Phase and amplitude correlations in the newborn EEG

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Thesis submitted for examination for the degree of Master of Science in Technology.

Espoo 27.11.2017

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ABSTRACT OF THE
MASTER'S THESIS

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Title: Phase and amplitude correlations in the newborn EEG

Date: 27.11.2017 Language: English Number of pages: 7+92

Department of Neuroscience and Biomedical Engineering

Professorship: Biomedical Engineering

Supervisor: Prof. Lauri Parkkonen

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In this thesis, the aim was to study the phase and amplitude correlations within neonatal electroencephalography (EEG) measurements. Premature birth can cause hindrances and changes in the functional connectivity of the brain, which can lead to serious neurological disorders later in life. The dataset consists of measurements from 113 babies: 67 born fullterm and 46 born preterm. The EEG measurements were done at the term-equivalent age in order to compare the phase and amplitude correlations between the two groups. Three different synchrony features were calculated from the data, in order to represent the different types of phase and amplitude correlations within the newborn brain. The main focus of this thesis is on the differences in functional connectivity between the two groups, but it is also studied how functional connectivity is located in the brain within the groups, and how the synchrony features are correlated with conceptional age, with each other and with the neurological scores C1 and C2. The neurological scores evaluate the motor and sensory development of a baby at birth. As a result of all these tests there are clear differences between the two groups, which show that the connections in the brain do not all develop at the same time and the development in the preterms might be slightly delayed. The results of this thesis also show that synchrony features might have some predictive value in regards to cognitive outcome.

Keywords: Neonate, EEG, Functional connectivity, Phase, Amplitude, Correlation

AALTO-YLIOPISTO
SÄHKÖTEKNIIKAN KORKEAKOULU

DIPLOMITYÖN
TIIVISTELMÄ

Tekijä: Anton Hult

Työn nimi: Vaihe- ja amplitudikorrelaatiot vastasyntyneen EEG:ssa

Päivämäärä: 27.11.2017 Kieli: Englanti Sivumäärä: 7+92

Neurotieteen ja lääketieteellisen tekniikan laitos

Professuuri: Lääketieteellinen tekniikka

Työn valvoja: Prof. Lauri Parkkonen

Työn ohjaajat: FT Anton Tokariev, Prof. Sampsa Vanhatalo

Tässä diplomityössä tutkittiin vastasyntyneen elektroenkefalogrammin (EEG) vaihe- ja amplitudikorrelaatioita. Ennenaikainen syntymä voi aiheuttaa komplikaatioita ja muutoksia aivojen funktionaalisessa konnektiivisuudessa, mikä voi johtaa vakaviin neurologisiin häiriöihin myöhemmin elämässä. Tutkimuksessa käytetty aineisto koostuu 113:n vauvan EEG-mittauksista: 67 täysiaikaisena syntynyttä ja 46 ennenaikaisesti syntynyttä. EEG-mittaukset suoritettiin täysiaikaisuutta vastaavassa iässä, jotta vaihe- ja amplitudikorrelaatiot ovat vertailukelpoisia ryhmien välillä. Aineistosta laskettiin kolme erilaista synkroniamittaria, jotka kuvaavat vastasyntyneen aivoissa esiintyviä erilaisia vaihe- ja amplitudikorrelaatioita. Diplomityön ensisijaisena tavoitteena oli tutkia edellä mainittujen kahden ryhmän välisiä eroja aivojen funktionaalisessa konnektiivisuudessa. Työssä tutkitaan myös, kuinka funktionaalinen konnektiivisuus on jakautunut aivoissa ryhmien sisäisesti sekä kuinka synkroniamittarit ovat korreloituneet iän kanssa, keskenään sekä neurologisten mittarien C1 ja C2 kanssa. Mittarit C1 ja C2 arvioivat vauvan motorista ja sensorista kehitystä syntymän hetkellä. Kaikki nämä tutkimukset osoittavat, että ryhmien välillä on selkeitä eroja, mistä havaitaan, että yhteydet aivoissa eivät kehity kaikkialla samaan aikaan ja että keskosina syntyneiden aivojen kehitys on mahdollisesti hieman myöhästynyt. Tuloksista havaitaan myös, että synkroniamittareista saattaa olla hyötyä vauvan kognitiivisen kehityksen ennustamisessa.

Avainsanat: Vastasyntynyt, EEG, Funktionaalinen konnektiivisuus, Vaihe, Amplitudi, Korrelaatio

Preface

This study was conducted at the baby brain activity (BABA) research center of the Helsinki University Children's Hospital. The environment was very welcoming and it was a pleasure to get to work with such smart and wonderful people. I would like to thank my advisors PhD. Anton Tokariev and Prof. Sampsa Vanhatalo for all the help and guidance I received during this study. I also thank Sampsa for giving me the opportunity to work on such an interesting and challenging project, and for introducing me to the fascinating world of neonatal EEG and brain research. I am grateful to Prof. Lauri Parkkonen for supervising this work and for his helpful comments on scientific writing.

The last six and a half years spent as a student at Aalto University have been the most exciting, funny, challenging and rewarding years of my life. During this time I have had the great fortune to meet and befriend such amazing people, with whom I have been able to share the highest highs and lowest lows. I am very grateful to the guild of bioinformation technology students Inkubio for taking me in as a freshman and introducing me to the teekkari culture. Thank you for all the long days spent at the kiltis and the long nights at countless joyful events. I also want to thank my closest friends from the 2011 Inkubio freshmen Roope, Joonas, Aleksi, Lauri and Niklas, for all the great times!

In addition to (and sometimes instead of) studying, I had the great joy to experience and organize the most incredible and memorable events with the lovely people of RATTO12, ITMK12, FTMK13, the board of Inkubio 2013, Teekkarijaosto 2014 and Tempaus 2016. I am also extremely thankful for everyone who was involved in the creation of VIRPI in 2015 and 2016. To the people of Rektorsgatan 1: I am immensely grateful for all the shared laughter, support and memorable experiences. It was a pleasure working with you in two Äpys and thank you for entrusting me with the top hat.

Finally I want to thank the ones closest to me: my parents Merja and Peter, for all the support and valuable life lessons throughout my life, and my dearest Rosa, for lighting up each of my days and filling them with joy and love.

Eikä syyttä.

Otaniemi, 27.11.2017

Anton Hult

Contents

Symbols and abbreviations

Symbols

cov	Covariance
E	Expected value
exp	Exponential function
F_c	Central frequency
F_s	Sampling frequency
i	Imaginary unit
ϕ	Phase
ρ_s	Spearman's correlation coefficient
σ	Standard deviation
$\sum$	Sum
θ	Phase difference
W	Sum of ranked values

Abbreviations

AS	Active Sleep
CA	Conceptional Age
DC	Direct Current
EEG	Electroencephalography
GA	Gestational Age
Hz	Hertz
lNC	Local Nestedness Coefficient
NC	Nestedness Coefficient
NPPC	Nested Phase–Phase Correlation
PAC	Phase–Amplitude Correlation
PLV	Phase-Locking Value
PPC	Phase–Phase Correlation
QS	Quiet Sleep
rNC	Remote Nestedness Coefficient
SAT	Spontaneous Activity Transient

1 Introduction

Premature birth, often caused by major complications in pregnancy, is a surprisingly common phenomenon, as 14.9 million babies were born prematurely in 2010 [1, 2]. This means that 11.1% of all the babies born alive are subject to many challenges, since complications related to being prematurely born cause approximately 35% of the world's annual neonatal deaths and they are also the second highest cause of death in children below five years of age [2, 3]. The children that do survive have a lifelong burden caused by the premature birth, as it may cause many different neurological disorders, such as cerebral palsy, impaired cognitive functions, attention deficit hyperactivity disorder and many others [1]. Many of these disorders are related to functional connectivity problems, they do not show up until later in life and diagnosing them is challenging, which is why studying the differences in functional connectivity at an early age is important and necessary [4].

Functional connectivity refers to statistically significant dependencies between neuronal activity and is quantifiable with correlations, coherence, phase–locking and other statistical measures [5, 6]. It is usually estimated as the statistically significant synchronization of neuronal activity between brain regions, and it can be studied from time series acquired with electroencephalography (EEG), magnetoencephalography (MEG), electrocorticography (ECoG) and functional magnetic resonance imaging (fMRI). Functional connectivity is inherently non-stationary in time, it varies fast and is highly specific to quite narrow frequency bands [7]. It can be used to acquire information on the underlying structural connectivity, when the measurement's time scale is long enough [8]. This is especially useful since measuring structural connectivity of the brain is challenging, particularly in neonates. [9, 10]

The theoretical and applied literature concerning functional connectivity is quite vast, since there are many different mathematical methods to calculate functional connectivity, which have very varied measurement and physiological bases [11]. In this thesis, functional connectivity is studied through correlation structures, resulting from neuronal interactions in large-scale networks: Neuronal activity is represented as phase and amplitude dynamics within a frequency band. The functional connectivity is then depicted as phase–phase correlations (PPCs) and phase–amplitude correlations (PACs) [12].

The dataset used in this thesis consists of EEG measurements from 113 neonates (67 controls born fullterm, 46 prematurely born babies). The measurements span at least 5 minutes for both sleep states: active sleep (AS) and quiet sleep (QS). The measurements were done at the term-equivalent age, meaning that babies in both groups were at the same age and in the same developmental stage. The EEG signal is first transformed into cortical source signals, after which functional connectivity is calculated, resulting in the following synchrony features: phase–phase correlation (PPC) [13], nestedness coefficient (NC) [14], which represents phase–amplitude correlation, and nested phase–phase correlation (NPPC) [15]. The frequency bands at which the features were studied were between 0.2 Hz and 20 Hz.

The goal of this master's thesis is to investigate the differences in functional connectivity between babies born prematurely and babies born fullterm. This is done

by calculating several synchrony features from cortical signals reconstructed from the EEG data, which were measured from the babies, and by group comparison.

The research questions studied in this thesis are:

1. Are there differences in functional connectivity between preterms and controls?
2. Do the functional connectivity features correlate with neurological outcome?
3. Are there differences in functional connectivity in different sleep states?

To address the first question, the synchrony features were calculated for both groups and compared statistically. With the results it is possible to see in which regions of the brain there are significant functional connectivity differences between the two groups. The results can be used to evaluate the effect of premature birth on functional connectivity.

With the second question, the aim is to find out if the connectivity features show some predictive value in regards to the neurological outcome of a neonate. The neurological development is measured with the neurological scores C1 and C2, which evaluate the current state of the motor, sensory and behavioural progress of a neonate. Higher neurological scores are linked with better later motor and neurological outcome.

With the final question, the goal is to assess how the sleep state influences the synchrony features. Since the EEG waveforms are different in the two sleep states, they could cause noticeable changes in the synchrony features. It will also be taken into account how the sleep state affects the results of the above mentioned other research questions.

2 Background

This section describes the background of the study field. Firstly, it focuses on the development of the brain during the pre- and postnatal periods. Secondly, premature birth and its effect on the brain are explained. After this, the working principle of EEG is described and EEG in a neonatal environment is discussed. Lastly, the topic of functional connectivity is explored.

2.1 Development of the brain

A baby's brain develops immensely during the second half of gestation and during the neonatal period, almost tripling its size during the third trimester. During this period the cerebral pathways find their targets and grow in the cortical plate: the thalamo–cortical fibres spread in the transient subplate zone, reposition in the cortical plate and create a remarkable amount of functional synapses with both permanent and transient (temporary) neuronal populations, shown in Figure 1. The plasticity of the brain is at its highest right before and after birth and the number of synapses in a neonate is higher than in the adult brain [16]. [17]

The subplate, located beneath the cortical layer, is four times thicker than the cortical plate and its thickness gradually decreases throughout gestation, disappearing during postnatal development [18]. During early development, the subplate has a very important role, as it works as a "waiting zone" to which the afferents from the thalamus and other cortical regions create the first longer-range connections. The thalamo-cortical connections attain the subplate towards the end of the second trimester (approximately 28 weeks) and reach the cortical layer during the beginning of the third trimester (29th to 33rd week). During this same period, the cortico-cortical connections reach the subplate and lower cortical structures. The thalamo-cortical connections are predominantly located in the cortical layer IV, when getting closer to fullterm (38th to 40th week) and the cortico-cortical connections achieve to find their intended areas within the cortex. The short cortico-cortical connections continue developing throughout several postnatal weeks, while the long cortico-cortical and thalamo-cortical connections have already stopped growing. [17, 19]

Brain development and subsequent neurocognitive outcome critically depend on the brain circuitries and how well they link in the pre- and perinatal periods [18]. This linkage is enhanced by early brain activity caused, for example, by sensory input, which modifies and strengthens the networks after birth [20]. These modifications occur via addition and removal of synapses, stabilization of synaptic connections, neuronal arborization, branching of axons and controlled cell death (apoptosis) [16, 20]. The changes can be between single neurons locally or between bigger groups at a greater distance. The local connectivity is deemed to be stronger than long-distance connectivity in the neonatal brain [21].

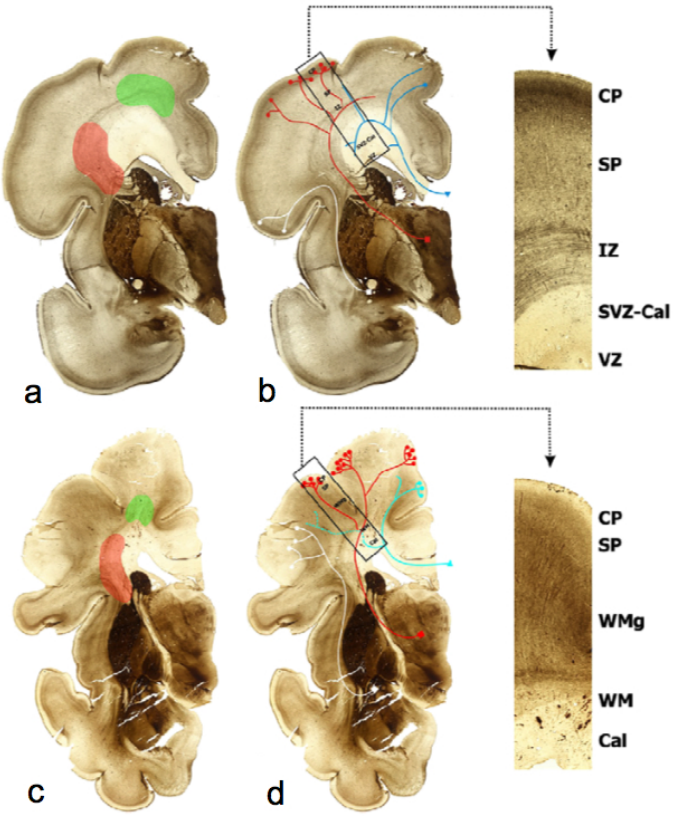


Figure 1: Organization of the developing cerebral wall during the early preterm phase (CA 24–32 weeks) (a, b) and late preterm phase (CA >32 weeks) (c, d). The first main periventricular crossings of pathways are displayed in red, while the second frontal crossings are in green (a, c). Development of cortical afferents (b, d): thalamo-cortical afferents are in red, callosal fibres in blue and basal forebrain fibres in white lines. The insets show the laminar organization of the changing zones in the cerebral wall. CP, cortical plate; SP, subplate zone; IZ, intermediate zone; SVZ, subventricular zone; Cal, callosal fibres; WM, white matter; WMg, gyral white matter. Modified from Kostovic and colleagues [17, 18].

2.2 Premature birth

Premature birth (birth before the gestational age (GA) of 37 weeks) is an abnormal event resulting from some major disturbances in pregnancy [1]. During 2010, it was estimated that a total of 14.9 million babies were born prematurely, meaning 11.1% of all livebirths globally [2]. The percentage of premature births is low in most European countries where they account for 5% of livebirths, while it is high in many African countries with a precentage as high as 18% [2]. Blencowe and colleagues found that rates of premature birth had decreased only in three countries (Croatia, Estonia and Ecuador) between 1990 and 2010, from all the 65 countries with time-trend data [2]. Complications related to premature birth have been estimated to be the cause of 35% of the world's 3.1 million annual neonatal deaths [3]. They are also the second highest cause of death in children under the age of 5 years, after

pneumonia [3]. Premature birth is the leading cause of child death in most of high- and middle-income countries [3]. For those that do survive, premature birth has lifelong effects on the functioning of the brain, for example, increasing the risk of cerebral palsy, visual disorders and impaired learning. Table 1 displays negative neurocognitive outcomes, which can be seen at a young age (up to 2 years) or at schoolgoing age, caused by a very preterm birth [1].

Table 1: Adverse neurocognitive outcomes as a result of a very preterm birth [1].

Early outcomes (up to 2 years)	**School-age outcomes**
Low developmental scores	Cognitive impairment
Cerebral palsy (CP)	Motor impairment (clumsiness)
Blindness	Visual-spatial/perceptual problems
Deafness	Attention deficit hyperactivity disorder
Transient dystonia	Psychiatric symptoms
Feeding difficulties	Ocular impairments
Delayed language skills	Poor auditory discrimination
	Special educational needs

A very premature birth is especially dangerous (birth at a gestational age (GA) between 28 and 32 weeks), as during this period the brain and all other body functions of the fetus are developing very rapidly [1]. Even though the number of preterm infants that survive has increased, due to the developed treatment in neonatal intensive care units (NICU), the neurodevelopmental outcome has still remained poor [1, 22, 23]. This is because of different brain injury mechanisms, such as damaged connectivity, inflammation or oxidative stress, which result mostly in cognitive impairment [24]. Because of this, the focus is no longer purely on the survival of the baby, but also on monitoring the brain for early abnormalities and trying to protect it during this vulnerable period, since biomarkers that are measured at birth or shortly after may be of use when diagnosing and predicting the possible complications and future outcome of the baby [25]. As much information as possible regarding the likelihood of survival and possible cognitive impairments is needed, when figuring out the best clinical decisions and discussing with the parents [23].

The demand for brain monitoring methods after preterm birth has increased and electroencephalography (EEG) is a well suited tool for both long-term monitoring in the NICU and basic research [24, 25]. The preterm brain is most vulnerable throughout the first days after birth, and the most important task is to try and preserve the structural and functional integrity of the brain. It has been shown that the early electrocortical background activity is associated with future longterm neurological outcome and that it also relates to subsequent brain growth [26]. An increase in the electrocortical background activity and increased number of spontaneous activity transients (SATs) (further explained in Chapter 2.4) during the first postnatal days correlates with a better longterm outcome [26]. In babies which have more cortical electrical activity and SATs, the total brain volume, and especially the subcortical grey matter volume, grows faster [27].

It has also been shown that structural measurements of the premature brain, with magnetic resonance imaging (MRI) at birth, can be used to predict the functional state of the brain at the term-equivalent age [28]. Dubois and colleagues also found correlation between the structure of the cortical surface at birth and the measured neurobehavioural scores at term age. This highlights the close link of function and structure in the developing brain. Alteration in early structural brain development could thus be the the cause which sets in motion the subsequent functional damage, which can manifest itself as neurological disorders later in life [28].

2.3 Electroencephalography (EEG)

Electroencephalography (EEG) is a neuroscientific tool, which measures the scalp electric potentials caused by electrical activity within neuron populations [29]. EEG has a good temporal resolution, which allows studying of the dynamics of neural networks and the functioning of the brain at millisecond intervals [29]. Hans Berger was the inventor of EEG in 1924, and it is nowadays widely used both in research and in multiple clinical applications [30].

EEG can be used to study the characteristics of brain activity in varying cognitive states: EEG time-series clearly reveal different sleep states and levels of alertness. It can also be utilized to study the effects of medication, drugs and diseases on brain activity. As with studying the effect of medication and drugs, EEG can also be used to research how the brain responds to different types of stimuli (visual or other). In addition to this, EEG is an invaluable tool for people suffering from epileptic seizures, as it can be used to detect seizures and their type, which helps finding the appropriate treatment for the patient. [31]

EEG is recorded with help of electrodes placed on the scalp. The position of the electrodes has been internationally standardized according to the 10–20 system, which uses landmarks on the head to specify the electrode locations [31, 32]. With the help of this system, all research and clinical studies can be made uniform. The positions are named with a combination of a letter and a number. The letters are F (frontal), C (central), T (temporal) and O (occipital) and odd numbers mean that the electrode is on the left hemisphere, while an even number means it is on the right hemisphere and 'z' means it is in the midline [31]. The EEG amplifier measures potential differences between two locations, and it can be measured between an electrode and a reference point or between all the electrode pairs [33]. The use of a reference point and the number of electrodes that are in use depend on the purpose of the study [20].

The electric potential that is sensed by the scalp electrodes represents synchronized activity of multiple synaptic connections in the cortical area and the resulting sum of voltage fluctuations [33]. The nerve cells communicate with one another through action potentials, which are fast pulses of electrical current along the axons. Single action potentials can have large amplitudes (70–110 mV), but they are too fast to be observed because one action potential takes approximately 2–5 ms. Since simultaneous creation of action potentials in neighbouring neurons is not likely, the sensed electric potential at the scalp consists mostly of the post-synaptic potentials.

The post-synaptic potentials are caused when the action potential from the previous nerve cell reaches the synapse and releases neurotransmitters, causing a depolarization of the post-synaptic nerve cell and possibly an action potential. The post-synaptic potential lasts longer (10–20 ms) than a single action potential, and also spans over a wider portion of the cell membrane. This makes it possible to sense summed activity of a cluster of neurons, even though the amplitude of post-synaptic potentials is smaller (0.1–10 mV). [29, 34]

EEG has several tangible advantages. Firstly, EEG enables very high-precision temporal measurements, which is crucial as the brain's electrical activity fluctuates in the millisecond scale and extreme precision is needed from the recording device. The most advanced EEG systems can detect electrical activity at a resolution of less than a millisecond. The other advantage of EEG is the fact that it is a non-invasive procedure, as the electrodes are placed onto the scalp and not inside the head. An additional benefit of EEG is that it is quite inexpensive and easy to use, when compared to other more complex measuring systems, such as ECoG or fMRI. [31]

There are some clear methodological challenges when using EEG to study functional connectivity. The potentials measured by the EEG amplifier are always calculated based on a selected reference, such as the mastoid or central electrode. These reference montages cause distorted functional connectivity results, which is why the recordings are re-referenced. The average montage has been found to be a good compromise, but other methods are also used. With EEG, functional connectivity can either be evaluated in the signal space or the source space, and both have their problems. In the signal space the electrode-level activity is used to evaluate the functional connectivity, which is problematic, because several electrodes can sense activity from the same source, called field spread. This leads to false estimates of functional connectivity. The source space means that the electrode-level signals are projected back to the underlying sources, with help of inverse modelling. This however is challenging and does not completely deal with field spread, but overall the signal space does give more reliable functional connectivity results. [31, 35]

In addition to methodological challenges, EEG is also subject to external artefacts, as are all electrical recordings. These artefacts can be caused by an electrode moving or becoming loose, by disturbances in the measuring equipment and environment, or by movements or other physical activity by the subject, such as blinking or frowning. All recordings contain a certain amount of artefacts and noise, which can affect the interpretation of the signal. Some of the artefacts can be easily spotted visually or in combination with other monitoring, like an electrocardiogram (ECG). Artefacts can be removed, for example, by cutting the corrupt part of the signal away or by filtering out only the wanted frequencies of the signal. [11, 33]

Even though EEG is prone to artefacts, it is a very useful method in studying electrical brain activity. Its ease of use, the possibility to combine it with other measurement methods, such as ECG, and also the possibility for monitoring over extended periods of time in challenging surroundings, such as (neonatal) intensive care units, make EEG an extremely valuable tool in this field. [11, 33]

2.4 Neonatal EEG

The neonatal EEG trace differs significantly from the EEG trace of an adult or that of a young child. Compared to older subjects, the neonatal EEG is very discontinuous, showing silent periods of low activity, which are followed by short multiband activity bursts, also known as spontaneous activity transients (SATs). The EEG signal profile of a neonate shifts towards a more continuous one through maturation and reaching the fullterm age of 37 weeks (CA). The increase in more continuous EEG signal is due to the developing cortico-cortical and thalamo-cortical networks, which enable activation and synchrony of larger areas, thus showing as increased background activity. [19, 20, 30]

Figure 2: EEG setup and EEG cap on a fullterm neonate [36].

The EEG recordings for neonates are done while the subject is asleep, to achieve recordings of necessary quality over several minutes; babies move frequently and cause many artefacts while awake. Babies have two sleep states: active sleep (AS) and quiet sleep (QS), demonstrated in Figure 3. During AS, the EEG-signal has a more continuous nature and higher frequencies, while in QS, the amplitudes are higher, the frequencies are lower and the profile of the signal is a lot more jagged and discontinuous. A neonatal sleep cycle lasts approximately 50 minutes, which is substantially shorter than in adults [37]. Quiet sleep is very useful in diagnostics, as it easily shows abnormalities in brain activity, although neonatal EEG does have suboptimal sensitivity in detecting different milder neurocognitive defects [19].

Spontaneous activity transients (SATs) are a characteristic feature of the immature brain [38]. This spontaneous activity is deemed to play a very important role in establishing the first neuronal connections before external sensory stimuli shape the activity-dependent development and plasticity [19, 39]. The spontaneous activity is an epigenetic mechanism in the accurate wiring of neuronal networks. Individual SATs are activated by pyramidal neurons, which are interconnected via excitatory (glutamatergic) synapses [19, 40].

There is a clear difference between SATs and inter-SAT activity: The SATs are seen mostly during the early development of the brain, they appear as self-organized spatio-temporally distinct bursts and they are generated by the cortex in isolation or as a result of inputs from the underlying subplate [19, 40]. Figure 4 displays how

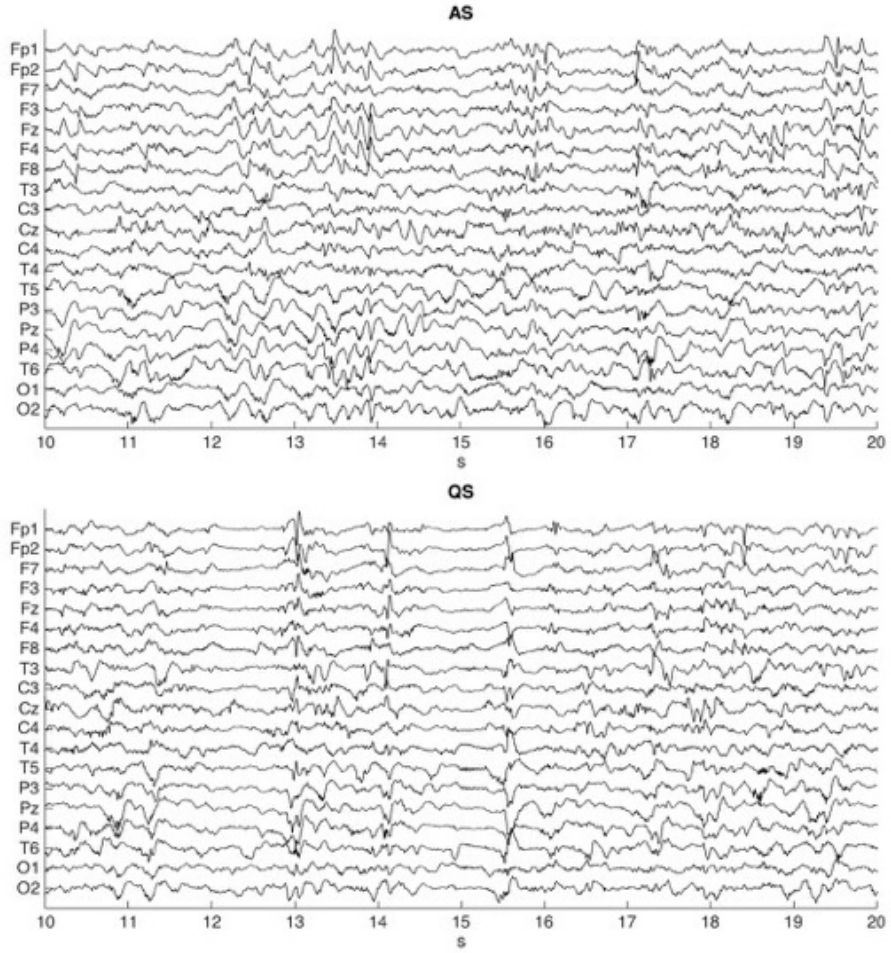


Figure 3: Examples of AS and QS EEG traces from a control subject, with the 19 electrodes used in this thesis.

SATs are sensed by the scalp electrodes.

The majority of early brain activity is limited to SATs, which have been shown to emerge at the conceptional age (CA) of 24 weeks and are at first mostly focal and concentrated in the sensory cortices before spreading in later development [31, 38]. The synchrony between hemispheres of the majority of SATs improves at the age of 30 weeks, while precise and consistent temporal cortico-cortical synchrony is achieved around the age of 35 weeks, due to the establishment of callosal connections between cortical plates [19]. During this time it is also noticeable that the duration of SATs increases and the amplitude decreases, and the low-frequency deflection consists of multiple components instead of one, as seen in the fullterm depiction of SATs in Figure 5 [19]. The decrease of SAT amplitude throughout maturation is thought to be due to the appearance of gyration, which disperses the orientation of cortical electric fields and also because of the increased areas of synchronous SATs, which decrease the voltage gradients between electrodes [19]. SATs slowly disappear from the EEG trace around term age, as the subplate fades away and functional cortical inhibitory GABAergic neurotransmission matures [14, 19].

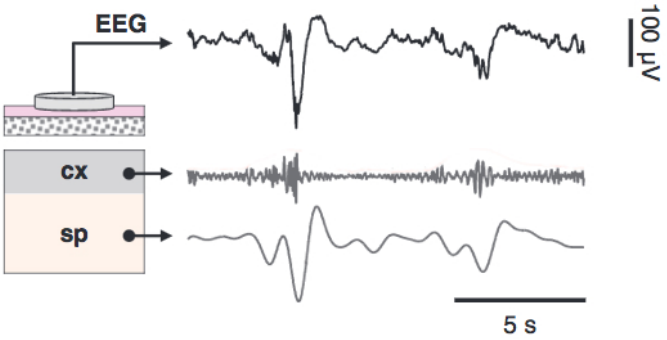


Figure 4: Schematic illustration of the EEG signal and the source of SATs. The SATs measured by the scalp electrodes are the result of superimposing the frequency components which arise from different cortical (cx) and subcortical (sp, subplate) layers. It can be clearly seen that there is a cross-frequency interaction where an increased amplitude of higher-frequency oscillation is nested within the phase of the lower frequency oscillation. Modified from Videman and colleagues [41].

The SATs are of immense importance in the neonatal EEG, which is why it is of utmost importance to be sure to measure the right frequency band, as they are characterized by a low intrinsic frequency between 0.1 and 0.5 Hz, which nests the activity of higher-frequency bands [19]. This can be achieved with the use of full-band EEG (fbEEG), which records the full, physiologically relevant range of frequencies [39]. If it is not used, salient and physiologically meaningful features of brain activity are completely disregarded.

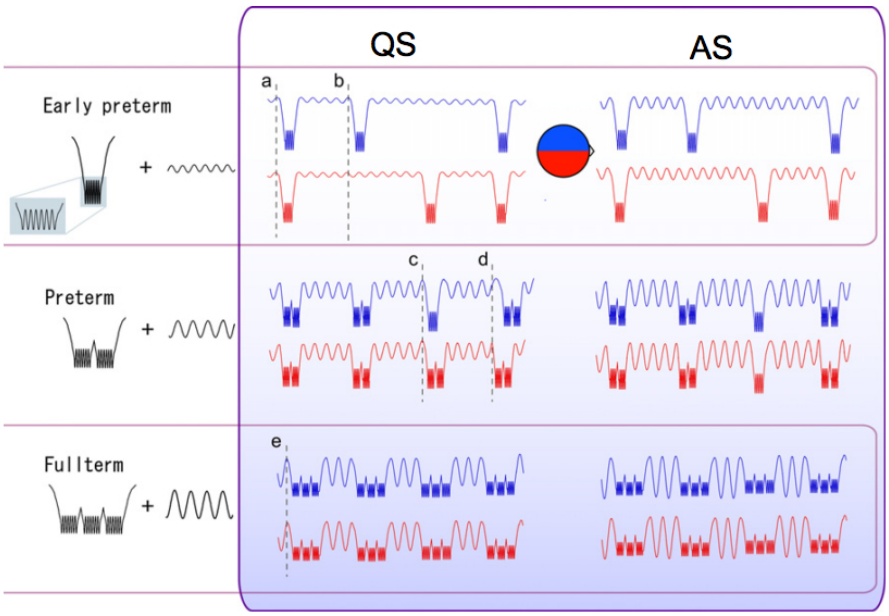


Figure 5: Development of SATs throughout the maturation of the brain from early preterm to fullterm. The deep troughs with the high-activity oscillation represent the SATs, while the continuous oscillation represents the inter-SAT period. The left side of the schematic demonstrates how the waveforms of the SATs and inter-SAT intervals develop, while the box displays how the SATs develop and become more coincident between hemispheres throughout maturation. In early preterms, SATs are sometimes coincident (a), and can be restricted to one hemisphere (b). Through ageing the SATs become more synchronized between the hemispheres and their waveform develops (c-e). During this development, the inter-SAT activity also increases in amplitude. SATs are very similar between AS and QS, while the inter-SAT activity is stronger in AS. Modified from Vanhatalo and colleagues [19].

2.5 Functional connectivity

Functional connectivity is defined as statistical dependencies between neurophysiological processes, and it can be quantified with statistical measures, such as correlations, coherence or phase-locking [5, 6]. Functional brain connectivity is often measured as the synchronization of neuronal activity between different brain regions, and can be studied from EEG, electrocorticogram (ECoG), functional magnetic resonance imaging (fMRI) and magnetoencephalography (MEG) time series. The time scale of functional connectivity between areas varies a lot and it can be as short as tens or hundreds of milliseconds [42]. Functional and structural connectivity are closely linked to one another, as Canadian psychologist Donald Hebb formulated a classical rule for neuroscience: "neurons that fire together wire together". Functional connectivity can be a good indicator of underlying structural connectivity, when functional connectivity is estimated from a longer time scale (minutes of data) [8]. Thus significant use for studying functional connectivity could be found in monitoring

developing brains. Although functional connectivity, which has been averaged over a longer period of time, is shown to resemble structural connectivity, functional connectivity is inherently non-stationary in time. In addition to this non-stationarity, it has been shown that it also varies and is specific to relatively narrow frequency bands [7]. [9, 10]

Brain functions are formed as accurate modes of collaboration between different cortical regions and they are coordinated by neuronal interactions, which take place, for example, as long-range phase synchronization of local neuronal oscillations [43]. The variation in cortical excitability is thought to be reflected by neuronal oscillations and most likely plays a significant role in controlling inter-areal communication and local neuronal processing [44].

2.5.1 Measurement methods

There is a large amount of both theoretical and applied literature related to the measurement and estimation of functional connectivity and none of them are universally used by the whole field, unchallengeable or omnipotent [11]. Their mathematical and physiological bases also vary a lot; some are derived from basic physiology and some are based solely on mathematics, without taking into account the physiology [11]. The most commonly used approach to measuring functional connectivity relate to synchrony of oscillations, amplitude fluctuations and the causal relationship of two signals [11]. In this thesis, functional connectivity is studied through correlation structures, which are a result of neuronal interactions within large-scale networks. When neuronal activity is represented with the help of phase and amplitude dynamics within a frequency band, two types of salient correlation structures can be used to describe functional connectivity: phase–phase correlation (PPC) and phase–amplitude correlation (PAC) [12].

The most important issue in functional connectivity measures is whether the connectivity estimate reflects a real effect in terms of change in neural interactions [45]. The connectivity measures can result in non-zero estimates in many situations, even though there is no underlying neural interaction. There are five common practical challenges when estimating functional connectivity, which do not apply to all the measures, but are still worth mentioning as a whole: the common reference problem, the signal-to-noise-ratio (SNR) problem, the volume conduction problem, the problem of unobserved common input, and the problem of uneven sample sizes [45]. The first three problems are related to the fact that the measured signal is always a combination of noise and the signal of interest. The fourth problem is related to the possibility that a functional interaction between a pair of signals could be caused by a common input from some third "external" source. The last problem is present, when the observation period or the number of epochs is unequal between subjects or conditions which are compared. [45]

2.5.2 The role of functional connectivity

PPC describes sub-second timing dependencies in neuronal excitability windows, which relate to regulating the spiking of neurons and thus either facilitating or

suppressing inter-regional communication [46, 47]. It has also been speculated that PPC could be a systems-level mechanism for coordinating and regulating the maintenance of objects in working memory [48]. PAC means the cross-frequency correlations between or within regions, where the amplitude of a higher-frequency oscillation is correlated with the phase of a lower-frequency oscillation. It has been shown that PAC is a prominent feature of brain dynamics and it could be an important systems-level mechanism for the regulation and integration of large-scale neuronal processing, which is happening at the same time in many frequency bands [39, 49, 50]. In a recent study, Daume and colleagues reported direct evidence of the co-occurrence of long-range phase synchronization and local PAC as an effective method for top-down modulated working memory maintenance [51]. This is in line with the concept that lower-frequency oscillations have a large spatial extent and play a principal role in coordinating non-local activity [52]. Functional connectivity enables the integration of spatially distributed processing and eases the communication between distinct oscillatory ensembles, meaning that it also has an important role in human cognition [53].

2.5.3 Neurological disorders

Studying functional connectivity is of great importance, as it is still unknown when and in what order the functional connectivity networks emerge during fetal life. Another important aspect of studying functional connectivity is the fact that disruptions in the functional brain connectivity are also related to several major health disorders, such as autism spectrum disorder, attention deficit hyperactivity disorder (ADHD), major depressive disorder, Alzheimer's disease (AD), schizophrenia and post-traumatic stress disorder (PTSD) [4]. The genesis of these types of disorders have been connected with alterations in functional connectivity during the early development [4]. Studies have shown that people suffering from AD have several EEG abnormalities, such as the slowing of the dominant posterior rhythm, emphasis of lower frequencies and decreased coherence of fast rhythms, and that functional connectivity measures could possibly be a valuable tool for early diagnosis of AD [54, 55].

3 Research material and methods

In this section, the research material and methods are explained in detail, so that the reader understands what steps were taken during the project and what the reasoning behind them was. First, the dataset is introduced, after which the pipeline of the thesis is described step by step, starting with the preprocessing of the data. Then, the focus is turned to the computational synchrony features and the statistical methods used in this thesis are made clear. Finally, the neurological scores and network visualization are explained. Figure 6 shows the pipeline for this study and all the major steps from raw data to results.

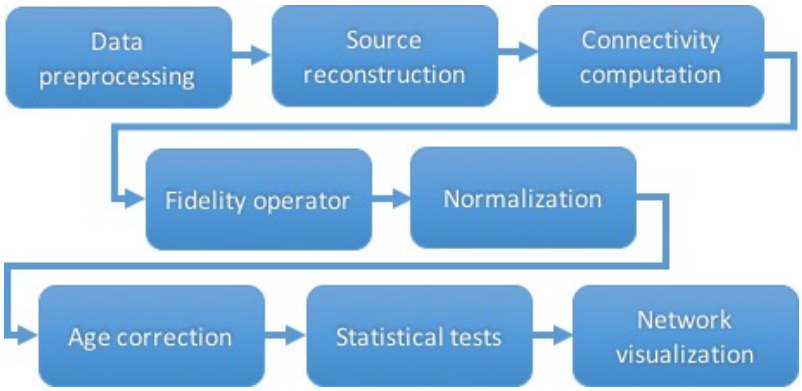


Figure 6: A flowchart depicting the steps taken in this thesis to go from raw unprocessed EEG data to the final results. At first, the data was preprocessed, before doing source reconstruction of the cortical signals, after which the functional connectivity computation was done to get the phase–phase correlation (PPC), nestedness coefficient (NC) and nested phase–phase correlation (NPPC) values. The following step consists of applying the fidelity operator, which corrects the connectivity adjacency matrices from unreliable data. After this, the adjacency matrices were normalized to achieve robust group comparisons, and age correction was applied to exclude the confounding factor that age has on synchrony measures. Statistical tests were then done to get the actual results of the thesis and finally the results were visualized with the help of graph theory.

3.1 Dataset

The data that are used in this thesis consist of 113 neonates, of which 67 were born at a gestational age (GA) of 40.35 ± 1.08 (mean ± SD) weeks, classified as healthy controls and 46 were were born prematurely at a gestational age of 26.41 ± 1.22 (mean ± SD) weeks. From the babies in this thesis, 34 of the subjects were girls, 75 were boys and 4 were unspecified. For the EEG recordings, the conceptional age (CA) of the healthy controls was 41.83 ± 1.12 (mean ± SD) weeks and for preterms the conceptional age was 40.76 ± 1.46 (mean ± SD) weeks. In this thesis, the EEG measurements have been done in such a way that the subjects in both groups are at term-equivalent age. The purpose of this is to be able to find out if premature birth

has affected the development of the brain and the functional connectivity within, in comparison to babies born fullterm. Figure 7 shows the locations of the EEG electrodes of interest.

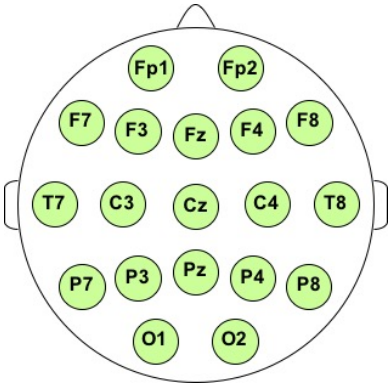


Figure 7: A schematic showing the placement of the electrodes of interest.

The dataset of this study was collected at the Helsinki University Children's Hospital and it is a combination of measurement data collected for previous studies at the BABA Center (http://www.babacenter.fi/en/). The EEG recordings were done mostly with the NicOne EEG amplifier (Cardinal Healthcare/Natus, Pleasanton, California, USA), but some of the first preterm infants were recorded with the Cognitrace amplifier (ANT B.V., Enschede, Netherlands). The data were collected using an EEG cap (sintered Ag/AgCl electrodes; Waveguard, ANT-Neuro, Germany) (shown in Figure 2), with 28 channels positioned in accordance to the international 10–20 standard. As the data had been recorded in different setups and for different studies, both 250 Hz and 500 Hz were used as the sampling frequencies in the EEG measurements.

The recording session lasted until the baby had passed through both AS and QS sleep states (displayed in Figure 3). To enable assessment of sleep state and data quality during the recordings, the following polygraphic channels were used: chin electromyogram, electrocardiogram, and sensors for eye movements and respiration. After discarding individual EEG measurements because of short duration or low quality, the resulting dataset contained 53 measurements for AS and 66 measurements for QS in controls, and 46 measurements for AS and 42 measurements for QS in preterms. In order to ensure full compatibility throughout the dataset, all the EEG data was exported into the European Data Format (EDF).

3.2 Preprocessing

The preprocessing of the data began with the selection of the data from the wanted 19 EEG-channels (Fp1, Fp2, F7, F3, Fz, F4, F8, T7, C3, Cz, C4, T8, P7, P3, Pz, P4, P8, O1 and O2) across all subjects. After this, the data from each subject was visually examined in MATLAB to see if there were any artefacts. If artefacts were found, they were cut out, while still achieving an epoch length of at least 5 minutes. The next step included removing of the DC component and changing the

EEG montage to the average montage. Then the signal was low-pass filtered with a seventh order Butterworth filter with a cutoff frequency of 45 Hz. The filtering of the signal was done using the `filtfilt` MATLAB function to achieve zero phase distortion. The cutoff frequency of 45 Hz was used, since the main frequency range of neonatal electrical brain activity ranges from close to 0 Hz to approximately 30 Hz [56]. After the low-pass filtering, the data were resampled to 100 Hz.

3.3 Frequency bands

The EEG signals were filtered using infinite impulse response (IIR) filters into six different frequency bands, with central frequencies $F_c = 0.4$, 4.0, 5.7, 8.0, 11.3 and 16.0 Hz. Low-pass and high-pass filters were paired to filter the EEG data to the wanted frequency bands, around the F_c. Pass-band cutoff frequencies were chosen as $0.85 * F_c - 1.15 * F_c$ and stop-band cutoffs were $0.5 * F_c - 1.5 * F_c$ at 40 dB attenuation. The filtering results in the following frequency bands: $0.2 - 0.6$ Hz, $3.4 - 4.6$ Hz, $4.8 - 6.5$ Hz, $6.8 - 9.2$ Hz, $9.6 - 13.0$ Hz and $13.6 - 18.4$ Hz. These frequency bands were based on the research done by Tokariev and colleagues [12]. They used 13 frequency bands, but for this thesis the number of bands was reduced to six, leaving out the two highest and five low frequencies.

3.4 Head model and source reconstruction

In this thesis, the data from the EEG electrodes were source-reconstructed into cortical parcel signals, which represent the local electrical activity of the cortex. In order to achieve this, the head model created by Tokariev and colleagues was used [57]. This neonatal head model is necessary, because there are several major differences between the neonatal and adult heads: the dimensions and geometry are distinct and the conductivity of a neonatal skull is significantly greater [58]. Magnetic resonance images (MRI) of a healthy full-term baby were used to generate the realistic head model, which includes scalp, skull and intracranial surfaces. The 19 EEG electrodes were placed in the model based on the international 10–20 system, similar to the actual EEG recordings. Due to difficulties in accurately segmenting the cortical gyri of infant MRI, an already existing gyrated cortical surface ('Colin 27' in the Brainstorm software) was used as the source space in the model. The cortical surface was scaled to match infant brain size and it was also smoothed to resemble the appropriate cortical folding at the age of interest. The end result was a head model with 8014 vertices corresponding cortical sources, which were collapsed into 64 parcels (nodes) of approximately the same size and symmetric across the hemispheres.

In order to compute the cortical parcel signals, the following steps were taken: A unique reference signal was set to all the sources within the same parcel (Figure 8: 1). Forward modelling was done to achieve simulated scalp EEG (Figure 8: 2), after which inverse modelling, was used to reconstruct the source signals (Figure 8: 3). The forward model uses a symmetric boundary element method (symmetric BEM) and the inverse model uses dynamic statistical parametric mapping (dSPM)

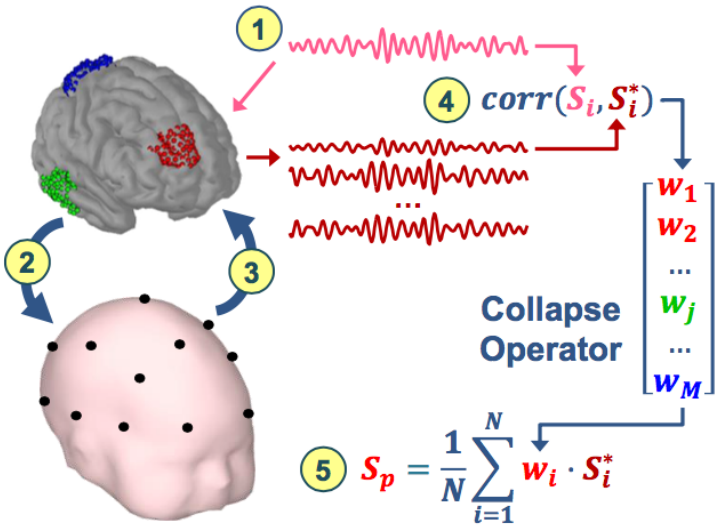


Figure 8: Computation of source reconstructed parcel signals. [15]

[59, 60, 61]. Source weights (w) were computed as the correlations between initial and reconstructed signals (Figure 8: 4). Lastly, parcel signals were computed as an average of the weighted source signals (Figure 8: 5). [62]

3.5 Synchrony features

In order to study the functional connectivity of the brain, three different synchrony features were selected for this thesis: nestedness coefficient (NC), phase–phase correlation (PPC) and nested phase–phase correlation (NPPC). The calculations of these synchrony features result in adjacency matrices, as the features are calculated between or within the source nodes. In the case of NC, two types of information can be observed from the matrix: local NC and remote NC. They are treated as separate features from here on in this thesis. The connection and communication between brain regions is necessary for high-order brain functions, such as cognitive tasks, and because of this synchronization is thought to play an important role in developing brain connectivity [10].

In this thesis, the focus is on phase–amplitude correlations, which are measured by the NC (local and remote), and on phase–phase correlations (PPC), which are measured with the phase-locking value (PLV) and NPPC. The four synchrony features have been selected for this thesis, because they are increasingly demanding and require more accurate and complex connections between neurons, starting with local NC and remote NC as the most simple, and going through NPPC and reaching PPC as the most complex. PPC reflects inter-regional interactions and needs accurate neuronal connections between areas, while NC and remote NC (rNC) are measures of connectivity, where the synchronization of the low-frequency oscillation from the subplate and increase in amplitude of cortical oscillations is calculated. The NPPC tells how the low-frequency oscillation from the subplate drives the cortico-cortical

synchronizations.

3.5.1 Phase-locking value

The correlation between phases of signals is called phase synchrony, and it represents the stable, non-random phase difference over a certain time period [47]. Phase synchrony appears in a variety of ways: from slow synchrony which spans over tens to hundreds of seconds, to very fast synchrony [10]. Figure 9 displays a visualization of phase synchrony. In this thesis, the phase–phase correlation (PPC) is calculated using the phase-locking value (PLV) and throughout this thesis PPC was assessed using PLV values.

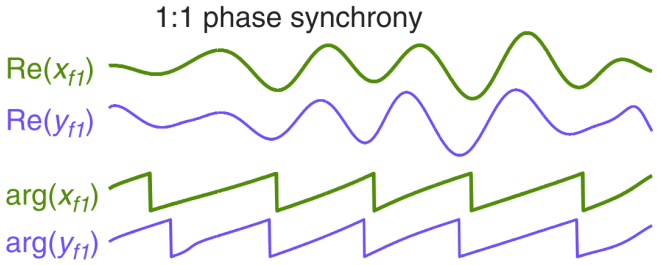


Figure 9: Example of 1:1 phase synchrony. Modified from Palva and Palva [10].

Phase-locking value (PLV) is a method which can be used to directly quantify frequency-specific synchronization between two neuroelectric signals measured at two recording locations. It is a statistical method which is used to estimate the stability of phase differences between two neurological signals across a time window. It is prone to volume conduction, but the problem is suppressed, since in this thesis the experiments are done on source reconstructed signals [10]. The PLV computes the phase-locking between two signals for each latency, at the frequency of interest. It is calculated as follows:

$$PLV = \frac{1}{N}\left|\sum_{n=1}^{N} \exp(i\Delta\theta(n))\right|, \tag{1}$$

where N is the number of samples of the signal within a time window, n is the sample index and the phase difference can be calculated $\Delta\theta(n) = \phi_1(n) - \phi_2(n)$, where $\phi_1(n)$ and $\phi_2(n)$ are the momentary phases of the two complex time series. Figure 10 illustrates how the PLV is calculated. The PLV assumes values between 0 and 1, where 0 means that there is no correlation between signals (the phase difference is uniformly distributed) and 1 means that there is perfect correlation between signals (perfect phase stability). In the PPC calculations the chosen window length was 5 minutes, i.e. the whole length of the epoch. [13]

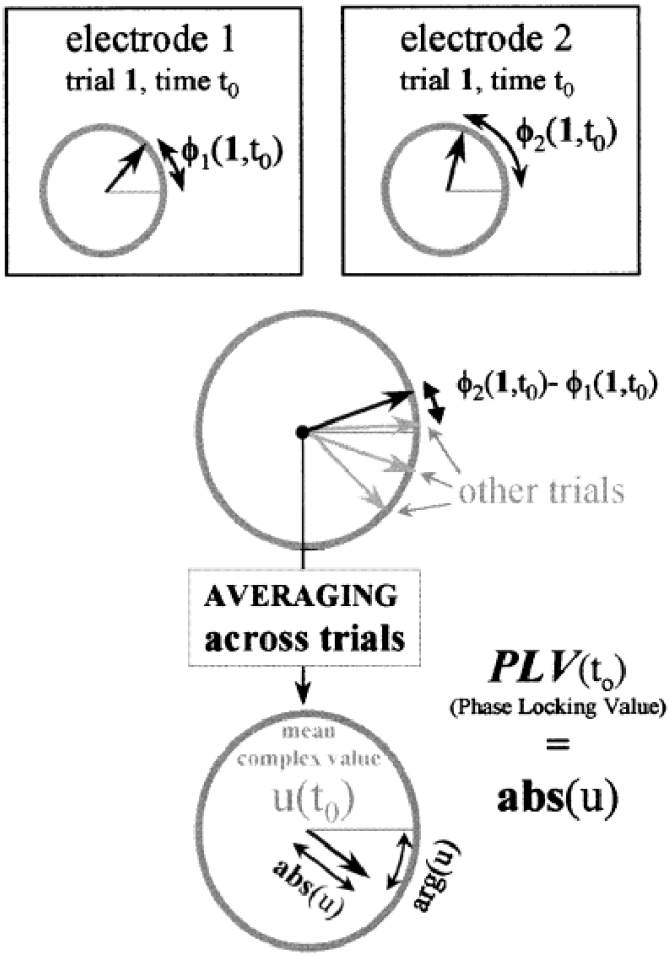


Figure 10: An approximation of PLV. The upper boxes for electrode 1 and electrode 2 represent the instantaneous phases at each electrode. After calculating the phase difference between electrodes over several trials, the phase differences are averaged over the trials and a complex value u is obtained. The amplitude, abs(u), is the phase-locking value [13].

3.5.2 Nestedness coefficient

Nestedness coefficient (NC) measures the phase–amplitude coupling within one neuroelectric signal when calculating local NC and between two signals for calculation of remote NC. The cross-frequency interaction of the nesting (low-frequency) and nested (high-frequency) oscillations, which are also seen in the SATs, can be estimated with the NC [14, 57]. The NC is thought to represent the coordination of spatially overlapped networks which have differing functionalities [49, 63]. In these cross-frequency interactions the amplitude of the high-frequency component is correlated with the phase of the low-frequency oscillation [14].

Nested oscillations are a common mechanism of brain dynamics and might also be of paramount importance in controlling large-scale neuronal activity which spans over multiple frequency bands [39, 49]. Phase–amplitude correlation possibly measures

the locking of the phase of the low-frequency oscillation to the peaks of the amplitude of the high-frequency oscillation, and it might also indicate the modulation of high-frequency oscillations by the low-frequency oscillations [10, 56].

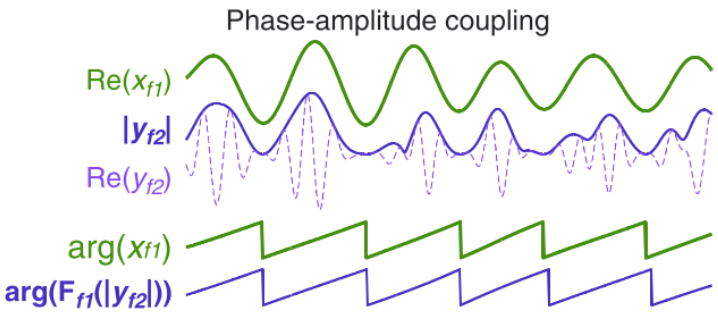


Figure 11: An example of nested oscillations, i.e. phase–amplitude coupling. The upper green line shows the low-frequency oscillation, while the dashed blue line shows the high-frequency oscillation and the upper blue line is its amplitude envelope. The two lower lines represent the phases of both the low-frequency oscillation and the envelope of the high-frequency oscillation. Modified from Palva and Palva [10].

The low-frequency (nesting) band which is used to calculate the NC in this thesis is the band between 0.2 and 0.6 Hz, while the higher frequency (nested) bands are the bands centered around 4.0, 5.7, 8.0, 11.3 and 16.0 Hz. Once the frequency bands have been filtered, both the low- and high-frequency components that are used to calculate the NC are first transformed into complex form with help of the Hilbert transform. The amplitude envelope of the high-frequency component is calculated, by taking the absolute value of the Hilbert transform's analytic signal output, and then filtered with the same filter as for the low-frequency component. The amplitude envelope is then transformed to the complex form with the Hilbert transform, after which the phases of both components are calculated by applying the MATLAB function `angle` on the low component and the complex conjugate of the amplitude envelope. Then finally, the PLV value is calculated according to Equation 1, to achieve the phase correlation between the components. Figure 11 shows an example of phase–amplitude coupling.

The NC calculations were done by taking the low component from one node and calculating one at a time the NC coefficient between it and the high component of all other nodes. This was done for all nodes, resulting in a NC matrix, where the values on the diagonal represent local NC (low and high component from the same node) and all the other cells represent remote NC between nodes. In this way it is possible to differentiate between local and remote NC.

3.5.3 Nested phase–phase correlation

The nested phase–phase correlation (NPPC) is a measure which indicates how well the low-frequency component drives the synchrony between two higher-frequency

components, where one of the high components is from the same cortical signal as the low component. It estimates how the oscillation originating from the subplate coordinates the high-frequency cortico–cortical synchronizations. The calculation of NPPC resembles phase–phase correlation, but it is taken a step further with the addition of the low-frequency nesting element. To compute the NPPC, the high-frequency components are filtered (Figure 12: 1). Then the PLV (Equation 1) between the high-frequency components is calculated in a sliding window (Figure 12: 2). The window length affects how many data points are taken into account in each PLV calculation. In this thesis the window length is calculated based on the central frequency of the frequency band in order to achieve a window length that is unbiased between frequency bands. The window length is calculated as follows:

$$WL = \frac{1}{F_c} * nCycles * F_s, \tag{2}$$

where WL is the window length, F_c is the central frequency of a frequency band, $nCycles$ is the number of cycles in the window, and F_s is the sampling frequency of 100 Hz. Different numbers of cycles were tested and the most optimal number of cycles was 10, which achieves PLV results that are not so prone to artefacts. It also results in a window length which is robust enough and takes into account a large enough number of samples to be statistically reliable. After this the low-frequency nesting component is filtered from one of the signals (Figure 12: 3). The PLV that has been calculated between the high-frequency components is filtered with the low-frequency filter at cutoff frequencies of $0.85 * F_c$ and $1.15 * F_c$ (Figure 12: 4) and finally the PLV (Equation 1) between the filtered low-frequency component and high-frequency PLV is calculated, with a window size of 5 minutes (the whole epoch) (Figure 12: 5). The resulting NPPC value describes how well the high-frequency phase–phase correlation is synchronized with the phase of the low-frequency oscillation. [15]

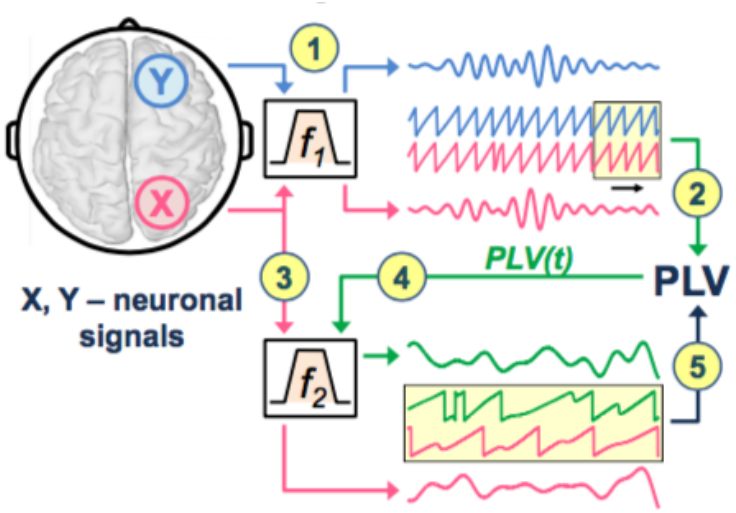


Figure 12: Computation of nested phase–phase correlation (NPPC). [15]

3.6 Fidelity operator

After calculating the synchrony features, the resulting 64-by-64 adjacency matrices were pruned using a fidelity operator. It is the result of a reliability assessment of the connectivity matrix [64]. This reliability assessment is necessary, because even an optimal source reconstruction of the EEG recordings, might not result in a completely accurate representation of all the pairwise interactions between the resulting 64 cortical parcels. The fidelity operator is a binary matrix with zeros in cells which represent non-reliable pairwise interactions between parcels. It was decided that all the nodes which had 66% or more non-reliable interactions were removed. As a result of this analysis a binary mask was created for this 19 electrode EEG recording configuration. Applying it excludes all the non-reliable data leaving only the connections that have reliable estimates. After the application of the fidelity operator the number of remaining nodes was reduced to 52.

3.7 Normalization

In order to achieve viable and robust statistical comparison between the groups, potentially subjective differences have to be accounted for. This is done by median normalization and it is applied to all the calculated connectivity matrices. It means that the the median of all the non-zero values in an adjacency matrix was calculated and after this each value in the matrix was divided by the median.

3.8 Age correction

Confounding is of great concern in studies which look for causality, as it can cause biased results. Some of the synchrony features that are calculated in this thesis might change with the development of the brain. Within both subject groups there were some small variations in conceptional age at the time of EEG recording. After calculating the Spearman's correlation coefficient between the conceptional age and the synchrony features, the preliminary results showed strong correlation. Because of this it was decided to apply age correction to the dataset to exclude this confounding factor. The age correction is achieved with a multiple linear regression model using least squares (MATLAB's `regress` function). With help of the calculated regression coefficients, the synchrony features' values were properly adjusted. [65, 66]

3.9 Statistical methods

This subsection introduces the statistical methods, which are used in this thesis. Firstly, the Wilcoxon rank tests are explained, which are used to find significant differences between and within the groups. Secondly, the Spearman correlation test is presented, as it is used to find correlation between the synchrony features and the age of the subjects, between the synchrony features and neurological scores C1 and C2, and between all the features. Lastly, post-hoc correction is described, because it was applied to the results in order to correct for false positives.

3.9.1 Wilcoxon rank tests

In order to find significant differences between the controls and preterms, the Wilcoxon rank sum test was used. It is a statistical test, which is equivalent to the Mann-Whitney U-test, and it is used to assess if two samples belong to the same distribution or not. It can be used as a nonparametric alternative to the t-test between two samples, but unlike the t-test it does not assume that the distributions are normal. The null-hypothesis of this test is that the median of the two samples are the same. The Wilcoxon rank sum test uses ranks instead of actual values, which simplifies the calculations. The ranking of the samples is done by ordering both of the groups together after which each sample is assigned a rank based on its position: The sample values start from the lowest, assigning it with 1 and subsequent samples are assigned with an ascending integer. If two or more samples share the same numerical value, they are assigned with the mean of their intended rank. [67, 68]

$$z = \frac{W - E(W)}{\sqrt{V(W)}}. \tag{3}$$

The test statistic parameter that is calculated in the Wilcoxon rank sum test is the sum of the ranked values of the first group, W. If the number of samples is large enough, the test uses a z-statistic to test the null-hypothesis, shown in Equation 3. $E(W)$ represents the expected value and $V(W)$ represents the variation of rank sum W. The z-score is then compared to the z-value table to be able to determine the P-value of the null hypothesis. The used significance level in this thesis was 0.05.

The Wilcoxon signed rank test was used, when comparing the strength of the cortical nodes within a group. The signed rank test resembles the rank sum test, but the difference is that the signed rank test calculates the difference between the compared nodes: $d = |x_1 - x_2|$, and ranks these differences. After having ranked the difference values d, they are assigned either a $"+"$ or a $"-"$, by using the sign function. W is then calculated as a sum of the signed ranks. The null hypothesis of the signed rank test is that the differences between nodes are part of a distribution, which has a median of zero. The variation $V(W)$ is calculated as follows,

$$V(W) = \frac{N(N+1)(2N+1)}{6} \tag{4}$$

and the z-score is

$$z = \frac{W}{\sqrt{V(W)}}, \tag{5}$$

which is then compared to the z-distribution to find the corresponding P-value. [68]

3.9.2 Spearman's correlation coefficient

In order to test if there is correlation between the calculated synchrony features and the conceptional age (CA) of the subjects, between the synchrony features and C1 and C2, or correlation purely between the synchrony features, Spearman's rank-order

correlation is used. The Spearman's rank-order correlation is chosen in this thesis instead of the Pearson product-moment correlation, because the Pearson's correlation test assumes linearity of the dataset, which is not the case here. According to previously done research Spearman's correlation is also more robust to outliers when compared to Pearson's correlation test [69, 70]. Spearman's correlation test results in the strength and direction of the monotonic relationship between the variables. The resulting correlation coefficient values are between -1 and +1, where 1 means perfect correlation, -1 inverse perfect correlation and 0 means no correlation. Spearman's correlation coefficient is calculated

$$\rho_s = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}, \tag{6}$$

if all ranks are individual integers. d_i is the difference between two ranks and n is the number of observations. If the ranks are not all distinct, the Spearman correlation coefficient is calculated as follows,

$$\rho_s = \frac{\mathrm{cov}(X, Y)}{\sigma_X \sigma_Y}, \tag{7}$$

where X and Y are the ranks of the observations, and σ_X and σ_Y are the standard deviations of the ranked variables. [71, 72]

3.9.3 Post-hoc correction

As the multiple comparisons and correlation tests that are done in this thesis might also lead to some false positive results, they are counteracted by using post-hoc correction. It is applied to all the results shown in this thesis. The proportion of false rejections of the null hypothesis is indicated by a threshold of 0.05, which is multiplied with the total amount of tests performed, in order to predict the amount of false discoveries. The number of tests, N_t, is calculated as follows

$$N_t = n * f * s, \tag{8}$$

where n is the total number of comparisons between nodes, f is the number of frequency-bands and s is the number of sleep states. The number of false rejections of the null hypothesis, x, is calculated

$$x = N_t * 0.05. \tag{9}$$

After calculating x, x amount of the weakest P-values below 0.05 were removed. For the group comparisons, age correlations and neurological score correlations the number of tests, N_t, is 520 and the number of rejected false positives, x, is 26. For the node-to-node comparisons N_t is 2652 and x is 132. [48, 53]

3.10 Neurological scores

The neurological scores C1 and C2 are scores, which have been developed from the Hammersmith neonatal neurological examination (HNNE), and can be used to

evaluate the current state of the motor, sensory and behavioural development of a baby at birth. These two scores also show some predictive value, as C1 is connected to later motor outcome and C2 is connected to later cognitive outcome at the age of two years. In this thesis Spearman's correlation coefficient between these two neurological scores and the synchrony features is calculated to study if they are interconnected in some way. [73]

The HNNE is among the most used assessment methods of neonatal neurology in both clinical and research settings. It is built upon combining 34 different tests, which are further grouped into six main domains: posture and tone, tone patterns, reflexes, movements, abnormal signs/patterns and lastly orientation and behaviour. The examination is done under the supervision of a child neurologist or other professional, as some of the tests require external stimuli. The tests are scored with a semi-quantitative scale and can be summed together to achieve the cumulative scores for individual domains or for the whole examination. The total scores of the HNNE can be compared to the expected values of a reference group to evaluate if a neonate's scores are within the norm. While the HNNE's purpose is to evaluate the current state of an infant, several studies have shown that neonatal neurological and neurodevelopmental examinations have a good predictive value with conditions such as cerebral palsy or grave neurodevelopmental and neuromuscular disorders [74, 75, 76]. [77]

The neurological scores C1 and C2 are the result of studying relations between the individual tests of the HNNE and their relations to the later neurological development of the infant. These interactions are measured by correlations, but also several other statistical methods, and resulting in the choice of three tests, because of their consistence throughout the different statistical approaches. The chosen HNNE tests were visual alertness, head raising in prone and increased neck extensor tone. Then it was studied if these three tests reflected indirectly some neurological functions in the neonate. Principal component analysis was used to find statistical combinations and resulted in the two component solution of C1 and C2. [73]

3.11 Network visualization

As the results of the statistical tests are long lists of P-values, which do not convey information very efficiently, the results of this thesis are visualized with the help of graph theoretical concepts such as node strength and edges. The basic idea of using graph theoretical concepts to visualize neuronal connectivity data is to display the patterns of functional connectivity as an adjacency matrix or as a graph. The entries of adjacency matrices display the strength of the connectivity between two nodes. The graphs are constituted of nodes and edges, where the cortical parcels are approximated as nodes and the pairwise interactions are the edges. In order to achieve these types of visualizations BrainNet Viewer, which is a graph-theoretical network visualization toolbox for MATLAB, was used [78]. With the use of BrainNet Viewer it is possible to generate precise maps of the large-scale functional architecture of the brain. [11]

4 Results

This section presents the results of the statistical tests after post-hoc correction. As hundreds and thousands of individual statistical tests were done to achieve these results, the information has been condensed into summarizing visualizations, which help understand the results in a larger context. Firstly, the correlation between features will be presented, after which the results of the age correlation tests are shown. The following results that are shown are for the group comparison between controls and preterms. Then, the node-to-node comparison results are brought forward and lastly, only the correlation with neurological score C2 is shown, since there was almost no significant correlation with C1.

4.1 Correlations between features

The Spearman correlation coefficient was calculated between all possible feature-pairs, for controls and preterms, in AS and QS and at all five frequency bands. Table 2 displays all the resulting correlation coefficients between the features. The only correlation that was found bigger than the abs(Rho) > 0.25 threshold was between lNC and PPC and lNC and rNC. All of these strongest correlations were found at the lower-frequency bands (between 4.0 and 8.0 Hz). In the case of lNC vs. NPPC and lNC vs. rNC all the correlation results are significant, while for lNC vs. PPC and rNC vs. NPPC most of the results are significant. In the rNC vs. PPC half of the results are significant, while only 20% of the PPC vs. NPPC correlation results are significant. lNC and rNC show significant and strong positive correlation in QS for both controls and preterms. The correlation is stronger in controls and is found at 4.0, 5.7 and 8.0 Hz, while correlation is found in preterms only at 4.0 Hz. lNC vs. PPC show significant and strong negative correlation for controls and preterms in QS at 4.0 and 5.7 Hz and for controls in AS at 5.7 Hz.

Table 2: Correlation coefficients between all the features at all frequency bands. Blue cells highlight the significant correlation coefficients, which have a P-value below 0.05 and the red values in bold represent a strong correlation coefficient that is abs(Rho) > 0.25

Rho values	Local NC vs NPPC				Local NC vs PPC			
	Control		Preterm		Control		Preterm	
Frequency (Hz)	AS	QS	AS	QS	AS	QS	AS	QS
4	0.10831	0.13274	0.11262	0.095222	-0.20572	**-0.27842**	-0.13629	**-0.27953**
5.7	0.095897	0.10039	0.089312	0.097583	**-0.26944**	**-0.33899**	-0.21379	**-0.33427**
8	0.083154	0.11713	0.07555	0.097584	-0.15704	-0.15337	-0.10324	-0.15698
11.3	0.093036	0.1065	0.17167	0.097585	0.084837	-0.020221	0.020681	-0.019397
16	0.16947	0.20553	0.17128	0.097586	-0.037635	0.019478	-0.01387	0.029096

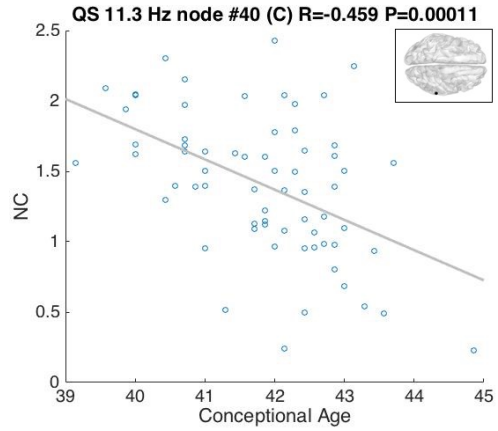
Rho values	Local NC vs Remote NC				Remote NC vs NPPC			
	Control		Preterm		Control		Preterm	
Frequency (Hz)	AS	QS	AS	QS	AS	QS	AS	QS
4	0.22985	**0.34895**	0.18518	**0.25238**	0.057796	0.12762	0.067572	0.036321
5.7	0.24998	**0.33533**	0.20405	0.19744	0.05128	0.085044	0.054873	0.066636
8	0.20973	**0.31696**	0.18981	0.17672	0.082163	0.16435	0.039495	0.07647
11.3	0.17966	0.23662	0.18408	0.12955	0.089225	0.14388	0.074082	0.084266
16	0.23018	0.21293	0.17407	0.10721	0.10486	0.1725	0.077194	0.14446

Rho values	Remote NC vs PPC				PPC vs NPPC			
	Control		Preterm		Control		Preterm	
Frequency (Hz)	AS	QS	AS	QS	AS	QS	AS	QS
4	0.095757	0.07496	0.085423	0.058213	0.052839	0.034238	0.026073	0.037269
5.7	0.069773	0.078361	0.06698	0.068661	0.022305	0.054033	0.007603	0.023279
8	0.011144	0.043175	0.075708	0.021558	0.012654	0.025421	0.0041557	0.059577
11.3	-0.004422	0.0059111	0.0024555	0.025398	-0.0049146	0.0072043	0.04927	0.0087701
16	0.0093574	0.0015908	-0.004104	0.04317	-0.020483	0.022546	0.001169	0.039569

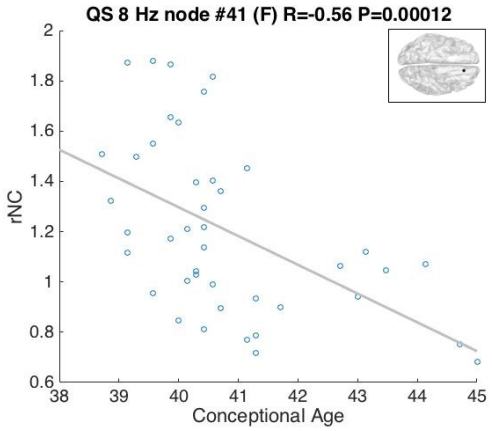
4.2 Age correlations

The correlations between the features and the conceptional age (CA) were calculated using Spearman's correlation coefficient. Figure 13 shows some examples of scatter plots, which represent the correlation at a specific node. It is clear from these scatter plots, that there is both strong positive and negative correlation with age. Subfigures (a), (c) and (d) are from controls and (b) is from preterms. In Figure 13 it is seen that local and remote NC, and PPC all have a strong and significant negative correlation with age, while NPPC has strong and significant positive correlation with age. This does not mean that all the strong correlation for the three aforementioned features was always negative and for NPPC was always positive. All features and both groups had strong negative and positive correlations. In the age correlation results (shown in Appendix A) it can be seen that there are some regional patterns, where a certain region has mostly positive correlation and another has negative. For example, in lNC vs. age correlation in controls the correlation in the frontal area is largely positive (seen in Appendix A Tables A1 and A2). In Table A1 it can also be seen how positive and negative correlation are evenly distributed within the occipital region. Appendix A has tables showing all the correlation coefficients and P-values for all the age

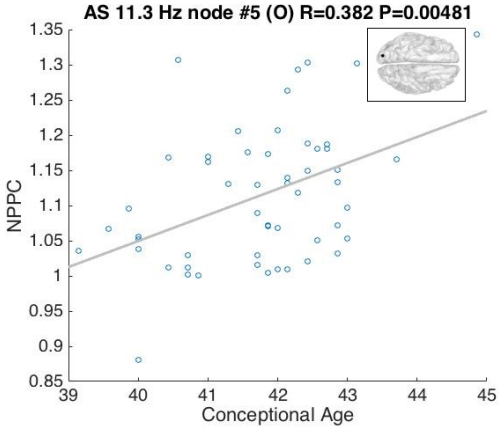
correlation tests. This correlation with age shown here in Figure 13 is the reason why age correction was done to the data. It was done to eliminate the confounding effect of age on the features.



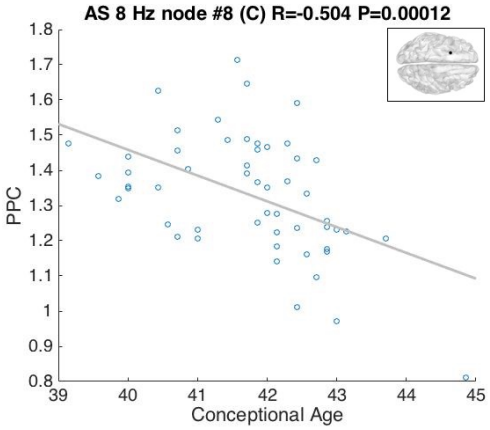
(a) Local NC



(b) Remote NC



(c) NPPC



(d) PPC

Figure 13: Examples of correlation between age and the features. The titles of the subfigure indicates from which sleep state the data is (AS for active sleep and QS for quiet sleep), in which frequency band it is measured, the number of the node, the location of the node in the brain regions (Frontal, Central, Temporal and Occipital), the correlation coefficient (R) and the P-value. The inset in the top-right corner of the subfigures shows the location of the node in the brain (top view).

4.3 Group comparison

This subsection covers the results of the group comparison between the controls and the preterms, which were achieved by using the Wilcoxon rank sum test. The groups were compared in both sleep states (AS and QS). The results show at which nodes there are significant differences between the groups and in which group the synchrony measure is stronger.

4.3.1 Local nestedness coefficient

Figure 14 shows the results of the group comparison between controls and preterms. No edges are visualized in the figure, as it displays the local nestedness within a certain node. Figure 14 (a) displays how lNC in AS is significantly stronger in the occipital area for the controls and in the frontal area for the preterms. This is supported by Figure 14 (c), which displays the percentage of significant nodes compared to all the 52 nodes and their spatial distribution. The prominent nodes at the back of the brain in favour of controls are seen at three higher-frequency bands (8.0, 11.3 and 16.0 Hz). Globally in AS there are approximately 5% more significantly stronger nodes in favour of preterms than in controls.

Figure 14 (b) and (d) show that there are clear spatial differences in QS between the groups. Both groups have significantly strong nodes, which are shown throughout all the frequencies at the back of the brain. The nodes which are significantly stronger in controls are located purely in the occipital area, but the nodes which are stronger in preterms are found in the occipital, temporal and central areas. In the frontal area there are significant nodes, which are only seen at one or two frequency bands. There is also a clear difference in the number of significant nodes as there are globally approximately 10% more nodes which are stronger in preterms than in controls.

4.3.2 Remote nestedness coefficient

Figure 15 shows the group comparison for rNC. As rNC shows the nestedness between two different areas of the brain, Figure 15 (a) and (b) show the top 10% strongest connections of the most prominent nodes (seen at three frequencies or more) as red or blue edges. The significantly stronger nodes in AS for controls, when compared to the preterms, are located mostly in the frontal area of the brain, while the nodes which are significantly stronger in preterms are in the central area. The two nodes that are located in the right hemisphere and are significantly stronger in controls are seen at all the frequency bands. The same can be said for the two significant preterm nodes, which are near the midline in opposite hemispheres. Neither group is significantly stronger in the temporal region. There is a 2% difference between the groups globally, since there is one significant node fewer for preterms. It is interesting to see how in both groups, the strongest edges are towards the back of the brain in the occipital, temporal and central regions. The connections of the strongest nodes are both intra- and inter-hemispheric.

In QS, there can be seen a stronger spatial division between the most significant nodes, as seen in Figure 15 (b) and (d). The nodes which are stronger in controls are located in the occipital region, while most of the nodes which are stronger in preterms are situated in the central region. Most of the nodes that are significantly stronger in controls in the occipital region and in preterms in the central, temporal and occipital regions are seen throughout the whole frequency range. It can be seen in (d) that the rNC is significantly stronger in preterms in most areas of the brain (F, C and T), while the occipital lobe is the only region of the brain where the rNC is clearly stronger in controls. As in AS, the strongest 10% of connections are both intra- and inter-hemispheric and these connecting nodes can be very far away, on

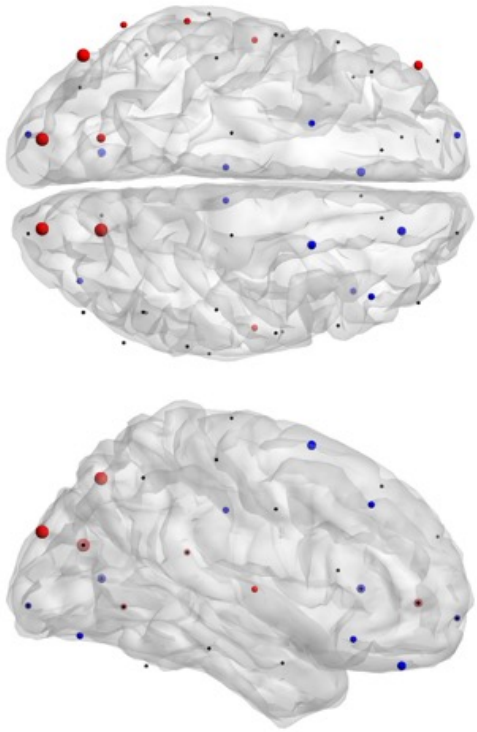
the other side of the brain. However, in QS, the strongest edges are not just towards the back of the brain, but instead they are all over the brain.

4.3.3 Nested phase–phase correlation

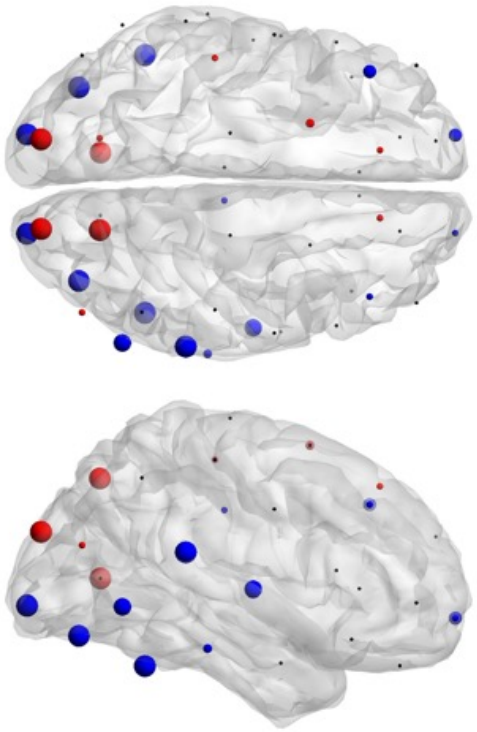
The results of the group comparison for NPPC are shown in Figure 16. After the post-hoc correction, there are only a few significant nodes which were left and none of them were shown as significant at more than one frequency band. This is also the reason, why the top 10% of the strongest connecting edges are not shown here. In AS, the two cases of significant difference are both in the occipital region and in the same hemisphere, while in QS, the only significant node in favour of preterms is on the right hemisphere and the four significant nodes in favour of the controls are all on the left hemisphere. Three of the significant nodes are situated in the frontal are, while the central and occipital regions both have one significant node. There are not that many nodes which show significant difference between the groups for NPPC, but the majority of those that do are stronger in controls.

4.3.4 Phase–phase correlation

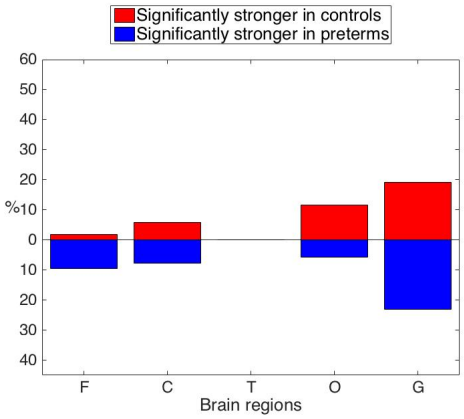
Figure 17 visualizes the results of the group comparison for PPC. It is very clear that on a global level, the PPC is significantly stronger in controls both in AS and QS. The difference in Figure 17 to the other group comparison visualizations is the fact that only the two lowest frequencies (4.0 and 5.7 Hz) are observed here, since the highest frequencies did not show significant differences. In AS there are four nodes, which are significantly stronger in preterms, where three of them are situated in the left hemisphere and one in the right hemisphere. The situation is very similar in QS, as there are three significant nodes in the left hemisphere and one in the right hemisphere. Three of the four significant nodes that are stronger in preterms are same in AS and QS. Figure 17 (c) clearly displays how most of the significant nodes that are stronger in controls in AS, are situated in the frontal region and second most in the central region. The back of the brain has only a few nodes, which show significant differences between the groups. In QS, the spatial distribution of significant nodes in favour of controls is a lot more even, but the frontal and central areas still have the most. The difference between groups is very big, as over 40% of all nodes are stronger in controls in AS, and almost 60% are stronger in controls in QS, while in both cases less than 10% of nodes are stronger in preterms. It can be seen, that a large part of the strongest edges in AS and QS are intra-hemispheric, with fewer inter-hemispheric significant connections. This differs from the result in remote NC, where there is approximately the same amount of intra- and inter-hemispheric strong edges.



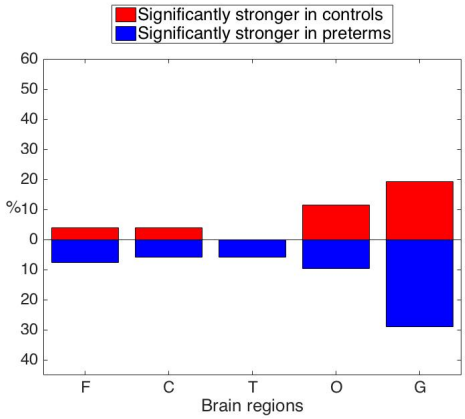
(a) Local NC in AS



(b) Local NC in QS

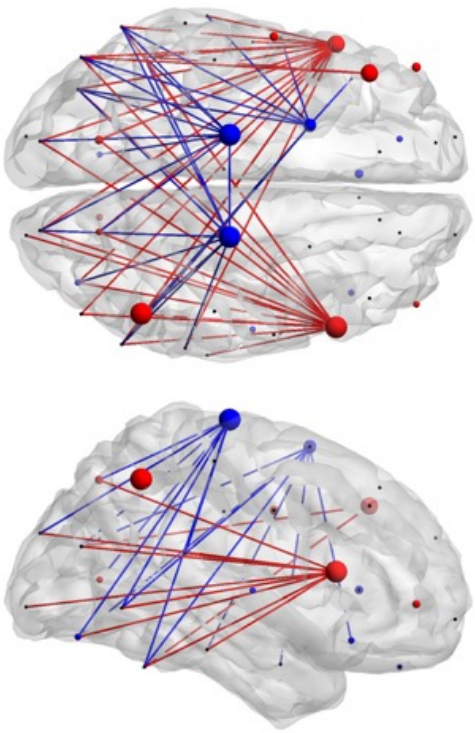


(c) Distribution of significant nodes in % for local NC in AS

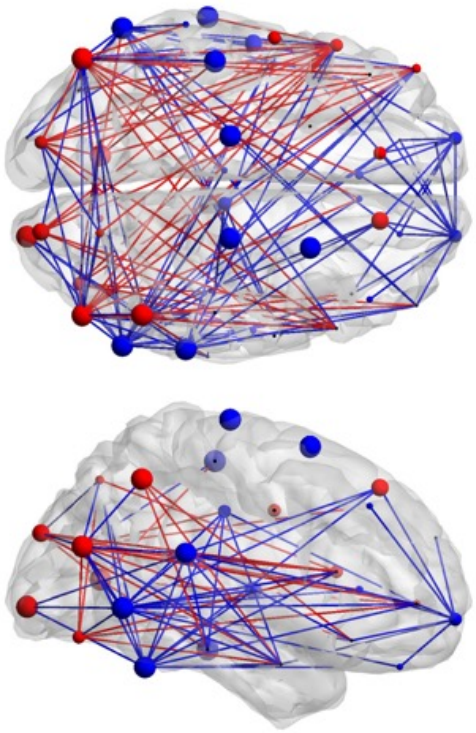


(d) Distribution of significant nodes in % for local NC in QS

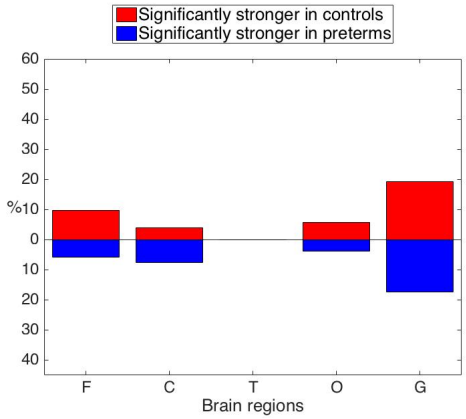
Figure 14: Group comparison between healthy controls and preterms for lNC in AS and QS. In panels (a) and (b) consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent. Panels (c) and (d) show what the % of significant nodes is when compared to the total number of nodes (52), and how they are situated in the cortex: frontal (F), central (C), temporal (T), occipital (O) and G stands for global, and has all the significant nodes put together.



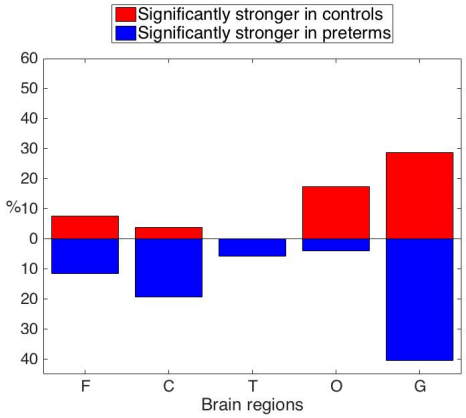
(a) Remote NC in AS



(b) Remote NC in QS

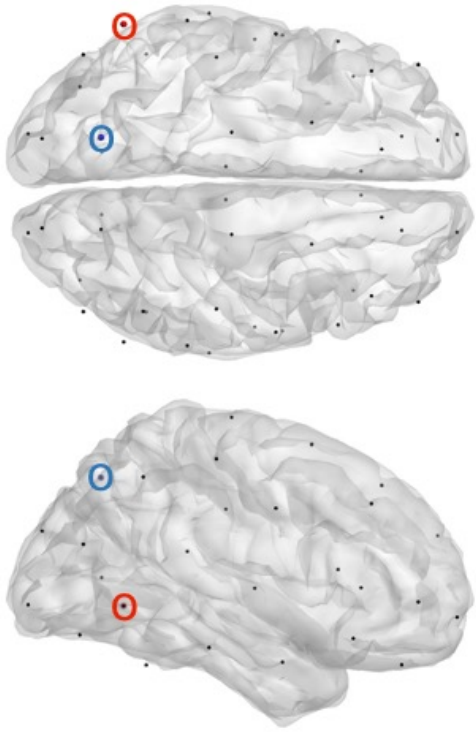


(c) Distribution of significant nodes in % for remote NC in AS

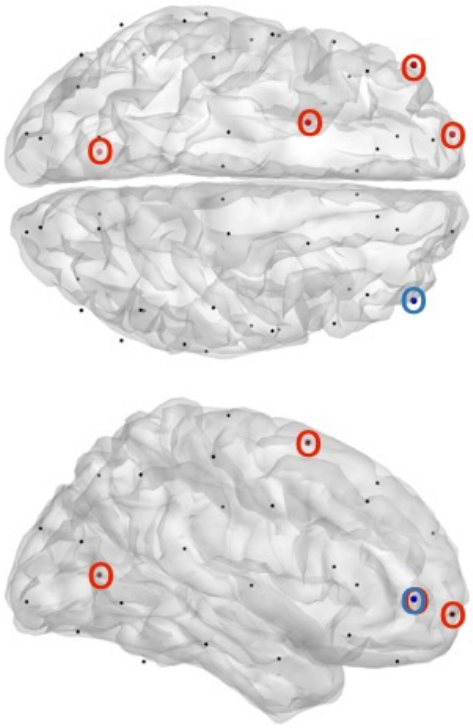


(d) Distribution of significant nodes in % for remote NC in QS

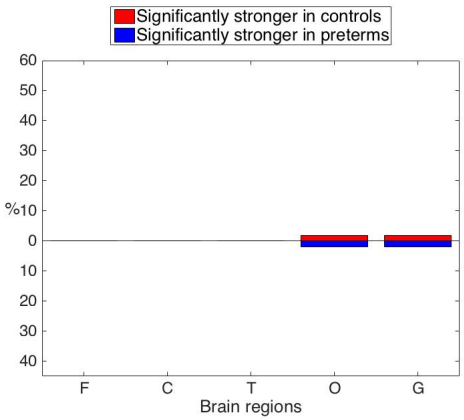
Figure 15: Group comparison between healthy controls and preterms for rNC in AS and QS. In panels (a) and (b) consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent. The consistently significant nodes have also edges, that depict the top 10% of the strongest edges in the brain. Panels (c) and (d) show what the % of significant nodes is when compared to the total number of nodes (52), and how they are situated in the cortex: frontal (F), central (C), temporal (T), occipital (O) and G stands for global, and has all the significant nodes put together.



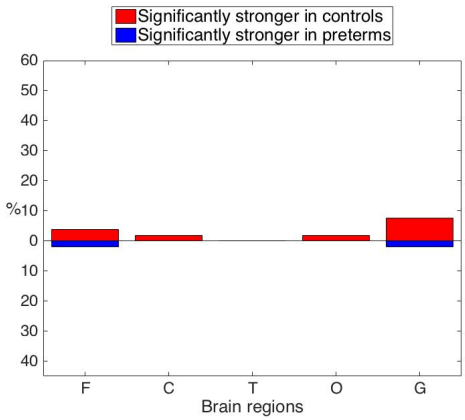
(a) NPPC in AS



(b) NPPC in QS

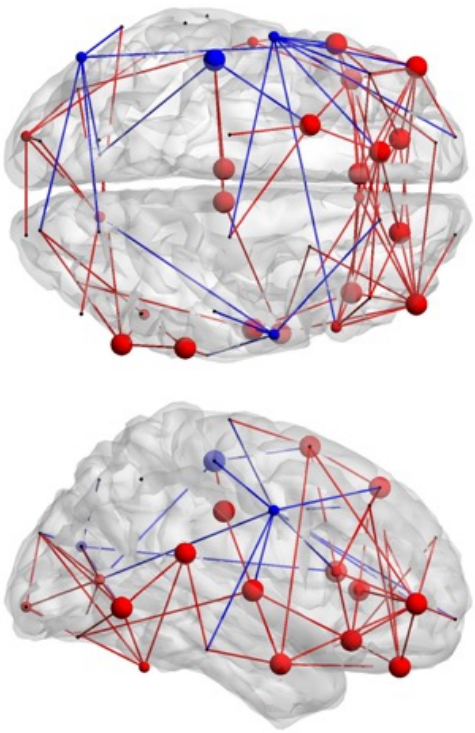


(c) Distribution of significant nodes in % for NPPC in AS

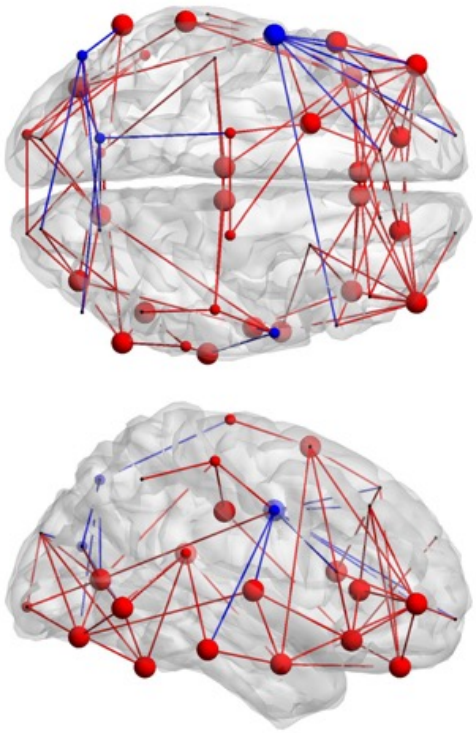


(d) Distribution of significant nodes in % for NPPC in QS

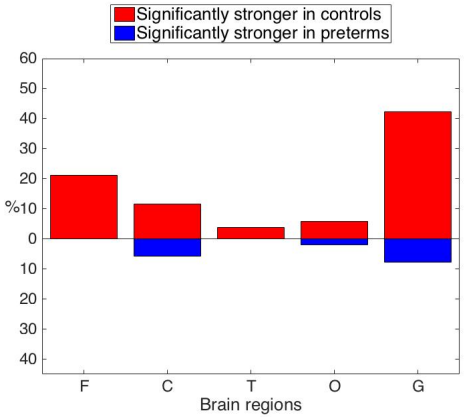
Figure 16: Group comparison between healthy controls and preterms for NPPC in AS and QS. In panels (a) and (b) consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent. Panels (c) and (d) show what the % of significant nodes is when compared to the total number of nodes (52), and how they are situated in the cortex: frontal (F), central (C), temporal (T), occipital (O) and G stands for global, and has all the significant nodes put together.



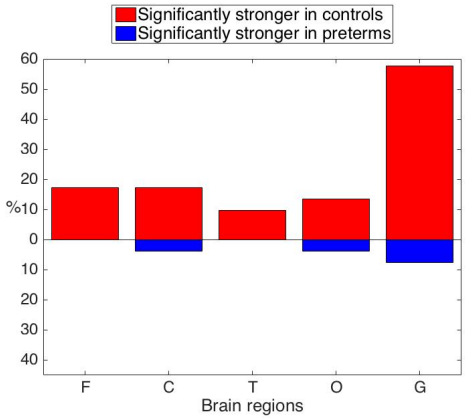
(a) PPC in AS



(b) PPC in QS



(c) Distribution of significant nodes in % for PPC in AS



(d) Distribution of significant nodes in % for PPC in QS

Figure 17: Group comparison between healthy controls and preterms for PPC in AS and QS. In panels (a) and (b) consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent. The consistently significant nodes have also edges, that depict the top 10% of the strongest edges in the brain. Panels (c) and (d) show what the % of significant nodes is when compared to the total number of nodes (52), and how they are situated in the cortex: frontal (F), central (C), temporal (T), occipital (O) and G stands for global, and has all the significant nodes put together.

4.4 Nodal comparison

The following results and figures describe the difference in strength between nodes within one group in AS or QS, which have been calculated using the Wilcoxon signed rank test.

4.4.1 Local nestedness coefficient

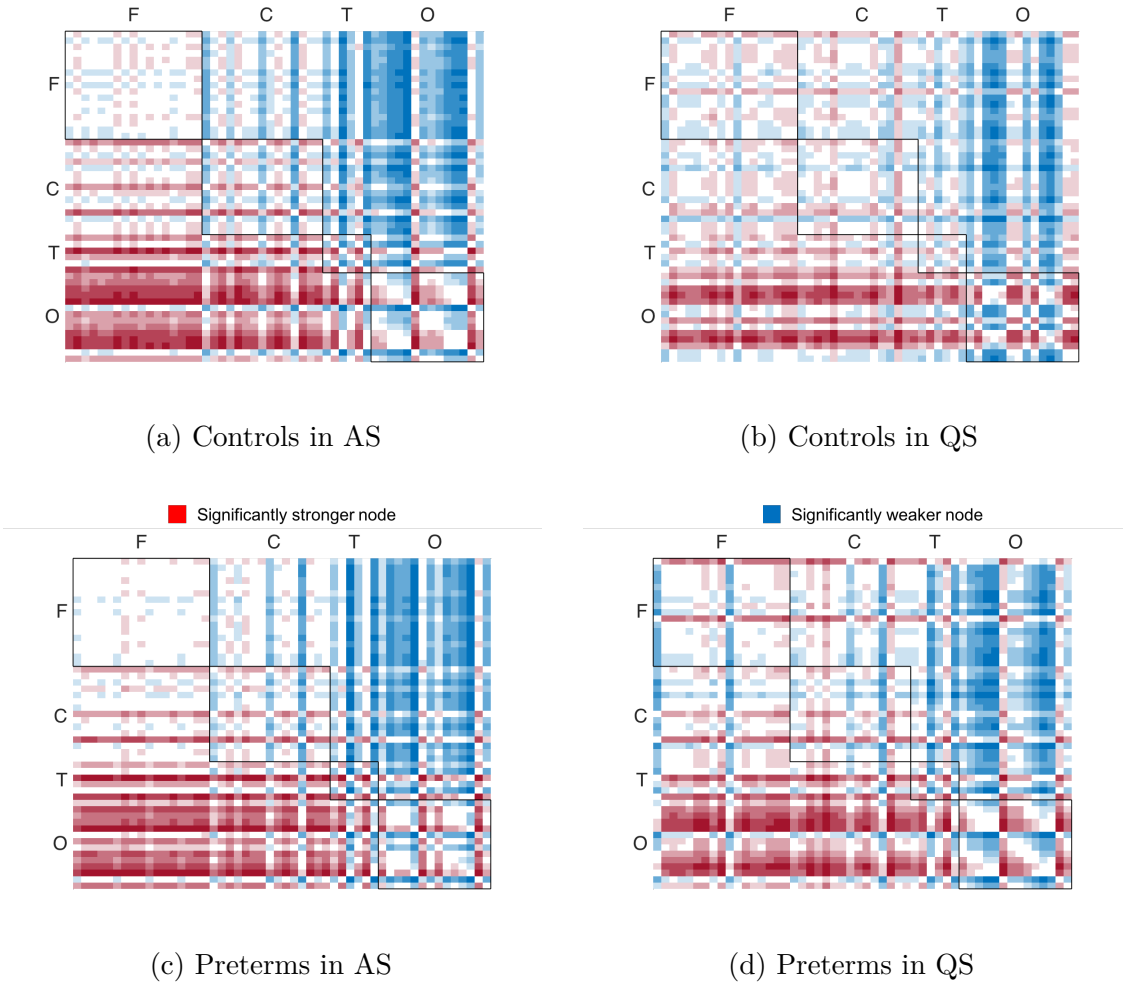
Figure 18 displays the node-to-node comparisons of lNC in controls, both in AS (a) and QS (b). Firstly, the differences in the strength of the nodes in AS in the frontal region are inexistent or only slightly significant at most. In all the other intra-regional comparisons there are consistent differences in strengths of the nodes. It is very interesting how in the occipital area, there are some smaller blocks which show no significant differences within some areas of the hemispheres. The nodes of the occipital area are mostly stronger in comparison to the frontal, central and temporal areas. When comparing the adjacency matrix of AS to QS, it can be seen how the significant differences between nodes in QS are not as strong as in AS. In QS, some of the same occipital nodes are still a lot stronger than the nodes in the frontal, central and temporal regions. In QS, there are more significant differences between nodes within the frontal region than in AS.

The nodal comparisons for lNC in preterms are shown in Figures 18c and 18d. Firstly, it is noteworthy that the adjacency matrices are very similar to the local NC results for controls, shown in Figures 18a and 18b. In AS, there are only a few significant differences within the frontal region, while all other regions have more variation and significant differences. The nodes of the occipital region are the strongest when compared to all the other regions. The situation does not change much in QS, and largely resembles the matrix in AS.

4.4.2 Remote nestedness coefficient

The results of the nodal comparison for rNC in controls are shown in Figures 19a and 19b. The adjacency matrices for remote NC AS and QS are very different when compared to the ones for lNC. In rNC and AS, there are now many significant and strong differences between the nodes of the frontal region, while the intra-regional comparisons for the other regions have only weak significant differences. The differences between the C, T and O regions are also quite weak. There seem to be some very strong frontal nodes, which are a lot stronger than all the other nodes of the brain and in general the frontal nodes are stronger when compared to other regions. The situation is quite similar in QS, as there are many very strong nodes in the frontal area, but this time there are also some strong nodes in the occipital and temporal regions. The nodes of the central region are in general weaker than the nodes from all the other regions, and the differences within the central region are non-existent or weak.

Similarly to lNC in preterms, the rNC nodal comparison results, which are shown in Figures 19c and 19d, resemble strongly the results of controls, with some exceptions. There are many more insignificant differences in preterms than in controls,



(a) Controls in AS

(b) Controls in QS

(c) Preterms in AS

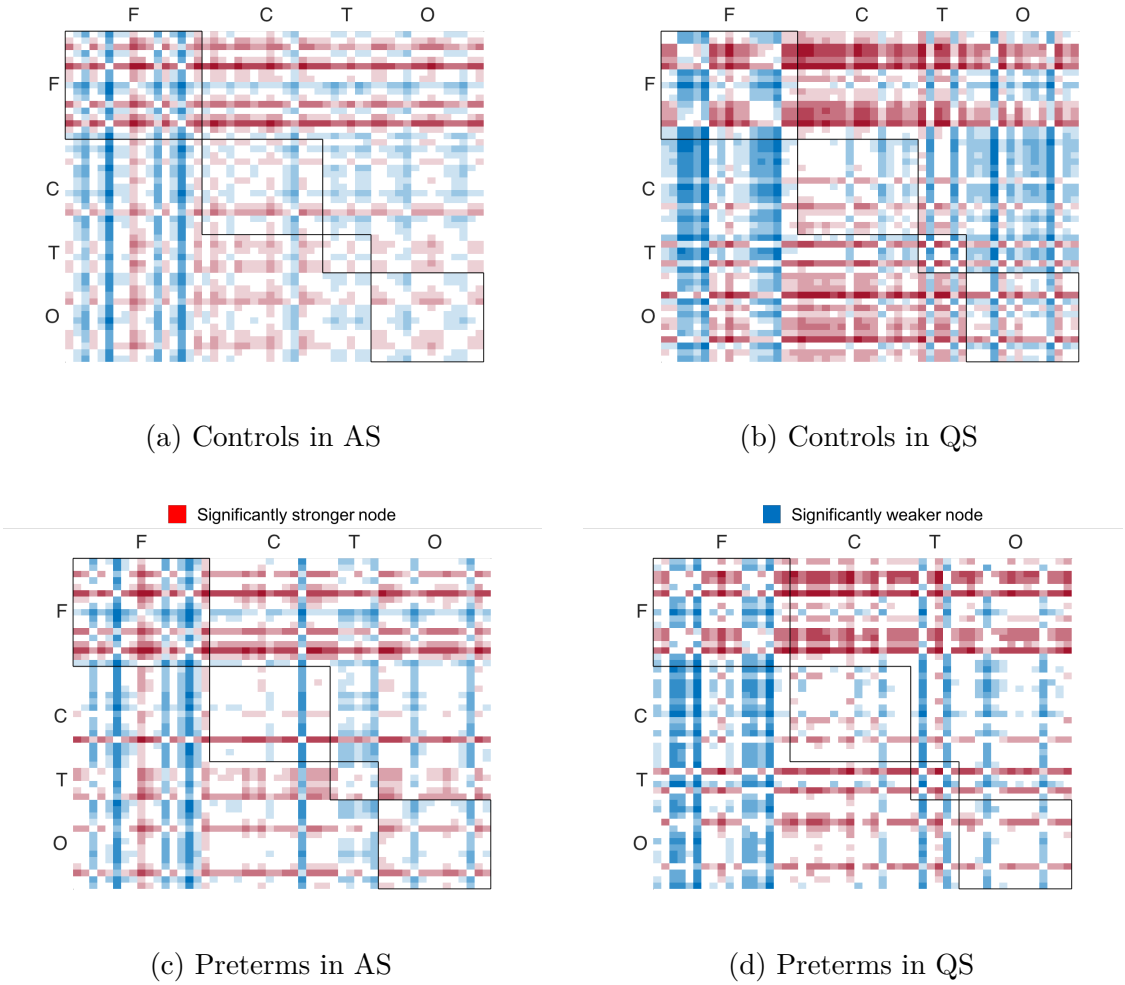
(d) Preterms in QS

Figure 18: Node-to-node comparison for lNC in controls and preterms. F, C, T and O stand for frontal, central, temporal and occipital brain regions. A darker colour means that the difference is more significant, while a pale colour means that the difference is less significant. White means that there is no significant difference between the nodes.

for example the comparisons within the central region result in only some significant differences. All-in-all the intra- and inter-regional comparisons for C and O are mostly insignificant, while F and T regions seem to be stronger than C and O. The difference between AS and QS in this case is that the significant differences are more accentuated in QS, because of the increased amount of insignificant results.

4.4.3 Nested phase–phase correlation

The results of the nodal comparisons for NPPC in controls are shown in Figures 20a and 20b. In AS, most of the matrix shows no significant differences between the nodes. There are barely any differences within the regions and between the F, C and T regions. The majority of significant and strong differences are due to the strength of the occipital nodes which are, barring some exceptions, stronger than all



(a) Controls in AS

(b) Controls in QS

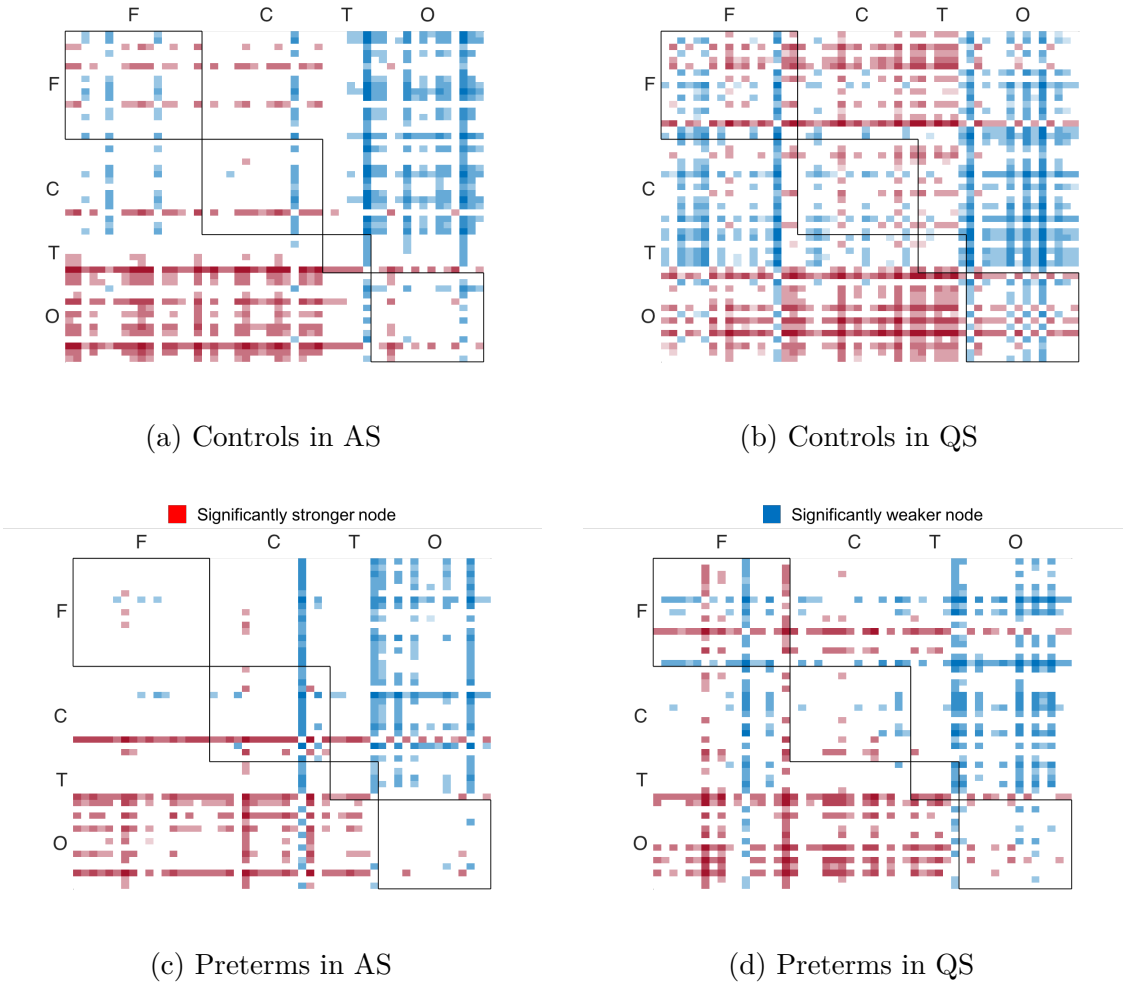
(c) Preterms in AS

(d) Preterms in QS

Figure 19: Node-to-node comparison for rNC in controls and preterms. F, C, T and O stand for frontal, central, temporal and occipital brain regions. A darker colour means that the difference is more significant, while a pale colour means that the difference is less significant. White means that there is no significant difference between the nodes.

the nodes in the F, C and T regions. In QS, there are more significant differences between nodes, although the amount of insignificant differences are still greater than in Figures 18a, 18b, 19a and 19b. Like in AS, the nodes of the occipital area are significantly stronger than the nodes of other areas, but this time also some frontal nodes show significantly stronger NPPC than nodes from the central and temporal areas.

The node-to-node comparisons in preterms for NPPC, shown in Figures 20c and 20d, demonstrate quite few significant differences in node strengths. It is, however, noteworthy that the differences that are shown are quite strong. In AS, the intra-regional comparisons show almost no significant differences, except for one strong node in the central region. The occipital region has the strongest nodes in comparison to the other regions. In QS, the frontal area has some diversity in node strengths, but



(a) Controls in AS

(b) Controls in QS

(c) Preterms in AS

(d) Preterms in QS

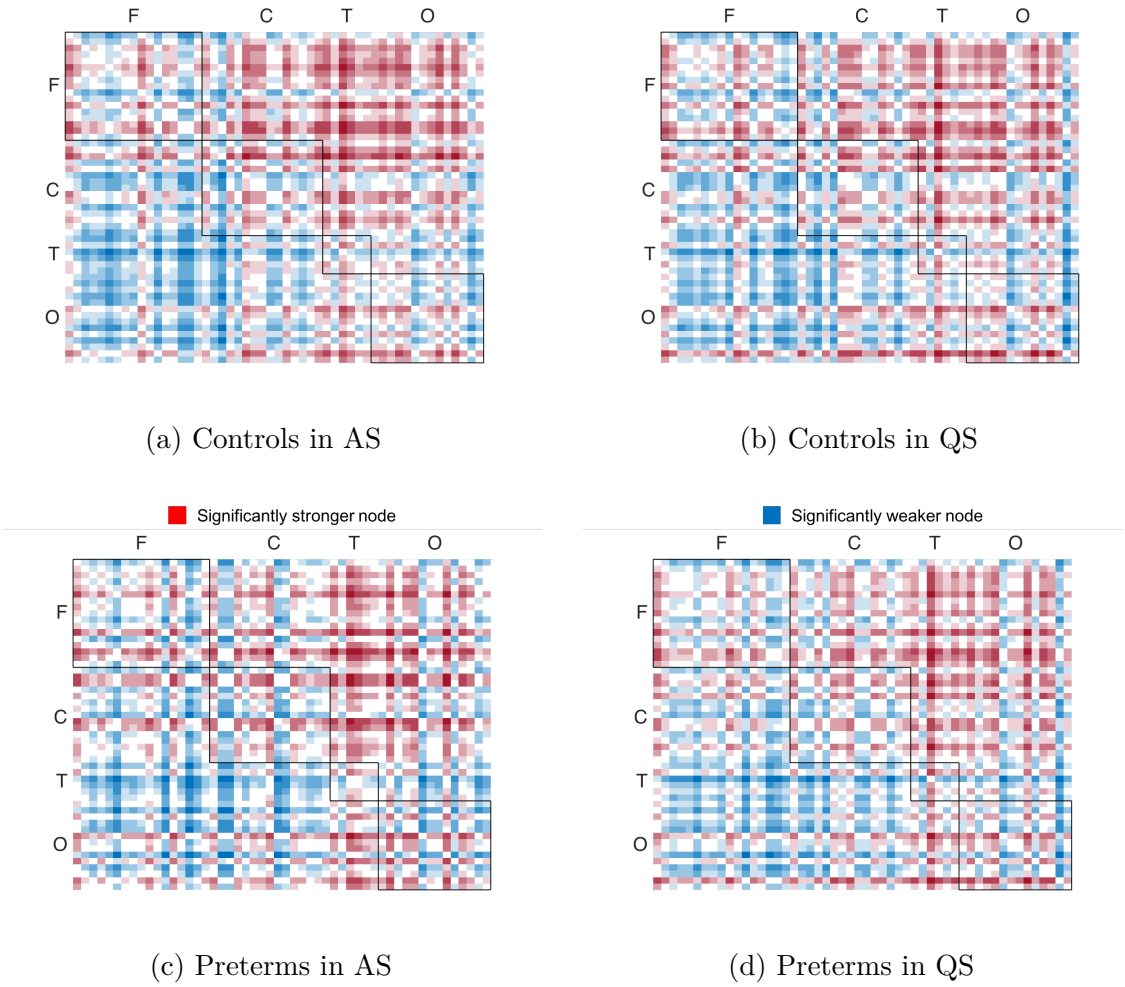
Figure 20: Node-to-node comparison for NPPC in controls and preterms. F, C, T and O stand for frontal, central, temporal and occipital brain regions. A darker colour means that the difference is more significant, while a pale colour means that the difference is less significant. White means that there is no significant difference between the nodes.

the other regions show little significant differences. Otherwise, the occipital region has the strongest nodes over all, yet again.

4.4.4 Phase–phase correlation

The results of nodal comparisons for PPC in controls are shown in Figures 21a and 21b. Here in AS, it can be seen that most of the differences between nodes are significant. When looking at the strength of nodes from the different regions, it can be seen that the F nodes are stronger than almost all the nodes from other regions, while the C and O regions seem to be stronger than the T region. The intra-regional differences are significant and strong, but there does not seem to be any clear patterns within them. The matrix for QS is very similar to the one for AS and the major difference seems to be that the significant differences are not quite as

strong as in AS.



(a) Controls in AS

(b) Controls in QS

(c) Preterms in AS

(d) Preterms in QS

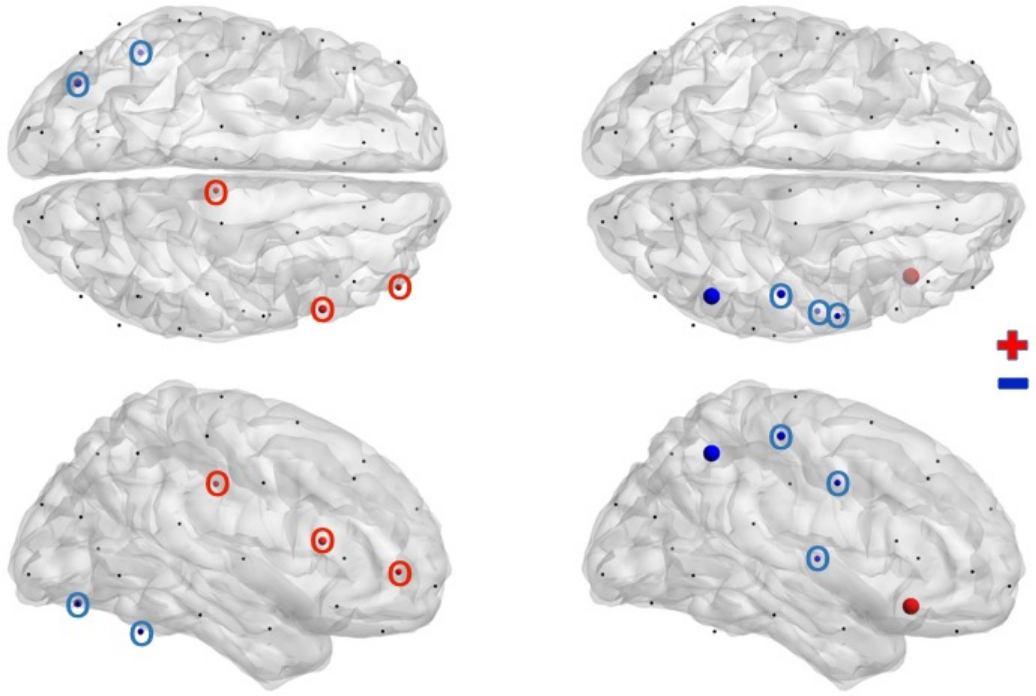
Figure 21: Node-to-node comparison for PPC in controls and preterms. F, C, T and O stand for frontal, central, temporal and occipital brain regions. A darker colour means that the difference is more significant, while a pale colour means that the difference is less significant. White means that there is no significant difference between the nodes.

The results for the nodal comparisons of PPC in preterms are shown in Figures 21c and 21d. The adjacency matrices for AS and QS are quite similar to the results in controls, shown in Figures 21a and 21b. In both AS and QS, there is not one region which has stronger nodes than all the others, but the temporal region is clearly weaker than the rest. When comparing PPC results to the other features' preterm results, they show a greater amount of significant differences and the same is true for the control groups' results.

4.5 Features vs. neurological outcome correlation

In this subsection the results for the correlation between the features and the neurological score C2 (cognitive outcome) are brought forward. There were almost no significant correlation results to be found between the features and neurological score C1 (motor outcome) and therefor are not presented in this section. The correlation coefficients and P-values of the correlation tests are shown in Appendix B, for the neurological score C1, and in Appendix C, for the neurological score C2. The results are displayed in a similar way as in the group comparison: the nodes which show significant correlation at several frequencies are bigger in size. The top 10% strongest connecting edges are drawn for all the nodes. The correlation results between the features and C2 for preterms show very little significant results and none that span over several frequency bands.

4.5.1 Local nestedness coefficient



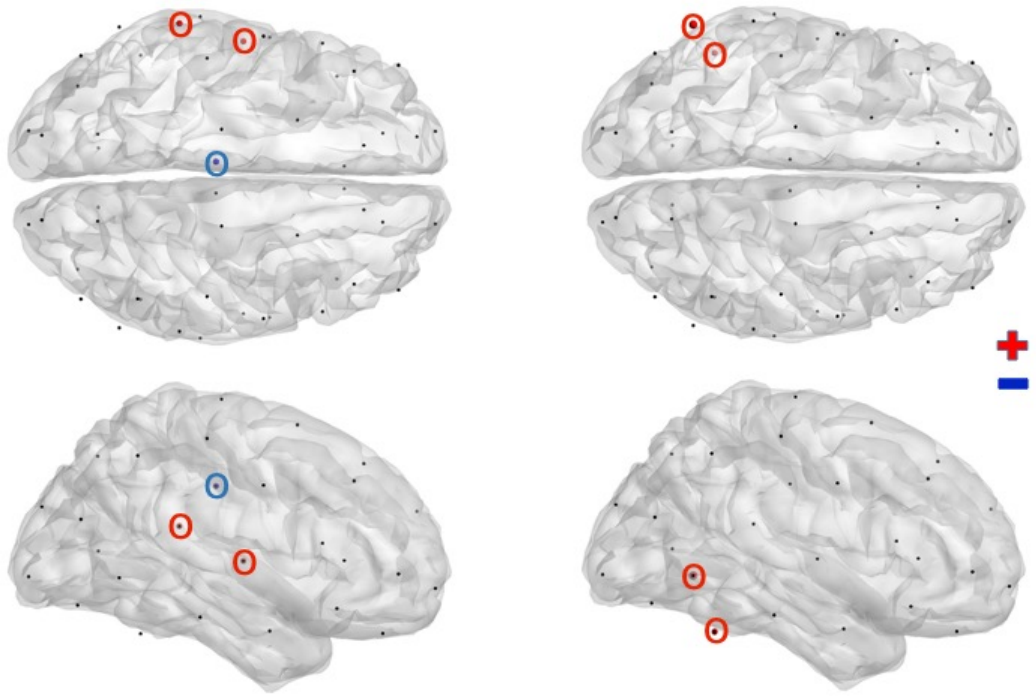
(a) AS (b) QS

Figure 22: Correlation between neurological score C2 and lNC in healthy controls in AS (a) and QS (b). Consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent.

The correlation between neurological score C2 and lNC in healthy controls is shown in Figure 22. In AS, there are no nodes which are consistently correlated through the whole frequency range, but there are two nodes which are negatively correlated (occipital and temporal regions in the left hemisphere) and three nodes

which are positively correlated (frontal and central regions in the right hemisphere). The significant negatively correlated nodes are seen at 4.0 and 5.7 Hz, while the positively correlated nodes are seen between 4.0 and 11.3 Hz.

In QS, all the significant nodes are in the right hemisphere. The positively correlated node is located in the frontal region and all the four negatively correlated nodes are found in the central region. There is one significant negatively correlated and one significant positively correlated node which are seen across most of the frequency range: 4.0–11.3 Hz for the positive correlation and 5.7–16.0 Hz for the negative correlation. The remaining negatively correlated nodes are seen at one or two frequencies between 4.0 and 8.0 Hz.



(a) AS (b) QS

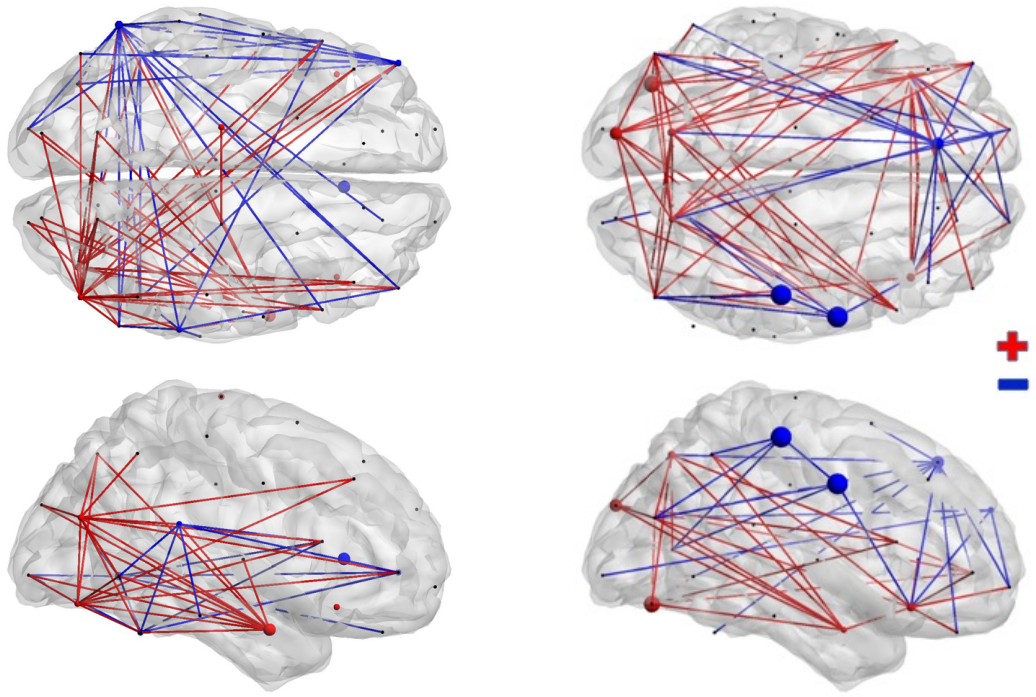
Figure 23: Correlation between neurological score C2 and lNC in preterms in AS (a) and QS (b). Consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent.

Figure 23 displays the results of C2 and lNC correlation in preterms. It can be seen that, in AS, there are two nodes which show significant positive correlation and they are located in the central region of the left hemisphere. These two nodes are seen at the 4.0 Hz centered frequency band. There is also one node which shows significant negative correlation in AS and it is located very close to the midline in the central area of the left hemisphere. It is seen at the frequency band centered around 16.0 Hz. In QS, there is no negative correlation, only two nodes which show positive correlation. They are located in the temporal region of the left hemisphere.

One of the nodes is seen only at the 5.7 Hz frequency band, while the other is seen both at 4.0 and 5.7 Hz.

4.5.2 Remote nestedness coefficient

Figure 24 shows the results of the correlation between neuroscore C2 and rNC for controls. In AS, the majority of the positive correlation is located in the right hemisphere, while negative correlation is situated more to the left hemisphere. The most consistent node in AS is a negatively correlated node in the central region of the right hemisphere, very close to the midline. It is shown at the frequency bands centered around 8.0, 11.3 and 16.0 Hz. The edges that are drawn display that the strongest connections are both intra- and inter-hemispheric and are widely dispersed throughout the brain. There is a quite clear pattern to be seen, as the nodes and edges in each hemisphere are almost symmetric with respect to the midline.



(a) AS (b) QS

Figure 24: Correlation between neurological score C2 and rNC in healthy controls in AS (a) and QS (b). Consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent. The edges show the strongest top 10% connections of the significant nodes.

In QS, there are two nodes in the right hemisphere, which display significant negative correlation throughout the whole frequency range, and their connections are intra-hemispheric. There is also a cluster of positively correlated nodes in the occipital area of the left hemisphere, which are seen at frequency bands of 4.0, 5.7

and 8.0 Hz. Their strongest edges are widely spread out over the brain. In the frontal area of the left hemisphere, there is a negatively correlated node, which is consistent throughout three frequency bands (5.7, 8.0 and 11.3 Hz). There are also some nodes in both hemispheres, which show significant correlations, that were only seen at one frequency band. No significant correlation was found between rNC and C2 in the preterm group.

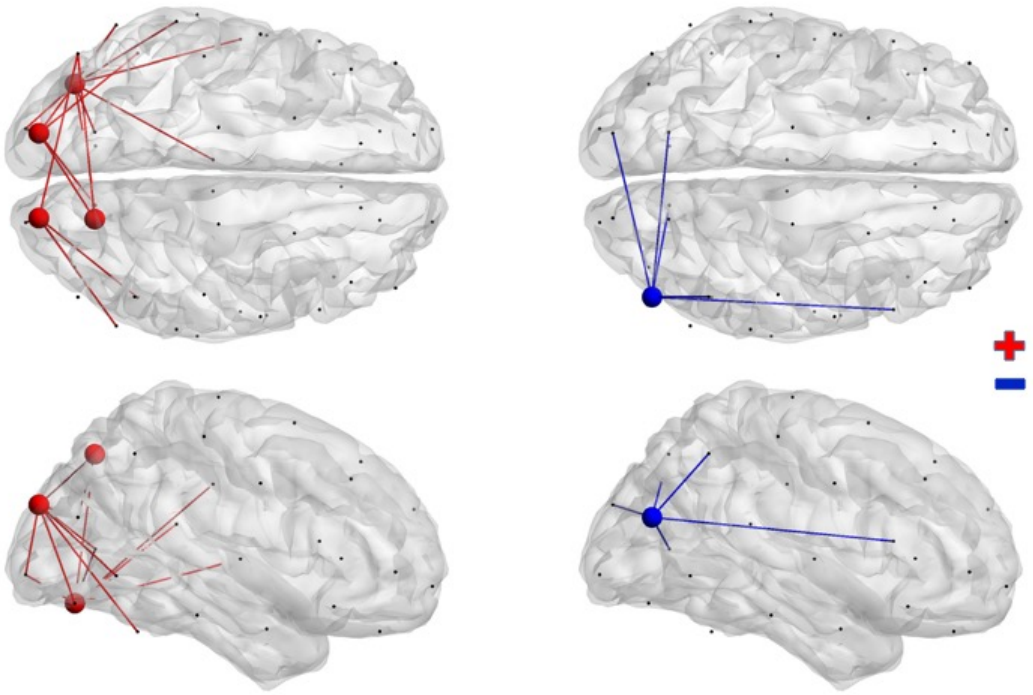
4.5.3 Nested phase–phase correlation

The results of correlation between neurological score C2 and NPPC do not show any significant correlation in either the control group or in the preterms, and in neither of the sleep states.

4.5.4 Phase–phase correlation

Correlation results between neurological score C2 and PPC are displayed in Figure 25. As with the group comparison, only the two lowest frequency bands (4.0 and 5.7 Hz) are shown. In AS, there are four significant positively correlated nodes in the occipital region of the brain; two in each hemisphere. All four significant nodes are seen at both the frequencies of interest. The strongest edges are both intra- and inter-hemispheric and are concentrated quite close to the node. No significant negative correlations were found in AS.

In QS, there is only one node, which shows significant negative correlation. It is located in the occipital region of the right hemisphere and its strongest edges are both intra- and inter-hemispheric. No significant positive correlations were found in QS. In case of the preterms, there is no significant correlation between C2 and PPC in either of the sleep states.



(a) AS (b) QS

Figure 25: Correlation between neuroscore C2 and PPC in healthy controls in AS (a) and QS (b). Consistency across frequency bands is coded with the size of the nodes, where bigger equals more consistent. The edges show the strongest top 10% connections of the significant nodes.

5 Discussion

This thesis provides evidence that there are significant differences in the functional brain connectivity between premature and fullterm babies, at the term-equivalent age. Some significant correlation was also found between the synchrony features and the neurological scores. These results and their possible meanings are discussed below.

5.1 Differences between features

Based on the spatial distribution of all the synchrony features, it can be seen that different areas of the brain are in different developmental stages. This can be best seen from the node-to-node comparisons, which give a clear visualization of which nodes are significantly stronger or weaker than others. When comparing Figures 18 and 19 it is very interesting, how the significantly stronger nodes are located in opposite areas of the brain. lNC is substantially stronger in the temporal and occipital regions of the brain, while rNC is stronger in the frontal area. lNC shows the more advanced short-range connections in the brain, and based on this it could be hypothesized that the temporal and occipital lobes develop earlier, than the frontal lobe of the cortex.

A similar pattern can be seen when comparing NPPC and PPC, although it is not quite as clear, since the amount of significant differences within the NPPC nodal comparisons (Figure 20) is not that large and on the other hand, the strength of the frontal area is not as clear in the PPC results (Figure 21). This would be in line with what Tokariev and colleagues hypothesized about NPPC providing a temporal frame for training emerging PPC in higher frequency oscillations [15]. These findings are proof of the temporal grouping of phase–phase correlation within SATs in the neonatal brain. Earlier studies suggest that the early endogenous mechanism of functional network connectivity is provided by SATs. The results shown in this thesis indicate that the role of SATs could expand to provide context for early developing PPC, a core mechanism for neuronal functional connectivity.

A synchrony feature that stands out from the rest is NPPC, as its results showed the least significant differences in the group comparisons and in the nodal comparisons and the least significant correlations in all the tests conducted in this thesis. It is also noteworthy, how PPC showed some quite extreme results in the group comparison, where almost all significant nodes were stronger in controls, and in the C2 correlation, where there was only positive correlation in AS and negative correlation in QS.

In the group comparisons, the frequency bands which show the most significant and consistent results vary a lot more. lNC has its most consistent and significant nodes between the 8.0 and 16.0 Hz frequency bands in AS, while rNC has consistent significant nodes through the whole frequency range in AS. Both features show significant nodes through all the frequency bands in QS. NPPC does not show any clear pattern in regards to which frequency bands display the most significant results. All of the significant and consistent nodes in the group comparison for PPC are in the two lowest frequency bands (4.0 and 5.7 Hz), with also some in the 8.0 Hz band

in AS.

The most consistent and significant nodes for all the features in the correlation with C2 results were found in the lower frequency bands, between 4.0 and 8.0 Hz. This holds true also for the correlation results between the features (Table 2), where practically all tests showed significant correlation at the lowest frequencies and all the strong significant correlation was within the three lowest frequency bands.

The results of this thesis clearly show that the selected synchrony features represent different coupling mechanisms and connections within the brain, since they are widely different between the features. The short-range connections depicted by lNC are being trained in different parts of the brain in comparison to the areas where long-range connections are still being established. The short-range connections develop only after the long-range networks have been made [17, 79]. The same applies to the regions which already show strong PPC and have a weak NPPC, since there no longer is a need to train the PPC.

5.2 Differences between controls and preterms

The main interest of this thesis was to find out if there are differences in functional brain connectivity between preterms and controls of approximately the same age. Based on the results there can clearly be seen significant differences, and they are looked into in this subsection.

5.2.1 Group comparison

Beginning with the group comparison results for NPPC, there were no clear differences between controls and preterms. In AS, the two significantly different nodes were located in the occipital region at the back of the brain, while in QS, the significantly different nodes were located towards the front of the brain in the frontal and central regions, regardless of which group was stronger at a node. Most of the significant nodes in both AS and QS are on the left hemisphere and in QS there are more significant differences in favour of the controls. However it can be said that NPPC does not differ greatly between the groups. This could mean that this mechanism is not necessary anymore at this stage of development, if the PPC is already well enough established in the brain.

Based on the lNC results, shown in Figure 14, in AS, the brain is seemingly divided at the center, where lNC is stronger in preterms in the frontal and central regions, while in the occipital area the lNC is significantly stronger in controls. In QS, there is no such spatial division, and there are significant differences in favour of both groups all over the brain. It is noteworthy however, that there is this boomerang shaped band of significantly stronger lNC at the occipital and temporal regions in favour of preterms, which is not seen in AS at all. In the same occipital region, there is a cluster of nodes, which is seen in both AS and QS, at quite many frequency bands, where the lNC is systematically stronger in controls. In QS, the significant nodes are much more symmetric between hemispheres, than in AS.

What is interesting when comparing the rNC Figures of AS (15a) and QS (15b),

is how in AS the strongest connecting nodes are situated towards the temporal and occipital regions of the brain and none towards the frontal area, whereas in QS the strong connecting nodes are located all over the brain and in both cases the strong connections are both intra- and inter-hemispheric. It is also worth noting how in QS, the preterms have significantly stronger rNC in large portions of the frontal and especially central areas, while the controls have stronger nodes in the occipital region. The situation is slightly different in AS, where controls have significantly stronger nodes at the frontal area, but the preterms do still have most of the significantly stronger nodes in the central area.

The significant differences between groups in lNC and rNC may indicate the areas of the brain where SATs are still training emerging connections and networks in the brain. This means that the nodes which are significantly stronger in preterms have still more SATs, while in controls they have already diminished. Neither structural or functional connections in the brain grow simultaneously everywhere, which explains why there are some regions that are stronger in controls and others that are stronger in preterms. The most important longer range connections develop first before establishing shorter range cortico-cortical connections [17, 79]. The development of intra-cortical connections is also needed before the functional connections are capable of generating precise high-frequency activity, which is presumed to be necessary for cognitive functions [48, 80].

The feature which resulted in significant differences, which were mostly in favour of one group was PPC, where almost all significant difference was caused by stronger PPC in controls. It is very interesting to note how the significantly stronger nodes for controls are distributed between AS and QS, as most of the nodes are in the frontal area, some are in the central area and only a few are in the temporal and occipital areas. These PPC results, where controls are significantly stronger in very large areas of the brain, could be explained by stronger more established connections in controls, which can produce precise high-frequency activity. The very stark difference between the groups in the frontal region both in AS and QS, is very noteworthy, since the frontal lobe is related to higher cognitive tasks, such as working memory, problem solving, task management and decision making [48, 81, 82].

5.2.2 Nodal comparison

Across all nodal comparisons it is quite clear that there are differences between controls and preterms. For the most part, the results for preterms are characterized by not so pronounced significant differences and another very noticeable difference is the greater amount of insignificant results. This means that within the preterms' brain there are not as many significantly different nodes, as in the controls' brain. The lesser amount of significant differences could possibly be caused by the fact that the brain has not developed as fast and the nodes have not yet differentiated so clearly from one another.

Even if there are some visible differences in the adjacency matrices between the two groups, they are for the most part very similar and the patterns created by the significant differences clearly resemble each other. Based on this it is evident that

prematurity does not in itself cause any "miswired" connections within the brain.

5.2.3 Features vs. neurological outcome

There was a very clear difference between controls and preterms when looking at the results of the neurological score C2 correlations, as the only feature with which preterms had any significant results was lNC, while none of the other features displayed any significant correlation with C2. The controls showed significant results with all features except NPPC. Positive correlation between features and C2 mean that when the value of the feature grows, the value of C2 grows as well and in negative correlation the C2 value diminishes while the feature value grows.

In the features vs. C2 correlation results, it can be seen that in most cases there is both significant positive and negative correlation in both sleep states, except for the PPC results, which show significant positive correlation only in AS and significant negative correlation only in QS. In most of the cases which show both positive and negative correlation in both sleep states, there is a division between hemispheres, where one hemisphere has only positive correlation and the other hemisphere has only negative correlation. This can be seen in Figure 22a, which shows results for lNC in controls in AS, Figure 23b, which shows results for lNC in preterms in QS, and to some extent in Figure 24 showing the results for rNC. In the rNC results, both types of correlation are found in both hemispheres, but it is clear that most of the significant positive correlation is in one hemisphere and most of the significant negative correlation is in the other. In the remaining results it can be seen how there are significant results only in one hemisphere: the lNC results for controls in QS (Figure 22b) show how all the significant correlation is in the right hemisphere and in preterms the lNC results in AS (Figure 23a) show how the significant results are in the left hemisphere only.

Similarly to the group comparison, NPPC does not show any clear differences between the groups. This means that at this age, there are not many significant differences between the control group and the preterms, when looking at NPPC.

5.3 Correlation with neurological outcome

The fact that there was practically no significant correlation between the synchrony features and motor outcome (C1), while significant correlations were found between the features and cognitive outcome (C2) is intriguing. There does not seem to be a link between the C1 score and the synchrony features used in this thesis. This could be due to the fact that PPC is linked to higher cognitive tasks [48, 81, 82] and that cross-frequency phase–amplitude coupling (depicted with NC) has been shown to play a role in learning and memory [83, 84]. Some other synchrony feature could be used to possibly show significant correlation with the motor outcome.

It is also noteworthy that the preterms showed significant correlation only between lNC and C2, while controls showed significant correlation results with C2 in lNC, rNC and PPC. As the neurological scores have shown some predictive value related to motor and neurological outcome, the question of whether the synchrony features

that showed strongest significant correlations could also have some predictive worth has to be discussed. The value of a possibly predictive synchrony feature would be greater for prematurely born babies, since they are at higher risk for neurological disorders. That is however not the case based on these results, since only controls had features which were consistently significantly correlated with C2, and even in controls the number of significant nodes for the synchrony features were quite low.

When looking at the C2 correlation results for controls, it can be seen that the most consistent nodes throughout all the features are in the right hemisphere and most of them are either in the central or occipital regions. The only feature that shows a closely packed cluster of several nodes which have similar and consistent correlation is PPC in AS (Figure 25a), where a cluster of 4 positively correlated nodes are in the occipital region. The similar phenomenon can be seen in the rNC QS results (Figure 24b), although in this case not all the nodes are quite as consistent. Based on these results, PPC and rNC show the most consistent significant correlations with the cognitive outcome. However, further research is needed to determine the predictive value of these features. The results of this thesis do not deny the idea of synchrony features having use as predictive tools.

5.4 Differences between sleep states

In the group comparison results, QS shows more significant nodes with all the synchrony features. In addition to a larger amount of significant nodes seen in QS, a larger portion of the significant nodes are consistent throughout many frequency bands. A difference between sleep states can also be seen in the nodal comparison results, where for most features (lNC, Figure 18; rNC, Figure 19 and NPPC, Figure 20) more significant and strong differences are seen. This manifests itself as less white space in the adjacency matrices, and darker colours. Only in the case of PPC, it is very hard to tell the adjacency matrices of AS apart from the ones of QS, but when comparing the two very closely QS does end up showing more significant results.

In the case of correlations with the neurological score C2, the same pattern continues, but it is not quite as clear, since the results do not show that many significant nodes overall. For example, in the lNC results in controls (Figure 22) and preterms (Figure 23), the amount of significant nodes is identical (four in AS and four in QS for controls) or very close (three in AS and two in QS for preterms). Although the results are very similar in number, the significant nodes in QS are more consistent throughout the frequency range. This holds true also for the rNC results for controls (Figure 24). The PPC results (Figure 25) do not fit this trend, as there are four significant and consistent nodes in AS and only one significant and consistent node in QS. It is also interesting, how the significant nodes in AS show only positive correlation and in QS the node shows negative correlation.

Similar differences between sleep states have been found in a previous study conducted by Tokariev and colleagues [12], where NC was found to be significantly stronger in QS, in comparison to AS, at all frequencies, while PPC was significantly stronger in QS rather than AS, at frequency bands below 1 Hz and above 4 Hz. The results of this thesis are in line with these findings.

As all the experiments and statistical tests were done separately at both sleep states, it can be seen that there are clear differences, throughout the results displayed in this thesis. Even though QS shows more significant results, AS should not be discarded from future research as both sleep states are valuable and might show different results. The reason why QS shows more significant results might be due to the fact that in QS the voltage is higher, the inter-SAT activity has a lower frequency and the nature of the EEG signal is more jagged and discontinuous.

5.5 Strengths and limitations of the study

The strengths of this study begin with large enough sample sizes (67 controls and 46 preterms). The preprocessing of the data was done meticulously, where artefacts were removed to achieve as good data as possible for the experiments. The source reconstruction of the cortical signals removed many potential problems, caused by volume conduction and other difficulties related to synchrony features calculated from raw EEG signals [10, 45]. Once the synchrony features were calculated from the data, the fidelity operator was applied to remove unreliable cortical sources and pairwise comparisons. With median normalization, potentially subjective differences are accounted for, and by doing age correction to the synchrony features, the confounding factor of age was excluded. After using the Wilcoxon rank tests and Spearman's correlation to calculate the results of this thesis, post-hoc correction was used to remove false positives and ensure that the results are actually significant. All of the above means that the data has been prepared and handled with the necessary attention in order to achieve as reliable results as possible.

The strength of this thesis and its results are also based on the large range of frequency bands that were investigated: bands centered around 4.0, 5.7, 8.0, 11.3 and 16.0 Hz. Also several synchrony features were calculated from the data (lNC, rNC, NPPC, PPC), which add to the robustness of the research, as they depict different coupling mechanisms of the brain.

There are also some limitations to the study. For example, source signal reconstruction is not without its challenges and problems, such as field spread, which can add some inaccuracies to the functional connectivity measures. The results of this thesis only show the general landscape of the functional brain connectivity between the two groups, and based on them it can not be analyzed if and how these prematurely born babies have a higher likelihood of developing neurological disorders. The results show significant differences, but they can not be used to make predictions on the babies' outcomes.

5.6 Future directions

The results of this thesis clearly show how there are significant differences in the functional brain connectivity between babies born prematurely and fullterm babies. The fact that the differences span throughout the wide range of frequency bands and all the synchrony features shows that the results of this thesis are not coincidence. Since functional connectivity is linked to many neurological disorders, further research

is and certainly will be done on this subject. Especially the potential predictive value of functional connectivity features in regards to the neurological outcome of babies is a matter that needs more research. lNC, rNC and PPC in controls and lNC in preterms showed significant correlations with the cognitive outcome (C2). Based on the results of this thesis it can not be said for certain that synchrony features can be used to predict cognitive outcome, but the results do not deny the possibility of it.

In future studies some other synchrony features could be added to the research, in order to find if they would be better suited to predict the neurological outcomes of babies.

6 Conclusions

The aim of this thesis was to study the differences in functional connectivity between prematurely born babies and babies born fullterm at the term-equivalent age. Another aspect of the study was to experiment and find out if the synchrony features that are used to measure functional connectivities could show potential in predicting the neurological outcome of babies. The work done in this thesis was novel work, in which different coupling mechanisms (phase–amplitude and phase–phase) of functional connectivity were compared between the two groups. The experiments were conducted throughout a wide range of frequency bands, at two sleep states and using several synchrony features.

Based on the differences between the groups, it can be said that NPPC as a feature does not show significant differences at this developmental stage, local and remote NC display some clear regional differences and the PPC results show that it is a lot more developed in controls, in practically the whole brain. The greater amount of significantly stronger nodes in preterms both for local and remote NC, could be due to the fact that SATs have largely diminished in the control group, but are still present in the preterms. This would mean a slight delay in the development of the functional brain connectivity. The PPC group comparison differences are of importance, because precise high-frequency activity is thought to be needed in cognitive functions. Also the fact that the differences are prominent in the frontal lobe, which plays an important role in the same cognitive functions is noteworthy. It can be argued that being born prematurely negatively affects the development of phase synchrony and possibly cognition.

When looking at the correlation results between the features and the neurological outcome, no clear relationship was found between the features and motor outcome as there was almost no significant correlation. The correlation between cognitive outcome and the features on the other hand did show significant correlations, mostly in controls. This means that from the synchrony features used in this thesis lNC, rNC and PPC need to be studied further in the context of predicting cognitive outcome. Due to the lack of correlation in preterms, the predictive value and the strength of the prediction would probably be higher in babies that were born fullterm. Based on the results of this thesis, it can not be declared that functional connectivity features can be used to predict the outcome, but the results do not disprove it either.

Clear, more pronounced and consistent differences can be seen in QS when compared to AS, as more consistent significant nodes (shown at several frequency bands) are seen in QS. This information can be of use in future research, where functional connectivity is studied. However, only studying QS is not encouraged, as the results between sleep states vary and both hold valuable information.

The differences in functional connectivity between the two groups, shown in this thesis certainly need more research. It would be interesting to find out how the differences in functional connectivity develop with age and what the long-term outcomes are. Most importantly the predictive potential of synchrony features need to be studied, since the results shown here are inconclusive, but plausible.

References

[1] N. Marlow, "Neurocognitive outcome after very preterm birth," *Archives of disease in childhood. Fetal and neonatal edition*, vol. 89, no. 3, pp. F224–8, 2004.

[2] H. Blencowe, S. Cousens, M. Z. Oestergaard, D. Chou, A. B. Moller, R. Narwal, A. Adler, C. Vera Garcia, S. Rohde, L. Say, and J. E. Lawn, "National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: A systematic analysis and implications," *The Lancet*, vol. 379, no. 9832, pp. 2162–2172, 2012.

[3] L. Liu, H. L. Johnson, S. Cousens, J. Perin, S. Scott, J. E. Lawn, I. Rudan, H. Campbell, R. Cibulskis, M. Li, C. Mathers, and R. E. Black, "Global, regional, and national causes of child mortality: An updated systematic analysis for 2010 with time trends since 2000," *The Lancet*, vol. 379, no. 9832, pp. 2151–2161, 2012.

[4] M. E. Thomason, M. T. Dassanayake, S. Shen, Y. Katkuri, M. Alexis, A. L. Anderson, L. Yeo, S. Mody, E. Hernandez-Andrade, S. S. Hassan, C. Studholme, J.-W. Jeong, and R. Romero, "Cross-Hemispheric Functional Connectivity in the Human Fetal Brain," *Science Translational Medicine*, vol. 5, no. 173, pp. 173ra24–173ra24, 2013.

[5] K. Friston, "Functional and effective connectivity in neuroimaging: a synthesis," *Human Brain Mapping*, vol. 2, no. 1-2, pp. 56–78, 1994.

[6] K. J. Friston, "Functional and effective connectivity: a review," *Brain Connectivity*, vol. 1, no. 1, pp. 13–36, 2011.

[7] M. Brookes, G. O'Neill, E. Hall, M. Woolrich, A. Baker, S. Palazzo Corner, S. Robson, P. Morris, and G. Barnes, "Measuring temporal, spectral and spatial changes in electrophysiological brain network connectivity," *NeuroImage*, vol. 91, pp. 282–299, 2014.

[8] C. J. Honey, R. Kötter, M. Breakspear, and O. Sporns, "Network structure of cerebral cortex shapes functional connectivity on multiple time scales." *Proceedings of the National Academy of Sciences*, vol. 104, no. 24, pp. 10 240–10 245, 2007.

[9] S. Vanhatalo and K. Kaila, "Emergence of spontaneous and evoked electroencephalographic activity in the human brain," *The Newborn Brain: Neuroscience and Clinical Applications*, vol. 2, no. 15, pp. 229–243, 2010.

[10] S. Palva and J. M. Palva, "Discovering oscillatory interaction networks with M/EEG: Challenges and breakthroughs," *Trends in Cognitive Sciences*, vol. 16, no. 4, pp. 219–229, 2012.

[11] S. Vanhatalo and P. Fransson, "Advanced EEG and MRI Measurements to Study the Functional Development of the Newborn Brain," in *Prenatal and Postnatal Determinants of Development, Neuromethods*, 1st ed., D. W. Walker, Ed. New York: Humana Press, 2016, vol. 109, ch. 4, pp. 53–68.

[12] A. Tokariev, M. Videman, J. M. Palva, and S. Vanhatalo, "Functional brain connectivity develops rapidly around term age and changes between vigilance states in the human newborn," *Cerebral Cortex*, vol. 26, no. 12, pp. 4540–4550, 2016.

[13] J.-P. Lachaux, E. Rodriguez, J. Martinerie, and F. J. Varela, "Measuring Phase Synchrony in Brain Signals," *Hum Brain Mapping*, vol. 8, pp. 194–208, 1999.

[14] S. Vanhatalo, J. M. Palva, S. Andersson, C. Rivera, J. Voipio, and K. Kaila, "Slow endogenous activity transients and developmental expression of K +-Cl- cotransporter 2 in the immature human cortex," *European Journal of Neuroscience*, vol. 22, no. 11, pp. 2799–2804, 2005.

[15] A. Tokariev, J. M. Palva, and S. Vanhatalo, "Infraslow activity transients nest the higher frequency phase synchrony in sleeping neonates," Poster session presented at the annual meeting of the Organisation for Human Brain Mapping, Geneva, Switzerland, 2016.

[16] D. H. Sanes, T. A. Reh, and W. A. W. A. Harris, *Development of the nervous system.* Elsevier, 2012.

[17] I. Kostović and N. Jovanov-Milošević, "The development of cerebral connections during the first 20-45 weeks' gestation," *Seminars in Fetal and Neonatal Medicine*, vol. 11, no. 6, pp. 415–422, 2006.

[18] I. Kostović and M. Judaš, "The development of the subplate and thalamocortical connections in the human foetal brain," *Acta Paediatrica, International Journal of Paediatrics*, vol. 99, no. 8, pp. 1119–1127, 2010.

[19] S. Vanhatalo and K. Kaila, "Development of neonatal EEG activity: From phenomenology to physiology," *Seminars in Fetal and Neonatal Medicine*, vol. 11, no. 6, pp. 471–478, 2006.

[20] H. Lagercrantz, *The newborn brain : neuroscience and clinical applications.* Cambridge University Press, 2010.

[21] A. Qiu, S. Mori, and M. I. Miller, "Diffusion tensor imaging for understanding brain development in early life." *Annual review of psychology*, vol. 66, pp. 853–76, jan 2015.

[22] S. Saigal and L. W. Doyle, "An overview of mortality and sequelae of preterm birth from infancy to adulthood," *The Lancet*, vol. 371, no. 9608, pp. 261–269, 2008.

[23] K. L. Costeloe, E. M. Hennessy, S. Haider, F. Stacey, N. Marlow, and E. S. Draper, "Short term outcomes after extreme preterm birth in England: comparison of two birth cohorts in 1995 and 2006 (the EPICure studies)," *Bmj*, vol. 345, no. dec04 3, pp. e7976–e7976, 2012.

[24] K. Klebermass, M. Olischar, T. Waldhoer, R. Fuiko, A. Pollak, and M. Weninger, "Amplitude-Integrated EEG Pattern Predicts Further Outcome in Preterm Infants," *Pediatric Research*, vol. 70, no. 1, pp. 102–108, jul 2011.

[25] E. Griesmaier, D. P. Enot, M. Bachmann, V. Neubauer, L. Hellström-Westas, U. Kiechl-Kohlendorfer, and M. Keller, "Systematic characterization of amplitude-integrated EEG signals for monitoring the preterm brain," *Pediatric Research*, vol. 73, no. 2, pp. 226–235, 2013.

[26] S. Wikström, I. H. Pupp, I. Rosén, E. Norman, V. Fellman, D. Ley, and L. Hellström-Westas, "Early single-channel aEEG/EEG predicts outcome in very preterm infants," *Acta Paediatrica*, vol. 101, no. 7, pp. 719–726, jul 2012.

[27] M. J. Benders, K. Palmu, C. Menache, C. Borradori-Tolsa, F. Lazeyras, S. Sizonenko, J. Dubois, S. Vanhatalo, and P. S. Hüppi, "Early brain activity relates to subsequent brain growth in premature infants," *Cerebral Cortex*, vol. 25, no. 9, pp. 3014–3024, 2015.

[28] J. Dubois, M. Benders, C. Borradori-Tolsa, A. Cachia, F. Lazeyras, R. Ha-Vinh Leuchter, S. V. Sizonenko, S. K. Warfield, J. F. Mangin, and P. S. Hüppi, "Primary cortical folding in the human newborn: An early marker of later functional development," *Brain*, vol. 131, no. 8, pp. 2028–2041, 2008.

[29] S. Baillet, J. C. Mosher, and R. M. Leahy, "Electromagnetic brain mapping," *IEEE Signal Processing Magazine*, vol. 18, no. 6, pp. 14–30, 2001.

[30] M. J. Aminoff, *Aminoff's Electrodiagnosis in Clinical Neurology*, 6th ed. Saunders, 2012.

[31] E. Niedermeyer and F. Lopes Da Silva, *Electroencephalography: Basic Principles, Clinical Applications, and Related Fields*. Boston, MA: Lippincott-Williams & Wilkins, 2004, vol. 1.

[32] V. L. Towle, J. Bolaños, D. Suarez, K. Tan, R. Grzeszczuk, D. N. Levin, R. Cakmur, S. A. Frank, and J. P. Spire, "The spatial location of EEG electrodes: locating the best-fitting sphere relative to cortical anatomy," *Electroencephalography and Clinical Neurophysiology*, vol. 86, no. 1, pp. 1–6, 1993.

[33] G. J. Tortora and B. Derrickson, *Principles of Anatomy & Physiology 14th Edition*, 2014.

[34] H. Hallez, B. Vanrumste, R. Grech, J. Muscat, W. De Clercq, A. Vergult, Y. D'Asseler, K. P. Camilleri, S. G. Fabri, S. Van Huffel, and I. Lemahieu,

"Review on solving the forward problem in EEG source analysis," *Journal of NeuroEngineering and Rehabilitation*, vol. 4, no. 1, p. 46, 2007.

[35] E. van Diessen, T. Numan, E. van Dellen, A. W. van der Kooi, M. Boersma, D. Hofman, R. van Lutterveld, B. W. van Dijk, E. C. van Straaten, A. Hillebrand, and C. J. Stam, "Opportunities and methodological challenges in EEG and MEG resting state functional brain network research," *Clinical Neurophysiology*, vol. 126, no. 8, pp. 1468–1481, 2015.

[36] A. Tokariev, "Studying connectivity in the neonatal EEG," Ph.D. dissertation, 2015.

[37] M. A. Carskadon and W. C. Dement, "Normal Human Sleep : An Overview," in *Principles and practice of sleep medicine*, 5th ed., M. Kryger, T. Roth, and W. Dement, Eds. St. Louis: Elsevier Saunders, 2011, ch. 2, pp. 16–26.

[38] M. Tolonen, J. M. Palva, S. Andersson, and S. Vanhatalo, "Development of the spontaneous activity transients and ongoing cortical activity in human preterm babies," *Neuroscience*, vol. 145, no. 3, pp. 997–1006, 2007.

[39] S. Vanhatalo, J. Voipio, and K. Kaila, "Full-band EEG (FbEEG): An emerging standard in electroencephalography," *Clinical Neurophysiology*, vol. 116, no. 1, pp. 1–8, 2005.

[40] S. T. Sipila, "Depolarizing GABA Acts on Intrinsically Bursting Pyramidal Neurons to Drive Giant Depolarizing Potentials in the Immature Hippocampus," *Journal of Neuroscience*, vol. 25, no. 22, pp. 5280–5289, 2005.

[41] M. Videman, A. Tokariev, H. Saikkonen, S. Stjerna, H. Heiskala, O. Mantere, and S. Vanhatalo, "Newborn Brain Function Is Affected by Fetal Exposure to Maternal Serotonin Reuptake Inhibitors," *Cerebral Cortex*, p. bhw153, 2016.

[42] O. Sporns, *Networks of the brain*, 1st ed. MIT Press, 2011.

[43] S. L. Bressler and V. Menon, "Large-scale brain networks in cognition: emerging methods and principles," pp. 277–290, 2010.

[44] P. J. Uhlhaas, F. Roux, E. Rodriguez, A. Rotarska-Jagiela, and W. Singer, "Neural synchrony and the development of cortical networks," *Trends in Cognitive Sciences*, vol. 14, no. 2, pp. 72–80, 2010.

[45] A. M. Bastos and J.-M. Schoffelen, "A Tutorial Review of Functional Connectivity Analysis Methods and Their Interpretational Pitfalls," *Frontiers in Systems Neuroscience*, vol. 9, no. January, pp. 1–23, 2016.

[46] P. Fries, "A mechanism for cognitive dynamics: Neuronal communication through neuronal coherence," *Trends in Cognitive Sciences*, vol. 9, no. 10, pp. 474–480, 2005.

[47] W. Singer, "Neuronal Syncrhony: A Versatile Code for the Definition of Relations?" *Neuron*, vol. 24, pp. 49–65, 1999.

[48] J. M. Palva, S. Monto, S. Kulashekhar, and S. Palva, "Neuronal synchrony reveals working memory networks and predicts individual memory capacity," *Proceedings of the National Academy of Sciences*, vol. 107, no. 16, pp. 7580–7585, 2010.

[49] A. K. Engel, C. Gerloff, C. C. Hilgetag, and G. Nolte, "Intrinsic Coupling Modes: Multiscale Interactions in Ongoing Brain Activity," pp. 867–886, 2013.

[50] R. T. Canolty and R. T. Knight, "The functional role of cross-frequncy coupling," *Trends in cognitive sciences*, vol. 14, no. 11, pp. 506–515, 2012.

[51] J. Daume, T. Gruber, A. K. Engel, and U. Friese, "Phase-Amplitude Coupling and Long-Range Phase Synchronization Reveal Frontotemporal Interactions during Visual Working Memory," *The Journal of Neuroscience*, vol. 37, no. 2, pp. 313–322, 2017.

[52] T. FitzGerald, "Cross-frequency coupling within and between the human thalamus and neocortex," *Frontiers in Human Neuroscience*, vol. 7, no. March, pp. 1–13, 2013.

[53] S. Palva, S. Monto, and J. M. Palva, "Graph properties of synchronized cortical networks during visual working memory maintenance," *NeuroImage*, vol. 49, no. 4, pp. 3257–3268, 2010.

[54] J. Jeong, "EEG dynamics in patients with Alzheimer's disease," *Clinical Neurophysiology*, vol. 115, no. 7, pp. 1490–1505, 2004.

[55] J. Dauwels, F. Vialatte, T. Musha, and A. Cichocki, "A comparative study of synchrony measures for the early diagnosis of Alzheimer's disease based on EEG," *NeuroImage*, vol. 49, no. 1, pp. 668–693, 2010.

[56] A. Tokariev, K. Palmu, A. Lano, M. Metsäranta, and S. Vanhatalo, "Phase synchrony in the early preterm EEG: Development of methods for estimating synchrony in both oscillations and events," *NeuroImage*, vol. 60, no. 2, pp. 1562–1573, 2012.

[57] A. Tokariev, S. Vanhatalo, and J. M. Palva, "Analysis of infant cortical synchrony is constrained by the number of recording electrodes and the recording montage," *Clinical Neurophysiology*, vol. 127, no. 1, pp. 310–323, 2016.

[58] M. Odabaee, A. Tokariev, S. Layeghy, M. Mesbah, P. B. Colditz, C. Ramon, and S. Vanhatalo, "Neonatal EEG at scalp is focal and implies high skull conductivity in realistic neonatal head models," *NeuroImage*, vol. 96, pp. 73–80, 2014.

[59] J. Kybic, M. Clerc, T. Abboud, O. Faugeras, R. Keriven, and T. Papadopoulo, "A common formalism for the integral formulations of the forward EEG problem," *IEEE Transactions on Medical Imaging*, vol. 24, no. 1, pp. 12–28, 2005.

[60] A. Gramfort, T. Papadopoulo, E. Olivi, and M. Clerc, "OpenMEEG: opensource software for quasistatic bioelectromagnetics," *BioMedical Engineering OnLine*, vol. 9, no. 1, p. 45, 2010.

[61] A. M. Dale, A. K. Liu, B. R. Fischl, R. L. Buckner, J. W. Belliveau, J. D. Lewine, and E. Halgren, "Dynamic Statistical Parametric Mapping: Combining fMRI and MEG for High-Resolution Imaging of Cortical Activity," *Neuron*, vol. 26, no. 1, pp. 55–67, 2000.

[62] O. Korhonen, S. Palva, and J. M. Palva, "Sparse weightings for collapsing inverse solutions to cortical parcellations optimize M/EEG source reconstruction accuracy," *Journal of Neuroscience Methods*, vol. 226, pp. 147–160, 2014.

[63] R. C. Sotero, A. Bortel, S. Naaman, V. M. Mocanu, P. Kropf, M. Villeneuve, and A. Shmuel, "Laminar distribution of phase-amplitude coupling of spontaneous current sources and sinks," *Frontiers in Neuroscience*, vol. 9, p. 454, 2015.

[64] A. Tokariev, J. M. Palva, S. Stjerna, M. Metsäranta, and S. Vanhatalo, "Electric networks in the newborn brain are affected by prematurity," Under review.

[65] R. McNamee, "Regression modelling and other methods to control confounding," *Occupational and Environmental Medicine*, vol. 62, no. 7, pp. 500–506, 2005.

[66] M. A. Pourhoseingholi, A. R. Baghestani, and M. Vahedi, "How to control confounding effects by statistical analysis," *Gastroenterology and Hepatology from Bed to Bench*, vol. 5, no. 2, pp. 79–83, 2012.

[67] F. Wilcoxon, "Individual Comparisons by Ranking Methods," *Biometrics Bulletin*, vol. 1, no. 6, p. 80, 1945.

[68] J. D. Gibbons and S. Chakraborti, *Nonparametric Statistical Inference*, 2003, vol. 15, no. 2.

[69] M. M. Mukaka, "A guide to appropriate use of Correlation coefficient in medical research." *Malawi Medical Journal*, vol. 24, no. 3, pp. 69–71, 2012.

[70] A. J. Bishara and J. B. Hittner, "Testing the significance of a correlation with nonnormal data: Comparison of Pearson, Spearman, transformation, and resampling approaches." *Psychological Methods*, vol. 17, no. 3, pp. 399–417, 2012.

[71] D. J. Best and D. E. Roberts, "The Upper Tail Probabilities of Spearman ' s Rho," *Applied Statistics*, vol. 24, no. 3, pp. 377–379, 1975.

[72] J. L. Myers, A. D. Well, and R. F. Lorch Jr., *Research design and statistical analysis*, 2nd ed. Lawrence Erlbaum Associates, 2010.

[73] S. Stjerna, M. Metsäranta, A. Lano, S. Vanhatalo, and L. Haataja, "Combination of Hammersmith neonatal neurological examination items associates with motor and cognitive development after two years in extremely preterm born infants," Unpublished.

[74] G. Cioni, H. F. R. Prechtl, F. Ferrari, P. B. Paolicelli, C. Einspieler, and M. F. Roversi, "Which better predicts later outcome in fullterm infants: Quality of general movements or neurological examination?" *Early Human Development*, vol. 50, no. 1, pp. 71–85, 1997.

[75] C. Einspieler, G. Cioni, P. B. Paolicelli, A. F. Bos, A. Dressler, F. Ferrari, M. F. Roversi, and H. F. R. Prechtl, "The early markers for later dyskinetic cerebral palsy are different from those for spastic cerebral palsy," *Neuropediatrics*, vol. 33, no. 2, pp. 73–78, 2002.

[76] I. Vasta, M. Kinali, S. Messina, A. Guzzetta, O. Kapellou, A. Manzur, F. Cowan, F. Muntoni, and E. Mercuri, "Can clinical signs identify newborns with neuromuscular disorders?" *Journal of Pediatrics*, vol. 146, no. 1, pp. 73–79, 2005.

[77] L. M. S. Dubowitz, V. Dubowitz, and E. Mercuri, *The neurological assessment of the pre-term & full-term newborn infant*, 2nd ed., M. Bax, H. Hart, M. Pountney, and S. Miller, Eds. London: Mac Keith Press, 1999.

[78] M. Xia, J. Wang, and Y. He, "BrainNet Viewer: A Network Visualization Tool for Human Brain Connectomics," *PLoS ONE*, vol. 8, no. 7, 2013.

[79] M. Judaš, M. Radoš, N. Jovanov-Miloševic, P. Hrabac, R. Štern-Padovan, and I. Kostovic, "Structural, immunocytochemical, and MR imaging properties of periventricular crossroads of growing cortical pathways in preterm infants," *American Journal of Neuroradiology*, vol. 26, no. 10, pp. 2671–2684, 2005.

[80] M. Steriade, "Grouping of brain rhythms in corticothalamic systems," *Neuroscience*, vol. 137, no. 4, pp. 1087–1106, 2006.

[81] S. Palva and J. M. Palva, "New vistas for α-frequency band oscillations," *Trends in Neurosciences*, vol. 30, no. 4, pp. 150–158, 2007.

[82] G. Buzsáki, "Theta rhythm of navigation: Link between path integration and landmark navigation, episodic and semantic memory," *Hippocampus*, vol. 15, no. 7, pp. 827–840, 2005.

[83] A. B. L. Tort, R. W. Komorowski, J. R. Manns, N. J. Kopell, and H. Eichenbaum, "Theta-gamma coupling increases during the learning of item-context associations," *Proceedings of the National Academy of Sciences*, vol. 106, no. 49, pp. 20 942–20 947, 2009.

[84] D. S. Rizzuto, J. R. Madsen, E. B. Bromfield, A. Schulze-Bonhage, and M. J. Kahana, "Human neocortical oscillations exhibit theta phase differences between encoding and retrieval," *NeuroImage*, vol. 31, no. 3, pp. 1352–1358, 2006.

A Features vs. age correlation

The tables below show the results of the correlation tests between the features and the age of the subjects at all the frequency bands for each node in the brain. The tables show the Spearman's correlation coefficient as Rho and the P-value of each test.

Table A1: Local NC and age correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.42807	0.0013861	-0.54839	2.13E-05	-0.38769	0.0041273	-0.2893	0.035637	-0.21985	0.1137
2 -C	0.17592	0.20766	0.20947	0.13223	0.3845	0.0044739	0.41919	0.0017827	0.18206	0.19199
3 - T	-0.3111	0.023364	-0.37005	0.0063852	-0.30799	0.024859	-0.14055	0.31547	-0.084427	0.5478
4 -F	-0.0030282	0.98283	0.24044	0.082875	0.18525	0.18418	0.11572	0.4093	0.17269	0.21626
5 - O	0.14188	0.31086	-0.022126	0.87504	0.0011709	0.99336	-0.012961	0.92661	0.064481	0.64644
6 - T	0.036702	0.79416	0.064723	0.6452	0.06335	0.65224	0.28114	0.041424	0.13381	0.33947
7 - O	0.0050067	0.97162	0.1074	0.44399	-0.011063	0.93733	0.076554	0.58587	0.03218	0.81907
8 - C	0.33601	0.013899	0.14758	0.29164	-0.049219	0.72635	0.20992	0.13139	0.29665	0.031012
9 - F	0.17124	0.22021	0.18194	0.19229	0.15945	0.25411	0.15165	0.27836	0.11225	0.42359
10 - F	0.15371	0.27181	0.25263	0.067988	0.21819	0.11651	0.14988	0.28409	0.24613	0.075634
11 - O	-0.033028	0.81438	-0.072274	0.60705	0.017604	0.90043	0.057819	0.6809	-0.0011709	0.99336
12 - F	0.26265	0.057431	0.20854	0.13399	0.10877	0.43816	0.15077	0.28122	0.19397	0.16402
13 - C	-0.27008	0.050486	-0.34219	0.012142	-0.28292	0.040102	-0.21714	0.11833	-0.17463	0.21107
14 - F	0.17967	0.19797	0.31114	0.023346	0.19679	0.15784	0.12133	0.3868	0.06222	0.65806
15 - F	0.066056	0.6384	0.22708	0.10202	0.20338	0.14412	-0.020996	0.88138	-0.09012	0.52104
16 - O	-0.32115	0.019039	-0.22304	0.10842	-0.19296	0.16626	-0.25461	0.065788	-0.040215	0.77495
17 - C	-0.014455	0.91818	0.0081156	0.95401	0.15327	0.27321	0.42327	0.0015896	0.31227	0.022821
18 - F	-0.02358	0.8669	0.07837	0.57698	0.18513	0.18448	0.084831	0.54588	0.20903	0.13307
19 - O	-0.33734	0.013503	-0.33113	0.015439	-0.34445	0.011548	-0.34021	0.012683	-0.27234	0.048514
20 - O	0.2765	0.04505	0.24484	0.077232	0.15404	0.27079	0.32341	0.018166	0.24621	0.075535
21 - O	-0.20721	0.13655	-0.074615	0.59542	-0.20572	0.13946	-0.25086	0.070014	-0.032422	0.81773
22 - F	0.22239	0.10948	0.15286	0.27449	0.033351	0.8126	0.053458	0.70382	0.2016	0.14774
23 - C	-0.028788	0.83786	-0.21617	0.12002	-0.40946	0.0023306	-0.17871	0.20044	-0.12896	0.3574
24 - C	-0.11859	0.39771	-0.35632	0.0088247	-0.30791	0.024899	-0.28946	0.035529	-0.20358	0.14372
25 - T	-0.32959	0.015952	-0.27779	0.044016	-0.29644	0.031132	-0.25054	0.070387	-0.13284	0.34301
26 - F	0.045262	0.74759	0.2184	0.11617	0.062341	0.65743	0.10797	0.44159	0.2337	0.092145
27 - C	-0.45068	0.00070791	-0.33452	0.014355	-0.37796	0.0052655	-0.32628	0.017108	-0.42835	0.0013749
28 - C	0.22986	0.097767	0.22179	0.11047	0.40493	0.0026327	0.46291	0.00048253	0.2127	0.12623
29 - T	-0.23766	0.086612	-0.36016	0.0080729	-0.3367	0.013694	-0.43292	0.0012049	-0.46558	0.00044304
30 - F	0.21076	0.1298	0.37639	0.0054735	0.23443	0.091108	0.18056	0.19572	0.36775	0.0067476
31 - O	0.067146	0.63285	0.11927	0.39496	0.039367	0.77958	-0.066136	0.63799	0.10252	0.46511
32 - T	0.12303	0.38014	0.13526	0.3342	0.30779	0.024959	0.11838	0.39852	0.0049259	0.97207
33 - O	-0.082731	0.5559	0.020955	0.8816	0.10752	0.44348	0.10296	0.46317	0.035814	0.79904
34 - C	0.10615	0.44935	0.2874	0.03692	0.14556	0.29836	0.086971	0.53576	0.1563	0.26373
35 - C	-0.27504	0.046237	-0.040134	0.77539	-0.086446	0.53824	-0.41806	0.0018399	-0.25687	0.063344
36 - F	0.42815	0.0013829	0.40724	0.0024749	0.16873	0.22713	0.1175	0.40209	0.0081156	0.95401
37 - F	0.29023	0.035023	0.39129	0.0037654	0.22784	0.10083	0.23132	0.095606	0.15553	0.26611
38 - O	0.10195	0.46759	-0.042072	0.76485	-0.0021803	0.98764	0.014858	0.9159	-0.0051682	0.9707
39 - F	0.155	0.26775	0.05047	0.71967	0.14887	0.28739	0.052449	0.70916	-0.17943	0.19858
40 - C	-0.50248	0.00012604	-0.41511	0.0019966	-0.40409	0.0026931	-0.42028	0.0017292	-0.24985	0.071186
41 - F	-0.063068	0.65369	0.16885	0.22679	0.27763	0.044144	0.21569	0.12087	-0.062624	0.65598
42 - F	0.15278	0.27475	0.25332	0.067219	0.12533	0.37123	0.073081	0.60303	-0.14321	0.30629
43 - O	-0.058707	0.67627	-0.20128	0.1484	-0.16098	0.24951	-0.13227	0.34509	-0.0035531	0.97986
44 - C	0.0107	0.93939	0.33137	0.015359	0.13643	0.33	0.34623	0.0111	0.32091	0.019134
45 - F	-0.045181	0.74803	0.08043	0.56698	0.15702	0.26149	0.2167	0.1191	0.36961	0.0064538
46 - O	-0.32055	0.019279	-0.32281	0.018396	-0.24246	0.080248	-0.26342	0.05668	-0.17342	0.2143
47 - O	-0.040699	0.77231	0.3008	0.028624	0.10106	0.4715	0.16784	0.22962	0.19381	0.16437
48 - O	-0.1091	0.43679	-0.18581	0.18282	-0.10829	0.44021	-0.030363	0.82912	0.038236	0.78576
49 - C	-0.31784	0.020381	-0.18965	0.17379	-0.21307	0.12557	-0.41236	0.0021531	-0.34825	0.010608
50 - C	-0.16534	0.23674	-0.06969	0.62	-0.3329	0.014863	-0.36306	0.0075408	-0.373	0.005946
51 - T	-0.2249	0.10544	-0.19425	0.16339	-0.12226	0.38314	-0.19813	0.15499	-0.010619	0.93984
52 - F	-0.090766	0.51804	0.16821	0.2286	0.18848	0.17652	-0.081843	0.56017	0.11515	0.4116

Table A2: Local NC and age correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.28273	0.021438	-0.32529	0.0076971	-0.45336	0.00013198	-0.39243	0.0011181	-0.31519	0.0099435
2 -C	-0.059782	0.63349	-0.20821	0.093415	-0.12598	0.31348	-0.21147	0.088282	-0.18526	0.13642
3 - T	-0.15288	0.22038	-0.16892	0.17516	-0.30995	0.011322	-0.20579	0.097382	-0.070087	0.57603
4 -F	0.21373	0.08486	0.23196	0.060919	0.31917	0.0089996	0.33704	0.0056531	0.20481	0.099026
5 - O	0.018332	0.88385	-0.034364	0.78414	0.18658	0.13361	0.24377	0.048563	0.177	0.15509
6 - T	0.38628	0.0013574	0.44899	0.00015596	0.45043	0.00014764	0.35186	0.0037658	0.23871	0.053577
7 - O	0.27748	0.024088	0.065969	0.5987	0.041827	0.73879	0.042684	0.73364	0.041847	0.73867
8 - C	0.028825	0.81829	-0.23927	0.052997	-0.081814	0.51372	-0.076755	0.54017	-0.081061	0.51761
9 - F	0.060723	0.62815	0.22592	0.068159	0.22951	0.063771	0.23029	0.062858	0.20704	0.095314
10 - F	0.36093	0.0029086	0.24343	0.048882	0.25702	0.037225	0.32427	0.0079027	0.25221	0.041053
11 - O	0.099769	0.42543	-0.021885	0.86154	0.14168	0.25648	0.17138	0.16885	0.16189	0.19406
12 - F	0.44559	0.00017737	0.47834	4.86E-05	0.5167	8.94E-06	0.3912	0.0011628	0.36469	0.0026075
13 - C	-0.15754	0.20646	-0.21958	0.076475	-0.29577	0.015901	-0.26611	0.030794	-0.07709	0.5384
14 - F	0.25449	0.0392	0.207	0.095382	0.30784	0.011921	0.23465	0.057895	0.13217	0.29011
15 - F	0.1611	0.19628	0.3015	0.013888	0.38513	0.001407	0.30219	0.013661	0.11359	0.36383
16 - O	-0.14377	0.24946	-0.087457	0.48501	-0.014862	0.90572	-0.17165	0.16816	-0.12096	0.33329
17 - C	0.15982	0.19989	0.22088	0.074711	0.29826	0.014997	0.24314	0.049163	0.22322	0.071606
18 - F	-0.0091763	0.94171	-0.055225	0.65964	0.13882	0.26632	0.10842	0.38618	0.11984	0.33786
19 - O	-0.36377	0.0026784	-0.25871	0.035949	-0.36183	0.002834	-0.23495	0.057574	-0.27479	0.025555
20 - O	0.033215	0.7912	0.060994	0.62661	0.073369	0.55824	-0.062479	0.61823	-0.11785	0.34598
21 - O	-0.0954	0.44608	-0.12767	0.30697	-0.12818	0.30506	-0.096404	0.44129	0.08428	0.50107
22 - F	0.26051	0.034635	0.14331	0.25099	0.17592	0.15768	0.15021	0.22866	0.1112	0.37405
23 - C	-0.11444	0.3602	-0.08336	0.50577	-0.27713	0.024277	-0.16239	0.19266	-0.11497	0.358
24 - C	-0.039235	0.75445	-0.052968	0.67274	-0.24162	0.050648	-0.27351	0.026274	-0.26883	0.029064
25 - T	-0.32213	0.0083462	-0.27142	0.02749	-0.33024	0.0067673	-0.22818	0.065376	-0.18486	0.13728
26 - F	0.11908	0.34092	0.13846	0.26755	0.1657	0.18364	0.10357	0.4079	0.017036	0.89201
27 - C	-0.33108	0.0066206	-0.33712	0.0056405	-0.38913	0.0012415	-0.36904	0.0022944	-0.32462	0.0078309
28 - C	-0.038545	0.75864	-0.12466	0.31861	-0.1228	0.32594	-0.16683	0.18063	-0.17067	0.17065
29 - T	-0.21718	0.079835	-0.32907	0.0069777	-0.29185	0.017422	-0.20228	0.10336	-0.18854	0.12949
30 - F	0.10568	0.39836	0.10297	0.41067	0.15844	0.20385	0.10194	0.41536	0.16511	0.18522
31 - O	0.15711	0.20775	0.11848	0.3434	0.138	0.26916	0.25192	0.041296	0.13277	0.28789
32 - T	0.48555	3.59E-05	0.45825	0.00010919	0.413	0.00056827	0.41241	0.00057966	0.39665	0.00097646
33 - O	0.088962	0.4775	0.12312	0.3247	0.10763	0.38969	0.19793	0.11115	0.16162	0.19481
34 - C	-0.058904	0.63849	-0.046822	0.70891	-0.0009406	0.99402	0.056584	0.6518	-0.013315	0.91549
35 - C	-0.36465	0.0026107	-0.32374	0.0080095	-0.3339	0.0061455	-0.48365	3.89E-05	-0.38169	0.0015657
36 - F	0.15159	0.22436	0.13593	0.27648	0.1051	0.40099	0.14124	0.25797	0.10368	0.40743
37 - F	0.18645	0.13388	0.11635	0.35222	0.30587	0.012504	0.32608	0.0075409	0.19231	0.12188
38 - O	0.16969	0.17316	0.10828	0.38683	0.24088	0.051373	0.23104	0.061979	0.14421	0.248
39 - F	0.39546	0.0010147	0.3157	0.0098197	0.37366	0.001999	0.36367	0.0026866	0.15255	0.2214
40 - C	-0.45779	0.00011117	-0.49563	2.32E-05	-0.45052	0.00014717	-0.45875	0.00010707	-0.3131	0.010474
41 - F	0.27516	0.025346	0.22178	0.073506	0.27176	0.027293	0.27489	0.025497	0.17243	0.16623
42 - F	0.063461	0.6127	0.14151	0.25705	0.090363	0.47056	0.12569	0.31462	-0.042349	0.73565
43 - O	-0.32215	0.0083417	-0.29709	0.015417	-0.193	0.12052	-0.11258	0.36811	-0.11737	0.34797
44 - C	0.08127	0.51653	0.022011	0.86075	0.17418	0.16189	0.027529	0.82633	-0.063106	0.6147
45 - F	0.017767	0.8874	-0.0038252	0.97568	0.089757	0.47356	0.26613	0.030781	0.25547	0.038423
46 - O	-0.27983	0.022873	-0.41172	0.00059337	-0.36914	0.0022873	-0.31101	0.011029	-0.23401	0.05861
47 - O	-0.054577	0.66339	-0.015489	0.90176	-0.040238	0.74838	-0.17659	0.15609	-0.19883	0.1095
48 - O	0.030121	0.81027	-0.011768	0.92528	0.086475	0.48994	0.089903	0.47283	0.14082	0.2594
49 - C	-0.21787	0.078859	-0.13606	0.27603	-0.16802	0.1775	-0.23856	0.053728	-0.20295	0.1022
50 - C	-0.15792	0.20537	-0.18624	0.13432	-0.19226	0.12196	-0.25353	0.039973	-0.27859	0.023506
51 - T	-0.2108	0.089316	-0.3066	0.012284	-0.26521	0.031386	-0.21112	0.08883	-0.066973	0.59314
52 - F	0.18365	0.13992	0.12088	0.33363	0.1163	0.35239	0.10849	0.38591	0.13037	0.29678

Table A3: Remote NC and age correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.21416	0.1236	-0.090766	0.51804	-0.03973	0.77759	0.038035	0.78686	0.18593	0.18253
2 -C	0.26406	0.056053	0.14806	0.29004	0.087455	0.53348	0.21117	0.12905	0.22837	0.10003
3 - T	-0.074252	0.59722	0.089595	0.52348	0.20237	0.14617	0.10009	0.47578	0.10978	0.43389
4 -F	0.11935	0.39464	-0.014051	0.92046	-0.17665	0.20576	-0.078815	0.57482	-0.022207	0.87459
5 - O	0.34417	0.011621	0.23535	0.089798	0.25163	0.069133	0.12064	0.38951	0.22486	0.1055
6 - T	0.052126	0.71087	0.13252	0.3442	0.19159	0.16936	0.12658	0.36643	-0.018129	0.89748
7 - O	0.23426	0.091338	0.05471	0.69721	0.12872	0.35832	0.14172	0.31141	0.02362	0.86668
8 - C	-0.18286	0.18999	-0.17374	0.21344	-0.21222	0.12712	-0.075908	0.58905	-0.022813	0.8712
9 - F	-0.11455	0.41408	-0.10086	0.47239	-0.19562	0.16038	-0.025841	0.85427	-0.050874	0.71752
10 - F	-0.15448	0.26939	-0.036056	0.79771	-0.10038	0.47453	-0.27206	0.048757	-0.15658	0.26286
11 - O	0.39855	0.0031178	0.31078	0.023516	0.22934	0.098557	0.19247	0.16735	0.089595	0.52348
12 - F	0.19744	0.15645	0.29963	0.02928	0.31421	0.021946	0.26669	0.053567	0.089757	0.52273
13 - C	-0.27371	0.047347	-0.15888	0.25582	-0.047563	0.73521	-0.099689	0.47757	-0.023701	0.86623
14 - F	-0.21973	0.1139	-0.34998	0.0102	-0.4867	0.0002196	-0.50079	0.00013396	-0.38899	0.0039938
15 - F	-0.29325	0.03308	-0.15852	0.25692	-0.20745	0.13608	-0.2979	0.030276	-0.29212	0.033795
16 - O	-0.086728	0.5369	0.060928	0.66473	0.20148	0.14798	0.19033	0.17221	0.061009	0.66431
17 - C	-0.19183	0.16881	-0.015182	0.91408	-0.055356	0.69381	-0.036581	0.79483	0.01397	0.92091
18 - F	-0.17519	0.20957	-0.14863	0.28818	-0.17418	0.21225	-0.093108	0.50726	0.0059353	0.96636
19 - O	-0.25958	0.060515	-0.20879	0.13353	-0.18343	0.1886	-0.12109	0.38775	-0.066661	0.63532
20 - O	-0.059434	0.67248	0.088384	0.52913	0.044616	0.75108	0.19966	0.15175	0.24125	0.081816
21 - O	-0.091331	0.51543	-0.17103	0.22076	-0.13243	0.3445	-0.044091	0.75391	0.010538	0.9403
22 - F	-0.12428	0.37528	-0.33912	0.012989	-0.4051	0.0026214	-0.4697	0.00038773	-0.38741	0.0041571
23 - C	0.0093269	0.94715	0.068882	0.62407	-0.029757	0.83248	0.23463	0.090822	0.14091	0.31421
24 - C	0.024468	0.86194	-0.1179	0.40047	-0.12908	0.35695	-0.11552	0.41012	-0.027456	0.84527
25 - T	-0.19982	0.15141	-0.10457	0.45615	-0.25998	0.060102	-0.0081964	0.95355	-0.04397	0.75457
26 - F	0.13223	0.34524	0.11051	0.43084	0.35224	0.0096898	0.36161	0.0078029	0.28679	0.037337
27 - C	-0.088626	0.528	-0.05152	0.71409	-0.11051	0.43084	-0.085679	0.54186	-0.099084	0.48026
28 - C	0.24795	0.073432	0.099003	0.48062	0.10571	0.45126	0.22728	0.1017	0.22195	0.1102
29 - T	0.18767	0.17841	0.05903	0.67458	-0.085194	0.54416	0.089555	0.52367	0.052207	0.71044
30 - F	-0.054024	0.70083	-0.041951	0.76551	-0.03331	0.81282	-0.12953	0.35528	-0.16409	0.24036
31 - O	0.21585	0.12059	0.27561	0.045772	0.26523	0.054933	0.31146	0.023195	0.27674	0.044854
32 - T	0.13324	0.34154	0.038923	0.782	0.029111	0.83607	0.17649	0.20618	0.14935	0.2858
33 - O	-0.066177	0.63778	0.089676	0.5231	0.10821	0.44056	0.042234	0.76397	0.11342	0.41874
34 - C	0.070901	0.61391	-0.05899	0.67479	-0.096701	0.49093	-0.092502	0.51004	0.051884	0.71216
35 - C	-0.082449	0.55726	-0.013526	0.92342	0.19744	0.15645	-0.10684	0.44641	-0.099245	0.47954
36 - F	0.05475	0.697	0.0086809	0.95081	-0.073081	0.60303	0.041991	0.76529	-0.004078	0.97688
37 - F	-0.19187	0.16872	-0.2748	0.046437	-0.2448	0.077282	-0.28025	0.042098	-0.24589	0.075932
38 - O	0.35426	0.0092528	0.22554	0.10441	0.36767	0.0067606	0.2958	0.031519	0.18674	0.18061
39 - F	0.21032	0.13063	0.19134	0.16991	0.17067	0.22176	0.34574	0.01122	0.35188	0.0097703
40 - C	-0.30597	0.025872	-0.36452	0.0072864	-0.24286	0.07973	-0.23265	0.093658	-0.30706	0.025321
41 - F	-0.26313	0.056955	-0.37845	0.0052029	-0.47693	0.00030558	-0.558	1.42E-05	-0.45545	0.00061079
42 - F	-0.24961	0.07147	-0.32907	0.016131	-0.28025	0.042098	-0.29507	0.031958	-0.3086	0.024562
43 - O	0.069245	0.62223	0.16429	0.23978	0.16126	0.24867	0.012194	0.93094	0.17976	0.19776
44 - C	-0.12121	0.38727	-0.088909	0.52668	0.11172	0.42577	0.12622	0.36782	0.14435	0.30244
45 - F	-0.04183	0.76616	-0.080066	0.56874	-0.068155	0.62774	-0.0083983	0.95241	0.08051	0.56659
46 - O	-0.08693	0.53595	-0.086244	0.53919	0.048815	0.72851	-0.0075504	0.95721	-0.076109	0.58805
47 - O	-0.1049	0.45475	0.11075	0.42982	0.065329	0.6421	0.09012	0.52104	0.087536	0.5331
48 - O	-0.022813	0.8712	0.10857	0.43901	-0.0070255	0.96018	0.12755	0.36274	0.028304	0.84056
49 - C	-0.067267	0.63224	-0.020875	0.88206	0.08802	0.53083	-0.0031897	0.98192	-0.02895	0.83697
50 - C	-0.15085	0.28096	-0.09549	0.4964	0.1089	0.43764	0.052045	0.7113	-0.10199	0.46741
51 - T	-0.038358	0.78509	-0.021601	0.87798	0.097993	0.48513	0.060282	0.66808	-0.022368	0.87368
52 - F	-0.0028667	0.98375	0.13958	0.31885	0.09016	0.52085	0.03973	0.77759	-0.054871	0.69636

Table A4: Remote NC and age correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.077361	0.53697	-0.022951	0.85486	0.032462	0.79583	0.11881	0.34203	0.15303	0.21993
2 -C	0.25299	0.040416	0.056542	0.65204	0.048076	0.70147	0.12506	0.31706	0.16915	0.17456
3 - T	0.079472	0.52588	0.051128	0.68349	0.013963	0.9114	0.077821	0.53454	0.08798	0.48239
4 -F	0.17477	0.16046	0.10046	0.42222	0.089861	0.47304	0.20623	0.096654	0.18177	0.1441
5 - O	0.42019	0.00044392	0.35186	0.0037658	0.38697	0.0013284	0.45852	0.00010804	0.41712	0.00049366
6 - T	0.37648	0.0018357	0.41613	0.0005106	0.3843	0.0014441	0.29028	0.018063	0.18601	0.13481
7 - O	-0.17972	0.14875	-0.26645	0.030577	-0.29197	0.017372	-0.29247	0.017171	-0.18612	0.13459
8 - C	-0.26003	0.034983	-0.2353	0.057186	-0.23422	0.058379	-0.27011	0.028281	-0.20547	0.097904
9 - F	-0.19661	0.11359	-0.26969	0.028536	-0.29525	0.016096	-0.27905	0.023269	-0.32567	0.0076228
10 - F	0.039799	0.75103	0.047345	0.70581	-0.073703	0.55645	-0.19617	0.11442	-0.22822	0.065326
11 - O	0.47523	5.53E-05	0.4741	5.79E-05	0.43095	0.00030355	0.43467	0.00026539	0.31783	0.0093084
12 - F	0.33127	0.0065879	0.3472	0.0042879	0.34101	0.0050795	0.24945	0.043393	0.12262	0.32669
13 - C	0.014339	0.90902	-0.030016	0.81091	-0.046091	0.71326	0.066534	0.59557	0.05395	0.66703
14 - F	-0.34088	0.0050968	-0.27094	0.027777	-0.32309	0.0081436	-0.32652	0.0074558	-0.3293	0.0069359
15 - F	-0.19185	0.12279	-0.18374	0.13974	-0.33959	0.0052786	-0.37575	0.0018768	-0.42897	0.00032591
16 - O	0.086245	0.4911	0.11168	0.37197	0.0037207	0.97635	-0.060326	0.6304	-0.045986	0.71388
17 - C	-0.21404	0.084393	-0.16827	0.17684	-0.21737	0.079568	-0.21981	0.07616	-0.16637	0.18186
18 - F	-0.26417	0.032085	-0.27755	0.024055	-0.30671	0.012253	-0.21892	0.077399	-0.16066	0.19752
19 - O	-0.13859	0.26712	-0.22458	0.069852	-0.17431	0.16158	-0.17498	0.15995	-0.073306	0.55858
20 - O	-0.032441	0.79595	0.030497	0.80794	-0.036747	0.76958	-0.047449	0.70519	-0.033674	0.78837
21 - O	0.18062	0.1467	0.098473	0.4315	0.14323	0.25127	0.17989	0.14837	0.29885	0.014791
22 - F	-0.38831	0.0012738	-0.31743	0.0094019	-0.36053	0.0029422	-0.32322	0.0081175	-0.3297	0.0068643
23 - C	0.037228	0.76665	0.028888	0.8179	0.10568	0.39836	0.1111	0.3745	0.15876	0.20295
24 - C	0.011078	0.92965	0.0054765	0.96519	0.030267	0.80936	0.014318	0.90915	0.014674	0.90691
25 - T	-0.007107	0.95484	-0.11285	0.36695	-0.088273	0.48093	-0.031501	0.80175	0.1291	0.30157
26 - F	-0.052842	0.67347	-0.10644	0.39499	-0.1111	0.3745	-0.206	0.097035	-0.12774	0.30673
27 - C	0.099644	0.42602	-0.0092599	0.94118	0.076253	0.54283	0.069836	0.5774	0.084238	0.50128
28 - C	0.1732	0.1643	0.059468	0.63528	0.033507	0.7894	0.12199	0.32919	0.14998	0.22938
29 - T	0.040781	0.74509	0.080476	0.52065	0.10418	0.40515	0.18919	0.12816	0.21674	0.080461
30 - F	0.17997	0.14817	0.16218	0.19324	0.11664	0.351	0.13169	0.29189	0.17034	0.1715
31 - O	0.39998	0.00087662	0.40528	0.00073616	0.4529	0.00013434	0.46866	7.22E-05	0.31904	0.0090282
32 - T	0.36197	0.002822	0.32606	0.007545	0.28704	0.019452	0.29828	0.01499	0.22585	0.068237
33 - O	-0.24973	0.043158	-0.23371	0.058935	-0.25892	0.035794	-0.26779	0.02972	-0.22491	0.069426
34 - C	0.21574	0.081907	0.10834	0.38655	0.083193	0.50662	0.098745	0.43022	0.097971	0.43386
35 - C	-0.28737	0.019305	-0.26649	0.03055	-0.21532	0.082515	-0.2691	0.028896	-0.25016	0.04278
36 - F	-0.31718	0.0094613	-0.22483	0.069532	-0.21492	0.083097	-0.13242	0.28919	-0.094878	0.44859
37 - F	-0.16923	0.17434	-0.058047	0.64339	-0.13875	0.26653	-0.14088	0.25918	-0.1352	0.27909
38 - O	0.4895	3.03E-05	0.47991	4.55E-05	0.48434	3.78E-05	0.48141	4.28E-05	0.38564	0.0013852
39 - F	0.12928	0.30086	0.093875	0.45342	0.13158	0.29227	0.1518	0.22372	0.024352	0.84611
40 - C	-0.3297	0.0068643	-0.34161	0.0049966	-0.2509	0.042156	-0.26193	0.033625	-0.10152	0.41729
41 - F	-0.35735	0.003223	-0.35834	0.0031338	-0.4033	0.00078611	-0.3773	0.0017908	-0.4371	0.00024294
42 - F	-0.33244	0.006388	-0.23277	0.059991	-0.30478	0.012836	-0.31191	0.010787	-0.30552	0.012612
43 - O	0.061621	0.62306	0.14496	0.24551	0.15311	0.21968	0.18196	0.14368	0.12715	0.30897
44 - C	-0.36484	0.0025964	-0.37178	0.0021149	-0.4057	0.00072602	-0.37945	0.001677	-0.2445	0.04787
45 - F	-0.17713	0.15479	-0.21354	0.085141	-0.23374	0.058912	-0.15019	0.22872	-0.084322	0.50085
46 - O	-0.24341	0.048902	-0.25788	0.036575	-0.19429	0.118	-0.15155	0.22449	-0.052445	0.67579
47 - O	-0.14923	0.23175	-0.26833	0.029377	-0.22105	0.074486	-0.22738	0.066345	-0.16277	0.19162
48 - O	0.0017976	0.98857	0.0043269	0.97249	0.099309	0.42758	0.092955	0.45788	0.10006	0.42407
49 - C	0.042015	0.73766	0.067683	0.58921	0.08474	0.49873	0.02663	0.83191	0.003219	0.97953
50 - C	0.012103	0.92316	0.024791	0.84337	0.037291	0.76626	0.040154	0.74888	0.0027174	0.98272
51 - T	-0.14055	0.26033	-0.15614	0.21058	-0.11141	0.37314	-0.078281	0.53212	0.069063	0.58163
52 - F	-0.1501	0.22899	-0.18457	0.13792	-0.20604	0.096965	-0.20391	0.10055	-0.20844	0.093046

Table A5: NPPC and age correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.079299	0.57246	-0.24529	0.07668	-0.056608	0.68724	0.11745	0.40226	0.29188	0.033949
2 -C	0.086486	0.53805	-0.12969	0.35468	-0.2744	0.046772	0.053095	0.70574	0.019704	0.88863
3 - T	-0.2079	0.13523	-0.35087	0.009997	0.021319	0.87957	0.07833	0.57718	0.02685	0.84865
4 -F	-0.084669	0.54665	0.185	0.18477	0.47886	0.00028642	0.17616	0.20702	0.46356	0.00047268
5 - O	-0.075948	0.58885	0.19607	0.15941	0.061412	0.66223	0.38164	0.004807	-0.12896	0.3574
6 - T	-0.33056	0.015626	0.2664	0.05383	0.055962	0.69063	-0.29426	0.032453	0.32018	0.019424
7 - O	0.032664	0.81639	-0.15492	0.268	-0.039044	0.78134	-0.039811	0.77715	-0.057334	0.68343
8 - C	0.083458	0.55242	-0.040376	0.77407	-0.20826	0.13453	0.013284	0.92479	0.092744	0.50892
9 - F	-0.063593	0.65099	-0.065773	0.63984	-0.14976	0.28449	-0.12993	0.35377	0.3172	0.020652
10 - F	-0.013405	0.9241	-0.11475	0.41326	-0.096015	0.49403	-0.0024226	0.98626	0.11156	0.42645
11 - O	0.0040376	0.97711	-0.024226	0.86329	0.043243	0.7585	0.07942	0.57187	-0.16744	0.23076
12 - F	-0.14645	0.29539	-0.12319	0.37951	0.11887	0.39658	0.103	0.46299	0.116	0.40815
13 - C	-0.13736	0.32669	-0.24089	0.082292	0.031453	0.82309	0.34263	0.012023	0.12775	0.36198
14 - F	0.041022	0.77056	0.041184	0.76968	-0.21399	0.12389	-0.12339	0.37873	0.1141	0.41591
15 - F	0.17903	0.19961	-0.075625	0.59044	0.12363	0.37778	-0.11475	0.41326	0.023418	0.86781
16 - O	0.0032705	0.98146	0.26455	0.055587	0.061412	0.66223	-0.047765	0.73413	-0.090847	0.51767
17 - C	0.040255	0.77473	-0.27416	0.046974	0.17741	0.20376	0.066056	0.6384	0.088989	0.5263
18 - F	0.053902	0.70147	-0.048007	0.73283	-0.12577	0.36952	-0.026931	0.8482	0.055881	0.69105
19 - O	0.081601	0.56133	-0.067105	0.63306	0.16809	0.22894	0.079138	0.57325	-0.19877	0.15362
20 - O	-0.028062	0.8419	-0.080591	0.5662	-0.32188	0.018754	0.087132	0.535	-0.22514	0.10505
21 - O	-0.026083	0.85292	0.05798	0.68006	-0.20067	0.14965	0.10793	0.44176	-0.35123	0.0099149
22 - F	-0.059919	0.66997	-0.11705	0.40389	-0.24307	0.079472	-0.21666	0.11917	0.079501	0.57148
23 - C	0.1521	0.27694	0.084346	0.54819	-0.083458	0.55242	-0.018129	0.89748	0.26079	0.059282
24 - C	0.031494	0.82286	0.13684	0.32855	-0.016877	0.90452	-0.021722	0.8773	0.14426	0.30272
25 - T	0.023257	0.86871	-0.081076	0.56386	-0.13159	0.34762	-0.061211	0.66327	-0.26479	0.055356
26 - F	-0.086567	0.53767	0.29992	0.02912	0.24278	0.079833	0.10898	0.4373	0.07724	0.58251
27 - C	-0.076917	0.58409	-0.11778	0.40095	0.02257	0.87255	-0.24093	0.082239	-0.22183	0.1104
28 - C	-0.014778	0.91636	-0.13304	0.34227	-0.12957	0.35513	0.2509	0.069967	-0.11798	0.40014
29 - T	-0.17047	0.22231	0.19098	0.17073	0.074091	0.59802	0.0029879	0.98306	-0.27533	0.046004
30 - F	0.086325	0.53881	0.13138	0.34837	-0.0092462	0.94761	0.070739	0.61472	-0.15601	0.26461
31 - O	0.10373	0.45983	0.12953	0.35528	-0.15311	0.27372	0.20414	0.14258	0.085154	0.54435
32 - T	0.0088424	0.94989	-0.017402	0.90157	0.093108	0.50726	0.020229	0.88568	-0.17382	0.21322
33 - O	-0.043526	0.75697	-0.033957	0.80926	-0.01078	0.93893	0.038681	0.78333	0.025276	0.85743
34 - C	0.090806	0.51786	0.079178	0.57305	-0.030484	0.82845	0.061937	0.65952	-0.19587	0.15985
35 - C	-0.049784	0.72333	0.045545	0.74607	0.12561	0.37014	-0.069407	0.62142	0.01607	0.90907
36 - F	-0.080389	0.56718	0.10671	0.44693	0.16554	0.23616	0.051197	0.7158	0.059394	0.67269
37 - F	0.11338	0.4189	0.029515	0.83383	0.19869	0.15379	-0.073646	0.60022	-0.20507	0.14074
38 - O	-0.23241	0.09401	0.051318	0.71516	-0.15161	0.27849	-0.1162	0.40732	-0.3801	0.004994
39 - F	-0.16284	0.24402	-0.064885	0.64437	0.16304	0.24342	-0.029838	0.83204	-0.2425	0.080196
40 - C	-0.0558	0.69148	0.013889	0.92137	-0.10219	0.46653	-0.27985	0.042408	-0.091331	0.51543
41 - F	0.033714	0.81059	0.017321	0.90202	-0.12662	0.36628	-0.068236	0.62733	0.035329	0.8017
42 - F	0.2064	0.13812	0.23697	0.087553	-0.0451	0.74846	-0.13167	0.34732	-0.052287	0.71002
43 - O	0.082004	0.55939	-0.034845	0.80437	0.098639	0.48224	-0.24383	0.078499	0.1462	0.2962
44 - C	-0.084023	0.54973	0.17608	0.20723	0.11463	0.41375	-0.11245	0.42275	0.0078734	0.95538
45 - F	-0.25009	0.070903	-0.21949	0.11431	-0.030726	0.82711	-0.030605	0.82778	-0.37441	0.0057449
46 - O	-0.017604	0.90043	-0.10159	0.46919	-0.26967	0.050845	-0.23931	0.084376	-0.15428	0.27003
47 - O	-0.030646	0.82756	-0.032341	0.81817	-0.10421	0.45772	-0.0054912	0.96887	0.082852	0.55532
48 - O	-0.22494	0.10537	0.0944	0.50136	-0.063512	0.65141	-0.070295	0.61695	-0.079824	0.56991
49 - C	0.0098922	0.94395	-0.040942	0.77099	-0.098841	0.48134	-0.036985	0.79261	-0.23951	0.084107
50 - C	-0.029959	0.83136	0.1091	0.43679	-0.022772	0.87142	-0.022772	0.87142	-0.29774	0.03037
51 - T	-0.12856	0.35892	-0.29745	0.030536	-0.17015	0.22321	-0.17447	0.2115	-0.19449	0.16286
52 - F	0.1395	0.31913	0.11047	0.43101	0.24121	0.081869	-0.035652	0.79992	0.22332	0.10796

Table A6: NPPC and age correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.18173	0.14419	-0.15619	0.21045	-0.049122	0.6953	0.076358	0.54228	-0.11762	0.34693
2 -C	0.088482	0.47989	0.005602	0.96439	0.061684	0.62271	0.13501	0.27977	0.14594	0.2423
3 - T	-0.023557	0.85107	0.048515	0.69888	0.11653	0.35143	0.15884	0.20271	-0.088649	0.47906
4 -F	-0.099121	0.42846	-0.057274	0.64783	0.002153	0.98631	0.28072	0.022421	0.084845	0.49819
5 - O	-0.1569	0.20836	0.051609	0.68068	0.10192	0.41546	0.018144	0.88503	0.11043	0.3774
6 - T	0.0097407	0.93813	0.010556	0.93296	-0.034197	0.78517	0.10729	0.39118	-0.23493	0.057597
7 - O	-0.18108	0.14565	-0.18267	0.14209	-0.13288	0.2875	-0.11066	0.3764	-0.20706	0.09528
8 - C	0.01482	0.90598	-0.060493	0.62945	-0.069209	0.58083	-0.21407	0.084362	-0.15366	0.21803
9 - F	-0.22594	0.068133	0.054389	0.66448	-0.21354	0.085141	-0.14515	0.2449	0.012897	0.91814
10 - F	-0.0002926	0.99814	-0.1908	0.12488	0.29218	0.017288	0.17512	0.1596	-0.14486	0.24586
11 - O	-0.10247	0.41296	-0.015301	0.90295	-0.13338	0.28567	0.15414	0.21657	-0.022387	0.85839
12 - F	0.037165	0.76703	0.095693	0.44468	0.025188	0.84089	0.17414	0.16199	0.098954	0.42924
13 - C	-0.04839	0.69962	0.21488	0.083158	0.083047	0.50737	-0.19866	0.1098	-0.16925	0.17429
14 - F	0.039005	0.75585	-0.29649	0.015638	-0.25081	0.042227	0.10803	0.38794	0.22903	0.064344
15 - F	-0.11672	0.35065	0.00058528	0.99628	0.068875	0.58266	0.16745	0.17898	-0.067161	0.5921
16 - O	0.029243	0.8157	0.33148	0.0065518	0.031041	0.80459	0.024122	0.84755	-0.087395	0.48532
17 - C	-0.0066262	0.95789	0.10823	0.38701	-0.15257	0.22134	-0.020234	0.87189	-0.35834	0.0031338
18 - F	-0.1916	0.12329	-0.07015	0.57568	0.086788	0.48837	-0.033591	0.78889	-0.19448	0.11764
19 - O	-0.10065	0.42135	-0.042558	0.73439	-0.08821	0.48124	-0.14024	0.2614	-0.15938	0.20115
20 - O	0.31446	0.010126	0.29843	0.014938	-0.026066	0.83543	-0.026233	0.83438	0.0063126	0.95988
21 - O	0.16499	0.18556	0.055978	0.65529	-0.078009	0.53355	-0.0477	0.7037	0.13735	0.27144
22 - F	-0.032797	0.79377	-0.18198	0.14363	-0.36145	0.002865	0.14252	0.25365	0.085973	0.49248
23 - C	-0.031166	0.80381	-0.21415	0.084238	-0.03589	0.77481	0.11787	0.34589	0.062499	0.61811
24 - C	0.037771	0.76334	-0.10849	0.38591	-0.043227	0.73037	0.16743	0.17903	-0.10993	0.37958
25 - T	0.034113	0.78568	-0.18041	0.14717	-0.10888	0.38416	-0.067558	0.58991	-0.094815	0.44889
26 - F	0.16014	0.199	-0.061705	0.62259	-0.17569	0.15824	-0.058904	0.63849	0.024435	0.84559
27 - C	0.0048285	0.96931	0.099205	0.42807	0.076755	0.54017	-0.14103	0.25868	-0.14674	0.23971
28 - C	0.088544	0.47958	-0.016032	0.89833	0.21356	0.08511	0.1032	0.40962	0.1218	0.32994
29 - T	0.014005	0.91113	-0.12004	0.33701	0.09586	0.44388	-0.12101	0.33312	-0.20604	0.096965
30 - F	0.12017	0.3365	-0.026484	0.83282	0.065656	0.60044	0.060806	0.62767	0.02663	0.83191
31 - O	0.16007	0.19918	-0.067014	0.59291	0.11363	0.36365	-0.1862	0.13441	-0.17264	0.1657
32 - T	-0.096634	0.44019	0.083862	0.5032	0.17811	0.15248	0.06507	0.6037	-0.088293	0.48083
33 - O	0.065718	0.60009	0.052926	0.67299	-0.059657	0.6342	-0.24768	0.044957	-0.30386	0.013124
34 - C	0.035263	0.77864	0.2435	0.048822	-0.08428	0.50107	0.225	0.069319	0.16258	0.19214
35 - C	-0.021321	0.86507	-0.23509	0.057414	-0.028511	0.82023	0.18762	0.13141	-0.0049958	0.96824
36 - F	0.086956	0.48753	-0.075585	0.54639	-0.13294	0.28727	0.059239	0.63659	0.066617	0.59511
37 - F	-0.015217	0.90348	-0.0056438	0.96413	-0.07941	0.52621	0.0080476	0.94887	-0.046634	0.71003
38 - O	0.020527	0.87005	-0.086036	0.49216	-0.073223	0.55903	-0.12761	0.30721	-0.0058319	0.96293
39 - F	0.13984	0.26277	0.21488	0.083158	-0.055392	0.65867	-0.11984	0.33786	0.028282	0.82166
40 - C	-0.086475	0.48994	-0.046739	0.7094	-0.12117	0.33245	0.026484	0.83282	0.036726	0.7697
41 - F	0.18597	0.1349	-0.24596	0.04651	0.024498	0.8452	0.12747	0.30777	0.11227	0.36946
42 - F	-0.024582	0.84468	0.11605	0.35344	0.10161	0.4169	0.011016	0.93005	0.073034	0.56004
43 - O	0.25453	0.039166	0.19682	0.1132	0.014695	0.90678	0.088064	0.48197	-0.057357	0.64735
44 - C	0.23355	0.059122	0.15263	0.22115	0.040698	0.7456	-0.1381	0.2688	-0.08311	0.50705
45 - F	-0.096362	0.44149	0.14091	0.25911	-0.12184	0.32977	0.047554	0.70457	0.0084656	0.94621
46 - O	-0.22698	0.066833	0.05834	0.64172	0.017245	0.89069	-0.048474	0.69912	-0.14093	0.25904
47 - O	-0.060994	0.62661	0.023955	0.84859	-0.183	0.14135	-0.020297	0.8715	-0.19295	0.1206
48 - O	-0.020568	0.86979	-0.017266	0.89056	-0.049811	0.69123	0.14588	0.2425	-0.050668	0.68619
49 - C	0.07895	0.52861	-0.22907	0.064294	-0.10621	0.39602	0.25618	0.037868	0.058214	0.64244
50 - C	0.13267	0.28827	-0.0057901	0.9632	0.13913	0.26523	0.20219	0.1035	0.031124	0.80407
51 - T	-0.13457	0.28135	-0.1019	0.41556	-0.11022	0.37831	-0.16223	0.19312	0.074184	0.55387
52 - F	0.22636	0.067611	-0.1264	0.31187	-0.08589	0.4929	-0.057587	0.64603	-0.19245	0.12159

Table A7: PPC and age correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.10575	0.45109	0.13861	0.32225	-0.046554	0.74063	-0.12052	0.38999	0.10013	0.4756
2 -C	-0.082933	0.55493	-0.26398	0.056131	-0.22203	0.11007	-0.10385	0.4593	-0.36343	0.0074765
3 - T	0.060524	0.66682	0.11079	0.42965	-0.041386	0.76858	-0.24359	0.078805	0.060888	0.66494
4 -F	-0.29547	0.031713	-0.42718	0.0014219	0.078411	0.57678	0.085638	0.54205	0.095086	0.49824
5 - O	-0.14297	0.30711	-0.24339	0.079061	-0.29386	0.032703	-0.13227	0.34509	0.12949	0.35543
6 - T	-0.15157	0.27862	0.0065813	0.9627	0.095006	0.4986	0.078209	0.57777	0.2018	0.14732
7 - O	-0.10195	0.46759	-0.20846	0.13414	-0.17023	0.22298	0.15339	0.27283	0.11471	0.41342
8 - C	-0.12262	0.38172	-0.23249	0.093892	-0.5039	0.00011977	0.17592	0.20766	-0.098478	0.48296
9 - F	0.23685	0.08772	0.21642	0.11959	0.10292	0.46335	-0.15064	0.28161	-0.10134	0.47025
10 - F	-0.066621	0.63552	0.11338	0.4189	0.33617	0.013851	0.091412	0.51506	0.0076715	0.95652
11 - O	0.093027	0.50763	0.2253	0.1048	-0.04179	0.76638	-0.028021	0.84213	-0.098115	0.48459
12 - F	-0.038196	0.78598	0.083175	0.55377	0.20584	0.13923	-0.197	0.1574	0.22906	0.098984
13 - C	0.065773	0.63984	0.17233	0.21724	0.16373	0.24142	-0.20911	0.13292	-0.14374	0.3045
14 - F	-0.087132	0.535	-0.16692	0.23225	0.080268	0.56776	-0.1162	0.40732	0.069407	0.62142
15 - F	0.049057	0.72721	0.14317	0.30642	0.18852	0.17642	-0.16837	0.22815	0.14225	0.30961
16 - O	0.17221	0.21757	0.4011	0.0029157	0.3516	0.0098333	0.18751	0.17879	-0.043485	0.75719
17 - C	-0.025356	0.85698	0.12109	0.38775	-0.16914	0.226	0.16328	0.24272	0.084387	0.54799
18 - F	0.031332	0.82376	0.017846	0.89907	0.0073889	0.95812	-0.099528	0.47829	-0.15727	0.26075
19 - O	-0.04615	0.7428	0.020107	0.88636	0.26277	0.057311	0.016272	0.90794	0.096055	0.49385
20 - O	-0.21299	0.12572	0.02043	0.88455	0.11612	0.40765	0.15973	0.25326	-0.08156	0.56153
21 - O	-0.084064	0.54953	-0.09981	0.47703	-0.30896	0.024385	-0.027537	0.84482	0.029354	0.83472
22 - F	-0.092744	0.50892	-0.15981	0.25302	-0.02576	0.85472	-0.079784	0.57011	-0.19163	0.16926
23 - C	0.28615	0.037787	0.39775	0.0031846	0.20725	0.13647	0.10449	0.4565	-0.062906	0.65452
24 - C	0.29212	0.033795	0.32677	0.016934	0.14535	0.29904	0.36912	0.0065293	-0.07183	0.60927
25 - T	-0.13437	0.33742	-0.087092	0.53519	-0.13352	0.3405	0.035491	0.80081	0.051722	0.71301
26 - F	-0.083942	0.55011	-0.014778	0.91636	0.2555	0.064819	0.083862	0.5505	0.032907	0.81505
27 - C	-0.19772	0.15585	-0.14091	0.31421	-0.18145	0.19349	0.025962	0.8536	0.10845	0.43953
28 - C	-0.058828	0.67563	-0.27791	0.04392	-0.17435	0.21182	-0.19054	0.17175	-0.27484	0.046403
29 - T	-0.24759	0.073868	-0.058586	0.6769	0.067671	0.63019	0.0056123	0.96819	0.16635	0.23385
30 - F	-0.25821	0.061937	-0.2639	0.056209	-0.023701	0.86623	0.092825	0.50855	0.16946	0.22511
31 - O	-0.029757	0.83248	0.073768	0.59962	0.034764	0.80481	-0.27193	0.048861	0.10211	0.46688
32 - T	-0.2855	0.038241	-0.10526	0.45318	-0.065813	0.63963	-0.26778	0.05256	-0.086971	0.53576
33 - O	-0.18755	0.1787	-0.3474	0.010812	-0.25054	0.070387	-0.092583	0.50966	-0.23592	0.089007
34 - C	-0.32891	0.016186	-0.43344	0.0011866	-0.18056	0.19572	-0.14798	0.29031	-0.030121	0.83047
35 - C	-0.23333	0.092666	0.025558	0.85585	-0.062058	0.65889	0.024347	0.86261	-0.0258	0.8545
36 - F	0.033593	0.81126	0.058061	0.67963	0.28643	0.037589	0.065652	0.64046	-0.26729	0.053006
37 - F	-0.11596	0.40831	-0.057859	0.68069	0.11911	0.39561	0.18129	0.1939	-0.075786	0.58964
38 - O	-0.019542	0.88954	0.18593	0.18253	0.28425	0.039133	0.066984	0.63367	0.1007	0.4731
39 - F	-0.27993	0.042346	-0.099931	0.4765	-0.046473	0.74107	-0.18052	0.19582	0.020471	0.88432
40 - C	-0.18383	0.18761	-0.10272	0.46423	0.098276	0.48387	0.043485	0.75719	0.073646	0.60022
41 - F	-0.15836	0.25741	-0.22926	0.098679	-0.15638	0.26348	-0.29564	0.031616	0.1202	0.39127
42 - F	0.10651	0.44779	0.094965	0.49879	0.2186	0.11582	0.19526	0.16117	-0.15521	0.26712
43 - O	0.05798	0.68006	0.19934	0.15243	0.059797	0.67059	-0.06012	0.66892	0.096499	0.49184
44 - C	0.022409	0.87346	0.1932	0.16572	-0.0029879	0.98306	0.1175	0.40209	0.14838	0.28898
45 - F	-0.14535	0.29904	0.1309	0.35016	0.04938	0.72549	0.25078	0.070107	0.085356	0.54339
46 - O	-0.2425	0.080196	-0.14277	0.3078	0.020471	0.88432	-0.1909	0.17092	0.20798	0.13507
47 - O	-0.25138	0.069411	-0.067792	0.62958	-0.14354	0.30519	0.062503	0.6566	-0.10954	0.43491
48 - O	-0.30819	0.02476	-0.13328	0.34139	-0.20762	0.13577	-0.10256	0.46493	-0.062018	0.6591
49 - C	-0.083175	0.55377	0.0052085	0.97047	-0.16171	0.24735	0.20576	0.13938	0.015141	0.91431
50 - C	-0.20564	0.13962	-0.0097711	0.94464	-0.14398	0.30368	0.33347	0.014684	-0.039407	0.77936
51 - T	-0.1525	0.27565	-0.16312	0.24319	-0.11112	0.4283	-0.19663	0.15819	0.16405	0.24048
52 - F	-0.2215	0.11094	-0.076634	0.58547	-0.035612	0.80015	0.019138	0.89181	0.12496	0.37263

Table A8: PPC and age correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.073327	0.55847	-0.11988	0.33769	0.07734	0.53708	0.18804	0.13054	0.10132	0.41825
2 -C	0.13953	0.26385	-0.14634	0.241	0.052842	0.67347	0.15694	0.20824	0.11563	0.35519
3 - T	0.034699	0.78209	0.0026129	0.98339	-0.048432	0.69937	0.056124	0.65445	-0.063837	0.61059
4 -F	-0.0029891	0.981	0.12423	0.32033	0.18861	0.12936	0.1092	0.38278	-0.029222	0.81583
5 - O	0.036538	0.77085	-0.031396	0.80239	-0.22583	0.068264	0.01666	0.89438	-0.036622	0.77034
6 - T	0.038127	0.76118	0.078553	0.5307	0.26262	0.033143	0.25121	0.041891	0.11582	0.3544
7 - O	-0.20111	0.10541	-0.19757	0.1118	-0.047387	0.70556	0.010744	0.93177	-0.13955	0.26378
8 - C	-0.062207	0.61976	-0.21616	0.081302	0.21501	0.082974	-0.0051839	0.96705	0.0213	0.8652
9 - F	0.16037	0.19835	0.16701	0.18014	0.1616	0.19487	0.20372	0.10087	0.33524	0.005931
10 - F	0.015322	0.90282	0.11206	0.37035	0.13587	0.2767	-0.024038	0.84807	0.21866	0.077747
11 - O	-0.042997	0.73175	0.035953	0.77442	-0.0653	0.60242	-0.0001254	0.9992	0.085012	0.49735
12 - F	0.0020276	0.98711	0.12441	0.31959	0.30675	0.01224	0.012416	0.92118	-0.0094272	0.94012
13 - C	-0.015844	0.89952	0.0091763	0.94171	-0.0015886	0.9899	0.091345	0.46573	0.096571	0.44049
14 - F	0.056479	0.6524	0.03635	0.772	0.017726	0.88766	0.024603	0.84454	-0.029954	0.8113
15 - F	0.071927	0.56603	-0.072115	0.56501	0.083005	0.50759	0.088691	0.47885	0.043018	0.73163
16 - O	0.022617	0.85695	0.18296	0.14144	-0.0036371	0.97688	-0.030225	0.80962	-0.068917	0.58243
17 - C	-0.13681	0.27336	-0.1097	0.38059	0.26034	0.034756	-0.22224	0.072896	-0.077988	0.53366
18 - F	-0.011936	0.92422	-0.089025	0.47718	0.16871	0.1757	0.068624	0.58404	-0.27247	0.026876
19 - O	-0.13578	0.277	-0.19057	0.12535	-0.24991	0.042995	-0.1176	0.34702	-0.20221	0.10347
20 - O	-0.079702	0.52468	0.029598	0.8135	0.013859	0.91206	0.083172	0.50673	-0.1481	0.23534
21 - O	-0.13123	0.29359	-0.13769	0.27026	-0.021823	0.86193	0.068227	0.58622	0.015865	0.89939
22 - F	-0.061454	0.62401	0.022136	0.85996	-0.11356	0.36392	-0.087792	0.48333	0.092662	0.4593
23 - C	0.054786	0.66218	0.10282	0.41134	-0.0041597	0.97356	-0.11977	0.33811	0.035012	0.78017
24 - C	0.13967	0.26335	0.14266	0.25316	0.16012	0.19906	0.073578	0.55712	0.091366	0.46563
25 - T	0.10957	0.38114	-0.13208	0.29042	-0.18748	0.13172	0.085346	0.49565	-0.088356	0.48051
26 - F	-0.19956	0.10817	-0.071885	0.56625	0.28526	0.020252	0.19757	0.1118	-0.0097198	0.93826
27 - C	-0.18618	0.13445	-0.19051	0.12547	-0.15079	0.22683	0.045965	0.714	0.17425	0.16173
28 - C	0.091784	0.46358	-0.16099	0.19658	0.076504	0.5415	0.0039506	0.97489	0.14431	0.24765
29 - T	-0.091931	0.46287	-0.16791	0.17777	-0.2631	0.032811	0.17834	0.15195	0.073034	0.56004
30 - F	-0.061642	0.62294	0.018959	0.8799	-0.099414	0.42709	0.12094	0.33338	-0.33631	0.0057648
31 - O	0.12935	0.30062	0.10782	0.38886	-0.064987	0.60417	0.027613	0.82581	0.092119	0.46195
32 - T	-0.17489	0.16016	0.036726	0.7697	0.2269	0.066937	0.080225	0.52196	-0.046153	0.71289
33 - O	-0.12907	0.30165	-0.25978	0.035165	-0.08683	0.48816	-0.15838	0.20403	-0.17324	0.1642
34 - C	-0.13112	0.29398	-0.29554	0.015986	-0.090028	0.47221	0.015301	0.90295	0.13202	0.29065
35 - C	-0.019042	0.87938	0.015155	0.90387	-0.11965	0.33862	-0.31053	0.01116	-0.18041	0.14717
36 - F	0.0075668	0.95192	0.0072951	0.95364	-0.026191	0.83464	-0.23261	0.060181	0.1805	0.14698
37 - F	-0.13445	0.2818	0.089025	0.47718	0.33137	0.0065698	-0.27838	0.023615	-0.27491	0.025485
38 - O	-0.074644	0.55141	-0.096153	0.44248	-0.0068352	0.95656	-0.058256	0.6422	0.059301	0.63623
39 - F	-0.26315	0.032783	0.032776	0.7939	0.14881	0.23308	0.28089	0.022337	-0.013754	0.91272
40 - C	-0.14542	0.244	-0.22195	0.073284	-0.05602	0.65505	-0.091847	0.46328	0.14003	0.26212
41 - F	0.084008	0.50245	0.058256	0.6422	-0.055121	0.66024	0.12947	0.30015	-0.21603	0.081483
42 - F	0.052989	0.67262	0.11666	0.35091	0.18683	0.13308	-0.14935	0.23136	0.058549	0.64052
43 - O	0.090008	0.47232	0.12218	0.32843	0.11699	0.34952	-0.20673	0.095828	0.079347	0.52654
44 - C	-0.19289	0.12073	-0.13014	0.29764	0.20487	0.09892	-0.083883	0.50309	-0.020924	0.86756
45 - F	-0.076692	0.5405	0.14132	0.25769	0.34711	0.0042978	0.32149	0.0084852	0.26308	0.032826
46 - O	-0.24153	0.05073	-0.1828	0.14181	-0.0176	0.88845	-0.1209	0.33355	0.14137	0.25754
47 - O	-0.18698	0.13277	-0.17274	0.16544	0.23528	0.057209	-0.1714	0.16879	-0.080957	0.51816
48 - O	-0.16756	0.1787	-0.15037	0.22814	-0.023223	0.85316	-0.046216	0.71251	0.059761	0.63361
49 - C	0.099936	0.42465	0.0023829	0.98485	-0.060116	0.63159	-0.3111	0.011006	-0.090969	0.46758
50 - C	-0.037583	0.76448	-0.10395	0.40619	-0.068979	0.58209	-0.22642	0.067532	-0.13739	0.27129
51 - T	-0.15073	0.22703	-0.18486	0.13728	0.018792	0.88095	0.00027174	0.99827	0.082733	0.50898
52 - F	-0.18679	0.13317	-0.045526	0.71662	0.19429	0.118	0.29253	0.017146	-0.035995	0.77417

Table A9: Local NC and age correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.099546	0.5104	-0.32502	0.027527	-0.35178	0.016512	-0.35264	0.01623	-0.33973	0.020893
2 -C	0.11709	0.43834	0.062162	0.68151	0.22263	0.13697	0.25384	0.088709	0.2932	0.047979
3 - T	-0.052585	0.72854	-0.17215	0.25262	-0.29128	0.049525	-0.1635	0.2776	-0.27102	0.068485
4 -F	0.047456	0.75414	0.076003	0.61565	0.11351	0.45258	-0.20935	0.16262	0.12334	0.41415
5 - O	-0.015324	0.91949	0.08725	0.56423	-0.18469	0.21915	-0.18086	0.22903	-0.13761	0.36178
6 - T	0.13118	0.38484	0.27917	0.06026	0.33757	0.021774	0.30179	0.04152	0.19779	0.18762
7 - O	-0.10381	0.49236	-0.40276	0.0055192	-0.39034	0.0073218	-0.26527	0.074796	-0.30747	0.037649
8 - C	0.26484	0.075289	0.10233	0.4986	0.28609	0.053919	0.24469	0.10122	0.47938	0.00074968
9 - F	-0.058764	0.69807	0.056539	0.70899	0.078784	0.60275	0.1677	0.26527	0.22455	0.13354
10 - F	-0.21201	0.15723	0.07415	0.62432	0.16424	0.2754	0.074397	0.62316	0.037075	0.80675
11 - O	-0.37507	0.010217	0.061112	0.68662	-0.36012	0.013958	-0.48482	0.00063888	-0.45614	0.0014425
12 - F	0.01174	0.93827	-0.0002472	0.9987	0.11061	0.46431	0.19508	0.19388	0.31217	0.03468
13 - C	-0.1014	0.50252	-0.33201	0.024186	-0.41691	0.0039479	-0.20373	0.17446	-0.21114	0.15897
14 - F	-0.019155	0.89945	0.080329	0.59564	-0.0019155	0.98992	0.10653	0.48104	0.25347	0.089192
15 - F	-0.090957	0.54773	0.027188	0.85766	0.14916	0.32247	0.20873	0.16389	0.064263	0.67135
16 - O	0.093305	0.53739	0.040721	0.78817	-0.099546	0.5104	-0.29419	0.047196	-0.28171	0.057873
17 - C	0.16974	0.25942	0.014027	0.92629	-0.055674	0.71325	0.21596	0.14945	0.071925	0.63478
18 - F	-0.057899	0.70231	0.30167	0.041607	0.28115	0.05839	0.094108	0.53388	0.47369	0.00088365
19 - O	-0.25446	0.087909	-0.38854	0.00762	-0.46813	0.001035	-0.21343	0.1544	-0.067229	0.6571
20 - O	0.083542	0.58096	0.043501	0.77407	-0.0053141	0.97204	-0.034665	0.8191	0.082244	0.58687
21 - O	-0.1593	0.29031	-0.27225	0.067184	-0.26898	0.070674	-0.185	0.21837	-0.16511	0.27284
22 - F	-0.18741	0.21232	0.091081	0.54718	0.1609	0.2854	0.079278	0.60047	0.15225	0.31244
23 - C	-0.071431	0.63711	-0.088176	0.56008	-0.22022	0.14138	-0.086941	0.56561	0.01656	0.91302
24 - C	-0.070628	0.64091	0.018043	0.90526	-0.020577	0.89203	-0.089536	0.55402	-0.089968	0.5521
25 - T	-0.30117	0.041959	-0.31514	0.032906	-0.46368	0.0011724	-0.32935	0.025415	-0.20867	0.16402
26 - F	0.15887	0.29163	-0.029351	0.84646	0.21102	0.15922	0.22399	0.13453	0.17926	0.23326
27 - C	-0.18507	0.21821	-0.2526	0.090326	-0.34356	0.019405	-0.45719	0.0014019	-0.54945	7.66E-05
28 - C	0.15701	0.29737	0.049495	0.74393	0.10004	0.50829	0.37588	0.010043	0.40171	0.0056551
29 - T	-0.21386	0.15354	-0.20787	0.16568	-0.32101	0.029616	-0.34819	0.017725	-0.4533	0.001558
30 - F	0.054006	0.72149	0.2172	0.14708	0.16554	0.27157	0.08484	0.57508	0.011122	0.94152
31 - O	-0.024964	0.8692	-0.15244	0.31184	-0.10894	0.47111	-0.062162	0.68151	0.049866	0.74208
32 - T	0.16449	0.27467	0.11765	0.43616	0.071184	0.63828	-0.11784	0.43543	-0.11431	0.44937
33 - O	-0.20373	0.17446	-0.31427	0.033416	-0.28041	0.059086	-0.31001	0.036023	-0.17252	0.25158
34 - C	0.46263	0.0012071	0.37866	0.0094612	0.14163	0.3478	0.31705	0.031801	0.16264	0.28019
35 - C	0.22406	0.13442	0.063831	0.67344	-0.12445	0.40992	-0.21843	0.14473	-0.16103	0.28503
36 - F	-0.0072914	0.96164	0.033553	0.82481	0.32002	0.030151	0.079217	0.60076	0.20336	0.17526
37 - F	0.26323	0.077143	0.33213	0.02413	0.36259	0.013269	0.33139	0.024467	-0.012791	0.93276
38 - O	-0.29135	0.049475	-0.18822	0.21033	-0.17135	0.25487	-0.45713	0.0014042	-0.46337	0.0011825
39 - F	0.10115	0.50357	0.1863	0.2151	0.19322	0.19824	0.24426	0.10185	0.082183	0.58715
40 - C	-0.050545	0.73869	0.085458	0.57229	-0.29808	0.044215	-0.36791	0.011886	-0.40424	0.0053323
41 - F	0.059629	0.69384	0.21689	0.14767	0.12321	0.41462	0.037755	0.80328	0.29005	0.050544
42 - F	0.031699	0.83435	0.16146	0.28372	0.28307	0.056623	0.43081	0.0028008	0.13396	0.37476
43 - O	-0.13594	0.36769	-0.088671	0.55788	-0.14261	0.34441	-0.2649	0.075219	-0.22653	0.13006
44 - C	0.075571	0.61767	-0.022369	0.88269	0.091513	0.54527	0.12655	0.402	0.11147	0.4608
45 - F	-0.14577	0.33374	-0.052708	0.72792	0.25532	0.086798	0.4559	0.0014523	0.27435	0.065018
46 - O	-0.099299	0.51146	-0.15238	0.31204	-0.29166	0.049223	-0.30544	0.039002	-0.29518	0.046424
47 - O	0.18315	0.2231	0.19946	0.18385	-0.12241	0.4177	-0.038187	0.80107	-0.092934	0.53902
48 - O	-0.09553	0.52769	0.01965	0.89687	-0.18018	0.23081	-0.32132	0.029451	-0.22875	0.12623
49 - C	-0.0058702	0.96912	-0.10375	0.49262	-0.20879	0.16376	-0.32484	0.02762	-0.39967	0.005927
50 - C	-0.06414	0.67195	-0.016313	0.91431	0.0087744	0.95385	-0.19637	0.19088	-0.27089	0.068616
51 - T	-0.007106	0.96262	-0.10659	0.48078	-0.15491	0.30397	-0.22832	0.12697	-0.16715	0.26688
52 - F	0.082801	0.58433	-0.072729	0.63099	0.050484	0.73899	0.12031	0.42579	0.20484	0.17207

Table A10: Local NC and age correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.35301	0.021843	-0.37793	0.0136	-0.30754	0.047561	-0.49257	0.00092044	-0.39994	0.0086856
2 -C	0.19225	0.22255	-0.009012	0.95483	0.13802	0.38339	0.45076	0.0027376	0.29788	0.055367
3 - T	-0.15166	0.33767	-0.26825	0.085866	-0.27279	0.080485	-0.28359	0.06876	-0.1882	0.23266
4 -F	0.21531	0.17087	0.34595	0.024825	0.38045	0.012939	0.3276	0.03419	0.19355	0.21938
5 - O	-0.47926	0.001322	-0.29496	0.057921	-0.22465	0.15263	-0.26882	0.085179	-0.41211	0.0066901
6 - T	0.19331	0.21997	0.04027	0.80011	0.1308	0.40902	0.12243	0.43986	0.34099	0.027112
7 - O	-0.010067	0.94955	0.026468	0.86786	-0.071446	0.65298	0.13161	0.40609	0.029472	0.85301
8 - C	0.28603	0.066312	-0.0039782	0.98005	0.23033	0.14224	0.30113	0.052637	0.3919	0.010266
9 - F	0.14257	0.36776	0.26955	0.084301	0.2361	0.13225	0.29691	0.056208	0.28554	0.066796
10 - F	0.0082001	0.9589	0.14638	0.35495	0.14882	0.34691	-0.0073882	0.96296	-0.092474	0.56025
11 - O	-0.15556	0.32526	-0.2033	0.1966	-0.31509	0.042102	-0.43144	0.0043347	-0.45141	0.0026944
12 - F	0.44053	0.0035032	0.24901	0.11179	0.30283	0.051247	0.40854	0.0072295	0.1722	0.2755
13 - C	-0.20273	0.19789	-0.28554	0.066796	-0.19428	0.21761	-0.24227	0.12215	-0.24957	0.11095
14 - F	0.3047	0.049759	0.40042	0.0085969	0.37371	0.014773	0.46205	0.0020672	0.48056	0.0012769
15 - F	0.035398	0.82388	0.053909	0.73455	0.16928	0.28385	0.0039782	0.98005	-0.053503	0.73648
16 - O	-0.22173	0.15818	-0.15393	0.3304	-0.18657	0.23679	-0.2309	0.14123	-0.34984	0.02314
17 - C	-0.024194	0.87912	-0.0037347	0.98127	0.20703	0.18833	0.076074	0.63206	0.077048	0.62769
18 - F	0.21068	0.18048	0.25956	0.096921	0.25891	0.09779	0.035804	0.8219	0.072258	0.64929
19 - O	-0.28749	0.064877	-0.41374	0.0064566	-0.34659	0.024537	-0.18552	0.2395	-0.31509	0.042102
20 - O	-0.028741	0.85662	0.11862	0.45436	-0.099294	0.53156	-0.031664	0.84222	-0.011529	0.94223
21 - O	-0.015507	0.92235	-0.18795	0.23327	-0.19542	0.21488	-0.051961	0.74382	-0.12186	0.44201
22 - F	0.17334	0.27229	0.36064	0.018963	0.34327	0.026042	0.36892	0.016207	0.45709	0.0023411
23 - C	0.063733	0.68843	-0.10741	0.49836	-0.0070634	0.96459	-0.12381	0.43469	0.019161	0.90414
24 - C	-0.10546	0.50623	-0.18576	0.23887	-0.14971	0.34399	-0.17309	0.27298	-0.28562	0.066715
25 - T	-0.31631	0.041271	-0.37282	0.015032	-0.17098	0.27896	-0.21215	0.17741	-0.26289	0.092563
26 - F	0.2365	0.13157	0.20029	0.20344	0.21142	0.17894	0.14184	0.37025	0.17374	0.27116
27 - C	-0.58001	5.68E-05	-0.55354	0.00014325	-0.62093	1.15E-05	-0.59739	2.96E-05	-0.62426	9.97E-06
28 - C	0.27271	0.080579	0.15393	0.3304	0.104	0.51217	0.38621	0.011527	0.33799	0.028583
29 - T	-0.42316	0.0052367	-0.54884	0.00016754	-0.61338	1.57E-05	-0.49282	0.00091424	-0.47633	0.0014286
30 - F	0.34189	0.026687	0.34245	0.02642	0.36324	0.018059	0.34359	0.025892	0.24527	0.11744
31 - O	-0.35902	0.019548	-0.26508	0.089776	-0.24828	0.11288	-0.39344	0.0099452	-0.34172	0.026764
32 - T	0.045709	0.77378	-0.038808	0.80722	-0.069904	0.66001	-0.053747	0.73532	-0.17618	0.26439
33 - O	0.031258	0.84421	0.096452	0.54343	0.030283	0.84901	0.16692	0.2907	0.083462	0.59924
34 - C	0.32727	0.034378	0.18341	0.24498	0.23407	0.13571	0.27499	0.077987	0.43931	0.0036057
35 - C	-0.25924	0.097355	-0.31225	0.044093	-0.31282	0.043689	-0.21125	0.17928	-0.20175	0.2001
36 - F	0.29277	0.059898	0.30884	0.046583	0.37964	0.013149	0.28099	0.07145	0.016238	0.91871
37 - F	0.10473	0.5092	0.21207	0.17758	0.029309	0.85382	0.031664	0.84222	-0.020703	0.89646
38 - O	-0.21012	0.18169	-0.29886	0.054537	-0.3172	0.04067	-0.4674	0.0018031	-0.41284	0.0065841
39 - F	0.17862	0.25774	0.29674	0.05635	0.23049	0.14195	0.17748	0.26083	-0.060648	0.70281
40 - C	-0.4687	0.0017437	-0.40294	0.0081511	-0.49006	0.00098674	-0.49907	0.0007673	-0.48665	0.0010833
41 - F	0.23869	0.12792	0.37022	0.015807	0.28067	0.071792	0.31444	0.04255	0.35885	0.019607
42 - F	0.07104	0.65483	-0.031745	0.84182	-0.2145	0.17253	-0.11245	0.47833	-0.068199	0.66782
43 - O	-0.20882	0.18446	-0.36032	0.019079	-0.36811	0.016461	-0.26005	0.096274	-0.38394	0.012067
44 - C	-0.16944	0.28339	0.023951	0.88033	0.20719	0.18798	0.089632	0.57242	-0.015263	0.92357
45 - F	-0.032638	0.83742	0.028091	0.85983	0.1364	0.38907	0.0032476	0.98372	0.34489	0.025298
46 - O	-0.32549	0.035432	-0.30283	0.051247	-0.38727	0.011284	-0.29658	0.056491	-0.42299	0.0052559
47 - O	-0.19347	0.21958	-0.047495	0.76518	0.012665	0.93655	-0.20663	0.18922	-0.16392	0.2996
48 - O	-0.21921	0.16308	-0.10871	0.49315	-0.2939	0.058866	-0.11878	0.45373	-0.10076	0.52551
49 - C	-0.27864	0.073958	-0.39563	0.0095036	-0.26695	0.087454	-0.14557	0.35765	-0.24771	0.11373
50 - C	-0.3086	0.046765	-0.40018	0.0086412	-0.32484	0.035822	-0.16108	0.30817	-0.26865	0.085375
51 - T	-0.15036	0.34188	-0.18608	0.23804	-0.27555	0.077349	-0.23886	0.12766	-0.2814	0.071024
52 - F	0.25924	0.097355	0.13396	0.39767	0.21458	0.17237	0.11789	0.45716	-0.0009743	0.99511

Table A11: Remote NC and age correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.12352	0.41345	-0.10437	0.49004	-0.1276	0.39807	-0.044243	0.77032	-0.049124	0.74578
2 -C	0.19131	0.20281	0.12772	0.39761	-0.004449	0.97659	0.026385	0.86182	0.002966	0.98439
3 - T	0.011679	0.9386	0.15108	0.31623	0.067414	0.65621	-0.10301	0.49574	-0.028177	0.85254
4 -F	-0.21812	0.14532	0.015942	0.91625	-0.04863	0.74826	-0.0006179	0.99675	0.15083	0.31703
5 - O	-0.044366	0.7697	-0.062286	0.68091	-0.015139	0.92046	-0.0080329	0.95775	-0.02379	0.8753
6 - T	0.21232	0.15661	0.44101	0.0021574	0.11073	0.4638	0.11351	0.45258	-0.032688	0.82926
7 - O	-0.14916	0.32247	-0.15306	0.30986	0.11555	0.44445	0.14305	0.34293	0.27028	0.069274
8 - C	0.015139	0.92046	0.010443	0.94509	-0.043687	0.77313	-0.028733	0.84966	-0.01242	0.93471
9 - F	-0.25742	0.084146	-0.15955	0.28955	-0.22325	0.13586	-0.26329	0.077071	-0.15442	0.30553
10 - F	0.015139	0.92046	0.11277	0.45556	-0.076683	0.61249	-0.14002	0.35335	-0.10579	0.48411
11 - O	-0.25767	0.083838	-0.035036	0.81719	0.081256	0.59139	0.15948	0.28974	0.013038	0.93147
12 - F	0.16653	0.26868	0.33114	0.02458	0.27565	0.063709	0.29067	0.050033	0.23209	0.12065
13 - C	-0.354	0.015795	-0.057837	0.70262	-0.14095	0.35014	-0.1973	0.18875	-0.14002	0.35335
14 - F	-0.043996	0.77157	-0.21998	0.14184	-0.31347	0.033895	-0.39534	0.0065419	-0.44311	0.0020425
15 - F	-0.058764	0.69807	-0.097136	0.52074	-0.40443	0.0053093	-0.32929	0.025444	-0.41209	0.0044322
16 - O	0.0012976	0.99317	-0.044799	0.76752	-0.043748	0.77282	-0.12673	0.40131	-0.093182	0.53794
17 - C	0.10542	0.48565	-0.26546	0.074586	-0.081503	0.59026	-0.077672	0.6079	-0.0621	0.68181
18 - F	-0.086446	0.56784	-0.13427	0.37365	-0.27825	0.061153	-0.18605	0.21572	-0.2214	0.13922
19 - O	-0.16307	0.27889	-0.30945	0.036375	-0.19922	0.18441	-0.27769	0.061693	-0.18525	0.21774
20 - O	-0.21825	0.14508	-0.091575	0.545	-0.11351	0.45258	-0.18099	0.2287	-0.19594	0.19187
21 - O	-0.4258	0.0031744	-0.22053	0.14081	-0.22301	0.1363	-0.14947	0.32146	-0.038743	0.79823
22 - F	-0.26756	0.072232	-0.16764	0.26545	-0.21281	0.15562	-0.38471	0.0082929	-0.4989	0.00041688
23 - C	-0.10356	0.4934	-0.042698	0.77814	0.079155	0.60104	0.028177	0.85254	0.15979	0.28879
24 - C	-0.10301	0.49574	-0.024408	0.87209	0.28263	0.057019	0.19495	0.19417	0.21232	0.15661
25 - T	-0.21707	0.14731	-0.31582	0.032511	-0.1428	0.34378	-0.14669	0.33065	-0.09139	0.54582
26 - F	0.37409	0.010435	0.065623	0.6648	0.21479	0.15173	0.20725	0.16697	0.28455	0.055285
27 - C	-0.029536	0.84551	-0.14867	0.3241	-0.17444	0.24627	-0.26095	0.079843	-0.24865	0.095655
28 - C	0.15398	0.3069	0.12185	0.41983	-0.048815	0.74733	0.0065499	0.96554	0.001792	0.99057
29 - T	0.075138	0.61969	-0.044799	0.76752	0.041215	0.78566	-0.084469	0.57676	-0.055674	0.71325
30 - F	-0.17067	0.25679	0.022183	0.88366	-0.10535	0.48591	-0.091637	0.54473	0.039052	0.79666
31 - O	-0.19501	0.19403	-0.08521	0.5734	-0.11178	0.45955	0.076003	0.61565	-0.13662	0.36527
32 - T	0.3807	0.0090529	0.229	0.12581	0.19576	0.1923	0.37384	0.01049	0.2856	0.054353
33 - O	-0.14163	0.3478	-0.13749	0.36222	0.15423	0.30612	-0.090339	0.55046	-0.0063027	0.96684
34 - C	0.20916	0.163	0.17512	0.24441	-0.039052	0.79666	-0.074644	0.622	0.051905	0.73192
35 - C	0.26027	0.080659	-0.043069	0.77626	0.03207	0.83244	0.090154	0.55128	-0.136	0.36747
36 - F	-0.28999	0.050595	-0.12179	0.42007	-0.17864	0.2349	-0.12321	0.41462	-0.19817	0.18678
37 - F	-0.12964	0.39051	-0.10956	0.46858	-0.1289	0.39325	-0.19359	0.19736	-0.26638	0.07354
38 - O	-0.11252	0.45656	-0.022801	0.88044	0.042451	0.77939	0.048012	0.75135	-0.13996	0.35357
39 - F	0.37458	0.010325	0.38527	0.0081922	0.17858	0.23507	0.31736	0.031626	0.33621	0.022344
40 - C	0.071307	0.6377	-0.13044	0.38756	-0.2497	0.094217	-0.2421	0.10501	-0.37965	0.0092613
41 - F	-0.20521	0.17128	-0.25662	0.085152	-0.4449	0.0019487	-0.49687	0.00044396	-0.54364	9.44E-05
42 - F	-0.086261	0.56867	-0.23376	0.11793	-0.30852	0.036968	-0.35166	0.016552	-0.41054	0.0045981
43 - O	0.23153	0.12157	0.24111	0.10648	0.37316	0.010642	0.40597	0.0051212	0.28721	0.052952
44 - C	0.2662	0.073748	-0.15967	0.28917	-0.11425	0.44962	-0.24327	0.10329	0.035901	0.81276
45 - F	-0.2324	0.12014	-0.25693	0.084764	-0.11679	0.43956	-0.34807	0.017768	-0.25625	0.08562
46 - O	0.1821	0.22581	0.067353	0.65651	0.034912	0.81783	-0.02311	0.87883	-0.063151	0.67672
47 - O	0.26076	0.080065	-0.1399	0.35378	0.039608	0.79383	0.23475	0.11634	0.21052	0.16022
48 - O	-0.12198	0.41936	0.10097	0.50435	0.043563	0.77376	0.057034	0.70656	0.23981	0.10844
49 - C	0.1981	0.18692	0.032935	0.82799	-0.073346	0.62809	0.091699	0.54445	0.079278	0.60047
50 - C	0.15751	0.29584	0.18278	0.22405	0.045726	0.76284	0.14138	0.34865	0.065252	0.66659
51 - T	-0.021071	0.88946	0.075942	0.61594	0.012729	0.93309	0.048444	0.74919	0.065746	0.66421
52 - F	0.22696	0.12931	-0.058578	0.69898	0.076869	0.61163	0.0014212	0.99252	0.030834	0.83881

Table A12: Remote NC and age correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.039214	0.80525	-0.037428	0.81396	0.12	0.44908	0.10473	0.5092	0.20484	0.19316
2 -C	0.045547	0.77456	0.081189	0.60926	0.13096	0.40843	0.15044	0.34161	0.2624	0.093191
3 - T	-0.038727	0.80762	-0.0017862	0.99104	0.1446	0.36091	0.075668	0.63388	-0.037347	0.81435
4 -F	0.29642	0.056633	0.29309	0.059602	0.41658	0.006065	0.33498	0.030119	0.23049	0.14195
5 - O	-0.1338	0.39825	-0.22156	0.15849	-0.12901	0.4155	-0.14289	0.36666	-0.1161	0.46405
6 - T	0.18251	0.24733	0.13282	0.40172	0.08947	0.57312	0.043923	0.7824	-0.055533	0.72686
7 - O	0.17415	0.27002	0.19826	0.20816	0.17983	0.25445	0.18852	0.23184	0.16717	0.28999
8 - C	-0.0246	0.87711	-0.20062	0.2027	-0.11618	0.46374	-0.034586	0.82786	0.10555	0.5059
9 - F	-0.2033	0.1966	-0.1886	0.23163	-0.23009	0.14268	-0.15686	0.32118	-0.2434	0.12035
10 - F	0.080864	0.6107	-0.053585	0.73609	-0.096371	0.54377	-0.19615	0.21314	-0.28189	0.070516
11 - O	0.14013	0.37609	0.17797	0.2595	0.072502	0.64818	-0.012097	0.93939	0.024194	0.87912
12 - F	0.32662	0.034759	0.31258	0.043862	0.28408	0.068265	0.25371	0.10496	0.15978	0.31214
13 - C	-0.075506	0.63461	-0.031826	0.84142	0.094504	0.55164	-0.03759	0.81316	-0.01778	0.91101
14 - F	-0.34432	0.025557	-0.38069	0.012876	-0.48851	0.0010295	-0.45458	0.0024922	-0.39693	0.00925
15 - F	-0.24698	0.11484	-0.26679	0.087654	-0.38394	0.012067	-0.40887	0.007179	-0.51141	0.00053757
16 - O	-0.20987	0.1822	-0.17326	0.27252	-0.15929	0.31363	-0.13705	0.38679	-0.18633	0.23741
17 - C	-0.043355	0.78515	-0.22441	0.15308	-0.32346	0.036662	-0.22002	0.16148	-0.20638	0.18975
18 - F	-0.21466	0.1722	-0.17423	0.26979	-0.22091	0.15975	-0.20614	0.19029	-0.30925	0.046281
19 - O	-0.015345	0.92316	-0.066656	0.67492	-0.017618	0.91182	0.018105	0.90939	0.019485	0.90252
20 - O	0.064464	0.68505	0.026062	0.86987	-0.083949	0.5971	-0.0020297	0.98982	0.074856	0.63754
21 - O	-0.16774	0.28833	-0.066818	0.67417	0.010067	0.94955	0.0044654	0.97761	0.11034	0.48668
22 - F	-0.23537	0.13349	-0.28375	0.068595	-0.33149	0.03199	-0.38703	0.011339	-0.42348	0.0051984
23 - C	0.091094	0.56615	0.047739	0.76401	0.0669	0.67379	0.059511	0.70813	0.070634	0.65668
24 - C	-0.043436	0.78475	0.10628	0.50294	0.16563	0.29453	0.11748	0.45872	0.20922	0.18359
25 - T	-0.030365	0.84861	-0.090282	0.56963	0.086141	0.58753	0.15816	0.31714	0.098969	0.53291
26 - F	0.12446	0.43226	0.14078	0.37386	0.09832	0.53561	0.12933	0.41432	0.19485	0.21624
27 - C	-0.15669	0.32169	-0.050256	0.75195	-0.1066	0.50163	-0.088739	0.57627	-0.11919	0.45218
28 - C	0.035398	0.82388	0.085735	0.5893	0.14338	0.36501	0.14338	0.36501	0.25631	0.10132
29 - T	-0.1804	0.25293	0.0012178	0.99389	0.039214	0.80525	0.075343	0.63534	0.11764	0.4581
30 - F	0.32061	0.038442	0.30478	0.049695	0.24146	0.12344	0.22059	0.16038	0.1942	0.21781
31 - O	0.047577	0.76479	0.0020297	0.98982	0.017618	0.91182	0.037184	0.81515	0.15182	0.33715
32 - T	0.21361	0.17437	0.36681	0.016875	0.41674	0.0060432	0.28749	0.064877	0.22473	0.15248
33 - O	0.12641	0.42503	0.070309	0.65816	0.078347	0.62188	0.19355	0.21938	0.27913	0.073434
34 - C	0.024844	0.8759	0.075668	0.63388	0.24527	0.11744	0.10587	0.50459	0.16002	0.31139
35 - C	-0.16278	0.30301	-0.1778	0.25994	-0.0092555	0.95361	0.043761	0.78318	0.027036	0.86505
36 - F	0.031176	0.84461	-0.011123	0.94426	-0.11415	0.47164	-0.072014	0.6504	-0.10417	0.51151
37 - F	-0.19193	0.22335	-0.13437	0.39623	-0.30933	0.046221	-0.40205	0.0083069	-0.40408	0.0079563
38 - O	0.14939	0.34505	0.19063	0.22656	0.14216	0.36914	-0.12609	0.42623	0.11472	0.46942
39 - F	0.085005	0.59249	0.15718	0.32017	0.2188	0.16388	0.18852	0.23184	0.10969	0.48926
40 - C	-0.26987	0.083913	-0.20175	0.2001	-0.22652	0.14916	-0.27823	0.074398	-0.29204	0.060568
41 - F	-0.41293	0.0065725	-0.48957	0.0010001	-0.55955	0.00011691	-0.53698	0.00024598	-0.51693	0.00045644
42 - F	-0.34806	0.0239	-0.31842	0.039862	-0.44012	0.0035371	-0.46732	0.0018068	-0.4575	0.0023175
43 - O	0.14297	0.36639	0.16709	0.29023	0.26744	0.086856	0.24389	0.11959	0.088009	0.57942
44 - C	-0.074207	0.64047	-0.067224	0.6723	-0.28067	0.071792	-0.11301	0.47609	-0.050824	0.74924
45 - F	-0.28286	0.069509	-0.26541	0.089369	-0.28854	0.063856	-0.3345	0.030375	-0.28172	0.070685
46 - O	0.052204	0.74266	0.068199	0.66782	0.049525	0.75545	0.011448	0.94264	-0.037184	0.81515
47 - O	-0.11464	0.46974	-0.043517	0.78436	-0.092961	0.55818	0.061054	0.70091	0.027279	0.86384
48 - O	0.11383	0.47291	0.021677	0.89161	0.059755	0.70699	0.062272	0.69523	0.009012	0.95483
49 - C	0.035236	0.82468	-0.050175	0.75234	0.018024	0.9098	0.12536	0.42894	0.22587	0.15036
50 - C	0.033125	0.83503	-0.0492	0.757	0.032313	0.83902	0.14809	0.34931	0.10319	0.51549
51 - T	0.13437	0.39623	0.087684	0.58083	0.12357	0.4356	0.099943	0.52886	-0.04027	0.80011
52 - F	-0.017293	0.91344	0.041244	0.79538	-0.1036	0.51383	-0.0069822	0.965	-0.17642	0.26372

Table A13: NPPC and age correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.019094	0.89977	-0.0040782	0.97854	-0.25285	0.090001	0.25267	0.090245	-0.087126	0.56478
2 -C	0.19773	0.18776	0.21819	0.1452	0.088918	0.55677	-0.2028	0.17647	-0.13057	0.38711
3 - T	0.20972	0.16186	0.067291	0.6568	-0.13458	0.37254	-0.153	0.31006	-0.25643	0.085386
4 -F	-0.25495	0.087273	-0.27349	0.065903	0.0033985	0.98212	0.17178	0.25365	-0.07588	0.61623
5 - O	0.18642	0.21479	-0.070937	0.63945	0.25946	0.081633	-0.026941	0.85894	-0.095715	0.52689
6 - T	0.15955	0.28955	-0.088547	0.55843	-0.024778	0.87016	-0.15738	0.29622	0.15701	0.29737
7 - O	0.03726	0.8058	-0.17011	0.25836	0.16523	0.27248	-0.19192	0.20132	0.037816	0.80296
8 - C	-0.017611	0.90752	-0.048815	0.74733	-0.20756	0.16633	-0.18476	0.21899	-0.0018537	0.99024
9 - F	-0.07761	0.60819	0.06933	0.64707	0.011122	0.94152	0.049557	0.74362	-0.016437	0.91366
10 - F	-0.14113	0.3495	-0.030896	0.83849	0.029598	0.84519	-0.015942	0.91625	-0.047332	0.75476
11 - O	0.016931	0.91108	0.034047	0.82227	-0.086384	0.56811	0.037755	0.80328	0.035221	0.81624
12 - F	-0.11882	0.43156	0.1491	0.32267	0.14601	0.33292	0.14472	0.33728	-0.25279	0.090082
13 - C	0.18167	0.22693	0.13674	0.36484	-0.34591	0.018537	-0.08243	0.58602	0.013903	0.92693
14 - F	0.11073	0.4638	0.1732	0.24969	0.068959	0.64884	-0.080823	0.59337	0.20125	0.17986
15 - F	0.15744	0.29603	0.19742	0.18847	0.06624	0.66183	0.018537	0.90268	-0.0063645	0.96652
16 - O	-0.15287	0.31045	0.22857	0.12655	-0.054068	0.72119	-0.0099484	0.94768	-0.066549	0.66035
17 - C	-0.12556	0.40572	-0.11339	0.45308	0.14465	0.33748	0.29987	0.042895	0.14564	0.33416
18 - F	0.11172	0.4598	0.023851	0.87498	-0.1352	0.37033	0.011061	0.94184	-0.18686	0.21371
19 - O	0.038558	0.79918	-0.43495	0.0025216	-0.15812	0.29392	0.022121	0.88398	-0.070072	0.64355
20 - O	0.039547	0.79414	0.020391	0.893	-0.15899	0.29125	-0.09763	0.51861	-0.26107	0.079695
21 - O	-0.061421	0.68511	-0.052523	0.72884	-0.23499	0.11594	0.066673	0.65976	-0.104	0.49159
22 - F	-0.16461	0.2743	-0.02206	0.8843	0.14231	0.34547	-0.024346	0.87241	-0.37637	0.0099377
23 - C	0.37069	0.011213	0.13779	0.36113	-0.032502	0.83021	0.14465	0.33748	0.098248	0.51596
24 - C	0.073717	0.62634	0.097816	0.51782	0.061421	0.68511	-0.067785	0.65444	0.033676	0.82417
25 - T	0.077178	0.61019	-0.23895	0.10976	-0.19211	0.20088	0.16084	0.28559	0.069515	0.64619
26 - F	0.042883	0.7772	0.29332	0.047881	-0.17623	0.24138	-0.089103	0.55595	-0.043996	0.77157
27 - C	-0.1069	0.4795	0.13934	0.35572	-0.28968	0.050853	0.12877	0.39371	-0.042945	0.77688
28 - C	0.22301	0.1363	0.086693	0.56672	0.13118	0.38484	-0.12012	0.42651	0.073717	0.62634
29 - T	0.027126	0.85798	-0.012049	0.93665	-0.3988	0.0060458	-0.30235	0.041127	-0.084222	0.57788
30 - F	-0.13205	0.38169	0.039114	0.79634	-0.019959	0.89526	-0.34047	0.020597	0.12643	0.40246
31 - O	0.15059	0.31783	-0.015324	0.91949	0.0032132	0.98309	-0.11104	0.46255	-0.086817	0.56617
32 - T	-0.14373	0.34062	0.13662	0.36527	-0.10906	0.47061	0.10591	0.4836	-0.10387	0.49211
33 - O	0.07038	0.64209	-0.2167	0.14802	0.12494	0.40805	-0.1247	0.40899	-0.22894	0.12592
34 - C	0.11753	0.43664	-0.23611	0.11418	-0.10307	0.49548	0.10474	0.48849	0.08725	0.56423
35 - C	-0.12785	0.39715	-0.26564	0.074376	-0.12624	0.40316	0.15405	0.30671	0.16986	0.25907
36 - F	0.040906	0.78723	0.039361	0.79508	-0.031761	0.83403	0.070875	0.63974	-0.043748	0.77282
37 - F	-0.081318	0.59111	-0.03207	0.83244	0.16597	0.2703	-0.54611	8.64E-05	-0.11963	0.42843
38 - O	0.26095	0.079843	-0.20824	0.16491	0.041153	0.78597	0.026447	0.8615	0.16264	0.28019
39 - F	-0.25124	0.092131	-0.067723	0.65473	0.16752	0.26581	0.078969	0.6019	0.1064	0.48155
40 - C	0.16177	0.28279	-0.097322	0.51994	0.045849	0.76222	-0.073655	0.62663	0.013285	0.93017
41 - F	0.040164	0.791	0.24692	0.098062	0.10301	0.49574	0.020515	0.89236	0.058578	0.69898
42 - F	-0.086446	0.56784	-0.03034	0.84136	0.056725	0.70808	-0.13594	0.36769	0.21899	0.14369
43 - O	-0.37192	0.010924	0.17852	0.23523	0.19996	0.18274	0.35919	0.014224	-0.03726	0.8058
44 - C	0.17289	0.25055	0.21769	0.14614	0.13526	0.37011	-0.072976	0.62983	0.0080329	0.95775
45 - F	-0.12624	0.40316	-0.028362	0.85158	0.0060556	0.96814	0.19149	0.20236	-0.01242	0.93471
46 - O	-0.10412	0.49107	0.0053759	0.97171	-0.076374	0.61393	-0.021998	0.88463	-0.23963	0.10872
47 - O	0.15503	0.30358	0.064696	0.66926	0.08657	0.56728	0.18772	0.21156	0.16684	0.26778
48 - O	0.15689	0.29776	-0.028486	0.85094	-0.21188	0.15747	-0.16251	0.28056	-0.12982	0.38983
49 - C	-0.097383	0.51968	0.040597	0.7888	-0.15374	0.30769	0.18198	0.22613	0.073161	0.62896
50 - C	-0.22869	0.12634	0.16888	0.26189	-0.12865	0.39417	0.18105	0.22854	0.11487	0.44715
51 - T	-0.09658	0.52314	0.0027188	0.98569	-0.16968	0.2596	-0.27954	0.059906	-0.21763	0.14625
52 - F	-0.096889	0.52181	-0.035468	0.81498	-0.074212	0.62403	-0.025334	0.86727	0.1779	0.23688

Table A14: NPPC and age correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.2594	0.097138	-0.016968	0.91506	0.10555	0.5059	-0.0051149	0.97435	0.25436	0.10404
2 -C	-0.11301	0.47609	-0.13672	0.38793	0.060404	0.70395	0.10433	0.51085	0.15978	0.31214
3 - T	-0.018592	0.90697	-0.30827	0.047009	-0.074369	0.63973	-0.12925	0.41461	-0.082975	0.60138
4 -F	-0.30511	0.04944	-0.1338	0.39825	0.21101	0.17979	0.049038	0.75778	0.051961	0.74382
5 - O	-0.12308	0.43742	-0.025169	0.87429	-0.1122	0.47929	-0.27832	0.07431	-0.20086	0.20214
6 - T	0.076236	0.63133	0.161	0.30841	-0.13713	0.38651	0.097751	0.53799	-0.29837	0.054951
7 - O	-0.13575	0.39135	0.01161	0.94183	-0.20232	0.1988	-0.19404	0.2182	0.071527	0.65261
8 - C	-0.060567	0.70319	-0.071203	0.65409	0.026549	0.86745	-0.076642	0.62951	0.11886	0.45342
9 - F	0.13161	0.40609	0.28757	0.064798	0.069985	0.65964	-0.093692	0.55508	-0.17261	0.27435
10 - F	0.059024	0.71041	0.19826	0.20816	-0.048794	0.75895	-0.078347	0.62188	-0.13705	0.38679
11 - O	-0.26549	0.089267	-0.19721	0.21064	-0.25331	0.10553	-0.20386	0.19533	-0.083137	0.60067
12 - F	-0.041325	0.79498	0.14427	0.362	0.20135	0.20102	0.16262	0.30349	0.043923	0.7824
13 - C	0.055452	0.72724	-0.25193	0.10751	-0.081676	0.60711	-0.2197	0.16212	-0.13867	0.38113
14 - F	-0.26053	0.09563	0.017537	0.91223	0.016968	0.91506	-0.21052	0.18082	-0.31063	0.045265
15 - F	0.13258	0.40259	-0.024438	0.87791	-0.054072	0.73378	0.23196	0.13937	0.080377	0.61286
16 - O	0.039295	0.80485	-0.22855	0.14545	-0.098401	0.53528	-0.063814	0.68806	-0.28051	0.071963
17 - C	0.25648	0.1011	0.065032	0.68241	0.2935	0.059233	0.060486	0.70357	-0.15296	0.3335
18 - F	-0.26403	0.09111	0.19981	0.20457	0.30113	0.052637	0.018673	0.90656	-0.049363	0.75622
19 - O	0.26735	0.086956	0.09426	0.55267	-0.16563	0.29453	-0.0077129	0.96134	-0.060973	0.70129
20 - O	-0.054153	0.7334	0.21531	0.17087	-0.13201	0.40463	-0.23691	0.13089	-0.022408	0.88798
21 - O	0.067874	0.66931	0.17488	0.26798	-0.12487	0.43075	-0.012747	0.93614	0.21669	0.16808
22 - F	-0.26403	0.09111	-0.082001	0.60567	0.082894	0.60174	-0.14476	0.36037	-0.20395	0.19515
23 - C	-0.057563	0.71728	-0.15848	0.31614	-0.18446	0.24223	-0.059187	0.70965	0.08882	0.57592
24 - C	0.030202	0.84941	0.016644	0.91668	-0.054072	0.73378	-0.31777	0.040292	0.44394	0.0032294
25 - T	0.13818	0.38283	-0.10043	0.52685	-0.15199	0.33663	-0.045385	0.77534	0.12349	0.4359
26 - F	0.14443	0.36146	0.14711	0.35252	-0.037753	0.81237	0.12779	0.41995	0.0071446	0.96418
27 - C	0.0025169	0.98738	-0.058862	0.71118	-0.14184	0.37025	-0.064545	0.68467	-0.22441	0.15308
28 - C	0.14297	0.36639	-0.33515	0.030035	0.044248	0.78083	0.096939	0.54138	0.04165	0.79341
29 - T	0.049688	0.75467	-0.0008119	0.99593	-0.2348	0.13446	0.1597	0.31238	-0.38069	0.012876
30 - F	0.070066	0.65927	0.2024	0.19862	-0.22059	0.16038	0.19737	0.21025	-0.014452	0.92762
31 - O	0.0044654	0.97761	0.12105	0.44508	0.06901	0.6641	-0.036616	0.81792	0.21953	0.16244
32 - T	-0.073638	0.64304	0.30316	0.050985	-0.13404	0.39738	0.13916	0.37945	0.21677	0.16792
33 - O	-0.23317	0.13725	-0.10481	0.50887	0.12958	0.41343	-0.50288	0.00068834	-0.31193	0.044326
34 - C	0.23382	0.13613	0.010717	0.9463	0.0078753	0.96052	0.06966	0.66113	0.061622	0.69826
35 - C	-0.063327	0.69032	-0.28505	0.067283	0.2158	0.16989	0.17277	0.27389	-0.042381	0.78986
36 - F	-0.0070634	0.96459	-0.036616	0.81792	-0.060242	0.70471	0.17594	0.26506	-0.074044	0.6412
37 - F	-0.11862	0.45436	0.12714	0.42234	-0.22278	0.15616	0.1118	0.48089	0.031339	0.84381
38 - O	0.12276	0.43864	-0.29463	0.058211	-0.33133	0.032079	-0.32094	0.038235	-0.12592	0.42683
39 - F	0.12471	0.43135	0.084842	0.59319	0.051717	0.74498	-0.12454	0.43196	-0.010636	0.9467
40 - C	-0.18276	0.24669	0.1955	0.21469	0.10051	0.52651	-0.18868	0.23143	0.08606	0.58788
41 - F	0.066169	0.67716	0.19071	0.22636	0.10652	0.50196	0.040432	0.79932	-0.022327	0.88839
42 - F	-0.07648	0.63024	0.036616	0.81792	-0.13153	0.40638	-0.16774	0.28833	0.06081	0.70205
43 - O	-0.21775	0.16597	0.028822	0.85622	0.036048	0.8207	0.082975	0.60138	-0.12803	0.41906
44 - C	0.15824	0.31689	0.21304	0.17555	0.36405	0.017784	0.061054	0.70091	0.13721	0.38622
45 - F	0.092555	0.55991	-0.1355	0.39221	0.15069	0.34082	-0.25591	0.10188	-0.14963	0.34425
46 - O	-0.0833	0.59996	-0.065763	0.67904	0.11569	0.46563	-0.32492	0.035773	-0.027198	0.86424
47 - O	-0.12235	0.44017	-0.065844	0.67866	0.21937	0.16276	-0.056913	0.72034	-0.17009	0.28152
48 - O	-0.2257	0.15066	0.25006	0.11023	-0.081514	0.60782	0.014939	0.92519	-0.20127	0.20121
49 - C	0.18649	0.23699	-0.13274	0.40201	-0.11423	0.47132	0.01299	0.93493	-0.033531	0.83304
50 - C	0.27247	0.080861	0.022895	0.88556	-0.043842	0.78279	-0.14947	0.34478	-0.11651	0.46248
51 - T	-0.24811	0.11312	-0.077211	0.62696	0.015669	0.92154	-0.16912	0.28432	0.019566	0.90211
52 - F	0.14549	0.35792	0.0833	0.59996	0.027848	0.86103	-0.10368	0.5135	-0.13534	0.39278

Table A15: PPC and age correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.052399	0.72946	0.059011	0.69686	0.21133	0.15859	-0.077795	0.60733	0.10029	0.50724
2 -C	-0.16993	0.25889	-0.21003	0.16122	-0.18247	0.22485	0.054747	0.71783	0.086879	0.56589
3 - T	0.1606	0.28634	0.13557	0.36901	0.19736	0.18861	-0.24581	0.099634	0.15349	0.30848
4 -F	-0.07829	0.60504	0.0077239	0.95937	-0.12698	0.40038	0.057034	0.70656	-0.14379	0.34041
5 - O	0.051967	0.73161	0.029598	0.84519	-0.090957	0.54773	0.13817	0.35983	0.04931	0.74486
6 - T	-0.11135	0.4613	0.0082183	0.95677	0.13341	0.37676	-0.3372	0.021929	-0.032873	0.8283
7 - O	0.1897	0.2067	0.043934	0.77188	-0.18877	0.20896	-0.23746	0.11205	-0.058764	0.69807
8 - C	-0.25477	0.087511	-0.24173	0.10556	-0.051287	0.73499	0.19254	0.19985	-0.022677	0.88109
9 - F	0.040412	0.78974	0.022307	0.88302	-0.019403	0.89816	0.10789	0.47542	0.11147	0.4608
10 - F	-0.12439	0.41016	-0.011061	0.94184	0.2772	0.062177	0.12445	0.40992	0.0028424	0.98504
11 - O	-0.016251	0.91463	0.0075386	0.96034	-0.049989	0.74146	0.10987	0.46732	-0.17716	0.23887
12 - F	-0.18797	0.21094	-0.021812	0.88559	0.12025	0.42603	0.052028	0.7313	0.13217	0.38124
13 - C	-0.074273	0.62374	0.007415	0.96099	0.080391	0.59536	-0.26101	0.079769	0.13298	0.37833
14 - F	0.086817	0.56617	0.12723	0.39946	-0.03139	0.83594	-0.076312	0.61421	0.16579	0.27085
15 - F	0.072667	0.63128	0.02311	0.87883	0.18605	0.21572	0.11184	0.4593	0.091019	0.54745
16 - O	0.097878	0.51755	0.17481	0.24526	0.19143	0.20251	0.20039	0.18178	0.060556	0.68932
17 - C	-0.097445	0.51941	-0.059196	0.69596	0.23203	0.12075	-0.22974	0.12456	0.084654	0.57592
18 - F	-0.077672	0.6079	0.0062409	0.96717	0.071246	0.63799	-0.060679	0.68872	-0.045231	0.76533
19 - O	0.086693	0.56672	0.20113	0.18013	0.29221	0.048772	-0.062595	0.67942	-0.081874	0.58856
20 - O	-0.023481	0.87691	0.0049433	0.97399	-0.17376	0.24815	0.0095159	0.94995	0.21608	0.14921
21 - O	0.10369	0.49288	0.14107	0.34972	-0.025952	0.86406	-0.024037	0.87401	-0.14725	0.3288
22 - F	0.01242	0.93471	0.0046962	0.97529	0.035468	0.81498	0.2201	0.14161	0.23419	0.11723
23 - C	0.060926	0.68752	-0.012667	0.93341	0.042883	0.7772	-0.087002	0.56534	0.15627	0.29969
24 - C	-0.082244	0.58687	-0.067106	0.65769	0.1158	0.44347	-0.065499	0.6654	0.25971	0.081332
25 - T	0.13959	0.35486	0.10257	0.49756	0.18469	0.21915	0.024408	0.87209	-0.030772	0.83913
26 - F	0.0262	0.86278	0.067971	0.65355	0.24828	0.096167	-0.093861	0.53496	-0.020947	0.8901
27 - C	0.060494	0.68963	0.16659	0.2685	0.056045	0.71142	-0.084469	0.57676	0.12321	0.41462
28 - C	-0.045046	0.76627	-0.16943	0.2603	0.0074768	0.96067	0.11425	0.44962	0.018599	0.90236
29 - T	0.10356	0.4934	0.20447	0.17287	-0.093058	0.53848	-0.043316	0.77501	0.067538	0.65562
30 - F	-0.093429	0.53685	-0.13001	0.38915	-0.058331	0.70019	-0.047023	0.75632	-0.060185	0.69113
31 - O	0.14855	0.3245	0.1661	0.26994	0.13909	0.35658	0.1593	0.29031	0.085025	0.57424
32 - T	0.001792	0.99057	0.041895	0.78221	-0.044799	0.76752	0.1669	0.2676	-0.39392	0.0067557
33 - O	0.073285	0.62838	-0.24457	0.1014	-0.31464	0.033197	-0.39559	0.0065053	-0.0019773	0.98959
34 - C	-0.13032	0.38801	-0.18161	0.22709	-0.026941	0.85894	0.14743	0.32818	0.18673	0.21402
35 - C	-0.088671	0.55788	-0.050731	0.73776	0.025211	0.86791	0.0051905	0.97269	-0.0086508	0.9545
36 - F	0.090463	0.54991	0.1137	0.45184	-0.0022245	0.98829	0.032193	0.8318	-0.084963	0.57452
37 - F	0.023357	0.87755	0.077239	0.60991	0.21398	0.1533	-0.26305	0.077359	-0.055674	0.71325
38 - O	0.18834	0.21003	0.16869	0.26242	0.21392	0.15342	0.13026	0.38824	-0.17654	0.24054
39 - F	-0.063954	0.67284	-0.059134	0.69626	-0.06346	0.67523	-0.086446	0.56784	-0.40028	0.0058434
40 - C	-0.0002472	0.9987	0.037322	0.80549	0.092811	0.53956	0.11444	0.44888	0.18797	0.21094
41 - F	-0.026385	0.86182	0.022369	0.88269	-0.09726	0.52021	-0.0076621	0.95969	-0.016684	0.91237
42 - F	0.014027	0.92629	0.023357	0.87755	-0.039423	0.79477	-0.038064	0.8017	0.20107	0.18027
43 - O	0.15831	0.29335	0.12865	0.39417	0.12105	0.42293	0.25755	0.083992	0.097878	0.51755
44 - C	0.071184	0.63828	0.12154	0.42102	0.09244	0.54119	-0.18327	0.22278	0.06865	0.65031
45 - F	0.088053	0.56063	0.14478	0.33707	0.29783	0.044399	-0.05277	0.72762	0.18093	0.22887
46 - O	0.023481	0.87691	-0.0051905	0.97269	-0.11926	0.42987	0.24179	0.10547	0.14286	0.34357
47 - O	-0.054006	0.72149	0.012173	0.93601	0.15609	0.30027	-0.11116	0.46205	0.0093305	0.95093
48 - O	0.08725	0.56423	0.017796	0.90655	-0.24309	0.10356	-0.010072	0.94703	0.24266	0.10419
49 - C	-0.094232	0.53334	-0.16721	0.2667	-0.19075	0.20415	0.22881	0.12613	-0.18383	0.22135
50 - C	-0.15948	0.28974	-0.17141	0.2547	-0.083048	0.58321	0.086261	0.56867	-0.050669	0.73807
51 - T	0.075262	0.61911	-0.040721	0.78817	-0.2028	0.17647	0.15133	0.31543	0.20181	0.17864
52 - F	-0.014706	0.92272	0.064572	0.66986	0.15244	0.31184	-0.30259	0.040954	-0.13983	0.354

Table A16: PPC and age correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.18381	0.24392	-0.068199	0.66782	0.29228	0.060344	0.33084	0.032348	-0.11472	0.46942
2 -C	-0.17447	0.26911	-0.2266	0.14901	0.1299	0.41225	-0.025169	0.87429	-0.1187	0.45404
3 - T	-0.14744	0.35145	-0.10611	0.5036	0.086385	0.58647	0.16043	0.31015	-0.45255	0.0026202
4 -F	-0.03345	0.83344	0.17521	0.26708	0.35122	0.022567	0.10011	0.52819	-0.19274	0.22136
5 - O	0.099619	0.53021	-0.014614	0.92681	-0.12008	0.44878	0.0055208	0.97232	0.098644	0.53426
6 - T	-0.11553	0.46626	-0.064626	0.68429	0.26143	0.094457	-0.1027	0.51749	-0.15004	0.34293
7 - O	0.03962	0.80327	-0.016968	0.91506	0.011204	0.94386	-0.073882	0.64193	-0.27978	0.072739
8 - C	-0.13047	0.41019	-0.099862	0.5292	-0.036616	0.81792	-0.18746	0.23451	-0.0059268	0.97028
9 - F	0.084436	0.59497	0.13973	0.37748	-0.13282	0.40172	-0.059024	0.71041	-0.11301	0.47609
10 - F	-0.09905	0.53257	-0.021759	0.89121	0.11878	0.45373	-0.28814	0.064247	0.067305	0.67193
11 - O	-0.16928	0.28385	-0.24357	0.1201	-0.10173	0.52149	-0.089226	0.57417	0.11764	0.4581
12 - F	0.019161	0.90414	0.025818	0.87107	0.10043	0.52685	-0.18649	0.23699	-0.11983	0.4497
13 - C	-0.19672	0.21179	-0.17269	0.27412	0.099294	0.53156	-0.014776	0.926	-0.16132	0.30743
14 - F	0.13396	0.39767	0.038483	0.80881	-0.0036535	0.98168	-0.0085248	0.95727	-0.025169	0.87429
15 - F	-0.1925	0.22195	-0.18795	0.23327	-0.079646	0.6161	0.11042	0.48635	-0.19769	0.20949
16 - O	0.15604	0.32373	0.17383	0.27093	-0.042705	0.78829	0.15751	0.31916	-0.096696	0.54241
17 - C	-0.22083	0.1599	-0.18763	0.2341	0.15856	0.31589	-0.1489	0.34664	0.18958	0.22919
18 - F	-0.033044	0.83543	0.0034099	0.9829	0.12316	0.43712	0.21621	0.16906	0.28181	0.070601
19 - O	-0.20167	0.20028	-0.10847	0.49413	-0.13916	0.37945	0.13144	0.40667	0.1122	0.47929
20 - O	-0.028984	0.85542	0.031826	0.84142	-0.019161	0.90414	-0.26711	0.087254	0.18032	0.25315
21 - O	-0.10855	0.4938	-0.044979	0.7773	0.12552	0.42834	-0.050581	0.7504	-0.050175	0.75234
22 - F	0.1325	0.40288	0.084761	0.59355	0.15239	0.33532	-0.30275	0.051312	0.23439	0.13515
23 - C	0.029959	0.85061	-0.05943	0.70851	-0.15426	0.32936	0.06966	0.66113	-0.35431	0.021328
24 - C	0.13518	0.39335	0.0492	0.757	-0.1912	0.22515	-0.16278	0.30301	-0.06763	0.67043
25 - T	-0.056507	0.72226	-0.031582	0.84261	-0.17431	0.26957	0.12958	0.41343	0.11115	0.48346
26 - F	0.0025169	0.98738	0.079971	0.61466	0.50946	0.00056914	-0.074044	0.6412	-0.078022	0.62333
27 - C	-0.067711	0.67006	0.029715	0.85181	0.20987	0.1822	-0.057319	0.71843	0.011042	0.94467
28 - C	-0.0031664	0.98412	-0.088577	0.57697	0.07851	0.62116	0.16092	0.30866	-0.10896	0.49218
29 - T	0.02046	0.89767	0.18324	0.24541	0.25664	0.10088	0.13843	0.38198	0.0075506	0.96215
30 - F	0.11407	0.47195	0.15864	0.31563	0.13412	0.39709	-0.014939	0.92519	0.074288	0.6401
31 - O	0.15458	0.32833	0.081595	0.60747	-0.055858	0.72533	-0.031745	0.84182	0.024763	0.8763
32 - T	-0.16278	0.30301	-0.032719	0.83703	0.055614	0.72648	0.054153	0.7334	0.041569	0.7938
33 - O	-0.29894	0.054468	-0.38037	0.01296	-0.20386	0.19533	0.05123	0.7473	-0.0082001	0.9589
34 - C	-0.023382	0.88315	-0.08403	0.59675	0.046521	0.76987	-0.026549	0.86745	-0.12195	0.4417
35 - C	0.10457	0.50986	0.072583	0.64782	-0.071121	0.65446	-0.035561	0.82309	0.048551	0.76011
36 - F	0.027604	0.86224	-0.04506	0.77691	0.13144	0.40667	0.28246	0.069927	-0.18925	0.23
37 - F	-0.03621	0.81991	-0.035317	0.82428	0.3673	0.016719	-0.026873	0.86585	0.0059268	0.97028
38 - O	0.0064951	0.96744	-0.034343	0.82905	-0.14987	0.34346	-0.23902	0.12739	0.16067	0.3094
39 - F	-0.19144	0.22455	-0.055127	0.72878	0.34156	0.026841	-0.20719	0.18798	0.089957	0.57102
40 - C	-0.090607	0.56823	-0.094017	0.5537	0.28067	0.071792	-0.097264	0.54002	0.22838	0.14574
41 - F	0.086547	0.58576	0.013721	0.93127	0.18552	0.2395	0.089632	0.57242	0.11318	0.47545
42 - F	-0.14151	0.37136	-0.18511	0.24055	0.40383	0.0079977	-0.0065763	0.96703	0.10319	0.51549
43 - O	0.094423	0.55198	0.0057644	0.9711	0.049444	0.75584	0.11293	0.47641	-0.10417	0.51151
44 - C	-0.13161	0.40609	-0.056101	0.72417	0.27296	0.080298	-0.06349	0.68956	0.29666	0.05642
45 - F	-0.083949	0.5971	-0.024032	0.87992	0.28254	0.069843	-0.16311	0.30203	0.17618	0.26439
46 - O	-0.059105	0.71003	-0.096858	0.54172	-0.24925	0.11143	-0.073476	0.64377	0.087603	0.58118
47 - O	-0.12487	0.43075	-0.14427	0.362	0.26419	0.090903	-0.044816	0.77808	0.22197	0.15771
48 - O	-0.050175	0.75234	-0.07648	0.63024	-0.14411	0.36255	-0.15353	0.33169	0.080377	0.61286
49 - C	0.087359	0.58224	0.1636	0.30057	-0.049688	0.75467	0.091013	0.5665	0.12552	0.42834
50 - C	0.042786	0.7879	0.17293	0.27344	-0.057319	0.71843	0.16059	0.30965	0.09767	0.53833
51 - T	-0.14955	0.34452	-0.17553	0.26618	-0.32565	0.035335	-0.058537	0.7127	0.032232	0.83942
52 - F	-0.15945	0.31313	-0.015101	0.92438	0.43688	0.0038188	0.10806	0.49575	-0.14379	0.36364

B Features vs. C1 correlation

The tables below show the results of the correlation tests between the features and the combination score C1 at all the frequency bands for each node in the brain. The tables show the Spearman's correlation coefficient as Rho and the P-value of each test.

Table B1: Local NC and C1 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.30398	0.05652	0.24811	0.12267	0.17498	0.28016	0.070484	0.66561	0.16528	0.30811
2 -C	0.22125	0.17006	0.017244	0.91589	-0.25546	0.11162	-0.20617	0.20182	0.10328	0.52598
3 - T	0.16226	0.31714	0.17263	0.28679	0.22624	0.16038	0.18714	0.24756	0.12664	0.43615
4 -F	0.088387	0.58758	0.29079	0.068702	0.26196	0.10249	0.25828	0.10758	0.3363	0.033857
5 - O	0.1029	0.5275	-0.10714	0.51053	0.035901	0.82592	-9.42E-05	0.99954	0.058705	0.71898
6 - T	0.05503	0.73592	-0.081132	0.61872	0.21522	0.1823	0.15105	0.35217	0.19213	0.23494
7 - O	0.13578	0.40348	0.14455	0.37352	0.087162	0.59279	0.047115	0.77282	0.11034	0.49789
8 - C	-0.22511	0.16253	-0.23652	0.14173	-0.1698	0.29487	-0.10318	0.52636	-0.12664	0.43615
9 - F	0.054747	0.73723	-0.005183	0.97468	0.18742	0.24683	-0.058422	0.72028	-0.21126	0.19067
10 - F	0.034582	0.83223	0.18045	0.26517	0.21192	0.18926	0.15887	0.3275	0.081508	0.61708
11 - O	-0.064924	0.69062	-0.19911	0.21806	0.090743	0.57762	0.083205	0.60975	0.11242	0.4898
12 - F	0.031944	0.84487	0.024405	0.88117	-0.070389	0.66603	-0.066526	0.68338	0.12043	0.45919
13 - C	0.15567	0.33747	0.15454	0.34104	0.39718	0.01116	-0.016019	0.92185	0.12674	0.4358
14 - F	0.062474	0.70174	-0.27374	0.087417	-0.22248	0.16765	-0.19882	0.21873	-0.13588	0.40315
15 - F	-0.077551	0.63433	0.081697	0.61626	0.13899	0.39237	0.029305	0.85754	-0.041838	0.7977
16 - O	-0.091968	0.57247	0.031473	0.84713	-0.094418	0.56224	0.003863	0.98112	-0.022709	0.88938
17 - C	-0.065207	0.68934	0.20222	0.21081	-0.40151	0.010231	0.016019	0.92185	-0.27082	0.090985
18 - F	-0.22672	0.15949	-0.36354	0.02112	-0.076514	0.63888	-0.003863	0.98112	0.088953	0.58518
19 - O	0.16556	0.30727	-0.12325	0.44864	0.018846	0.90811	0.021673	0.8944	0.022238	0.89166
20 - O	-0.13616	0.40216	-0.30135	0.058807	-0.044476	0.78523	0.44797	0.003747	0.27854	0.081785
21 - O	-0.020259	0.90125	-0.20599	0.20224	0.001319	0.99355	-0.1355	0.40447	-0.16368	0.31289
22 - F	0.038257	0.8147	-0.20796	0.19785	-0.099789	0.54011	-0.17734	0.27363	-0.047492	0.77105
23 - C	-0.058893	0.71812	-0.27006	0.091924	-0.2351	0.1442	0.022238	0.89166	0.13268	0.41443
24 - C	0.13249	0.4151	-0.097527	0.54938	-0.094418	0.56224	0.050507	0.75694	0.22747	0.15806
25 - T	0.086597	0.5952	-0.14012	0.38849	0.025536	0.87571	-0.01894	0.90765	0.062568	0.70132
26 - F	0.03185	0.84532	-0.22257	0.16746	-0.20335	0.20821	-0.18045	0.26517	-0.060024	0.71293
27 - C	0.082074	0.61463	0.12335	0.44829	0.054559	0.7381	0.079718	0.62486	0.07708	0.6364
28 - C	0.20033	0.21518	0.13004	0.42386	-0.27327	0.087985	-0.19496	0.22799	0.088199	0.58838
29 - T	0.25536	0.11176	-0.053145	0.74466	0.045701	0.77946	0.11694	0.47238	-0.004052	0.9802
30 - F	0.1029	0.5275	0.16038	0.32287	-0.007821	0.9618	0.28683	0.072734	0.12269	0.45074
31 - O	-0.007727	0.96226	0.12495	0.44237	0.028269	0.86253	0.21362	0.18566	0.1911	0.23752
32 - T	-0.15538	0.33836	-0.10648	0.51315	-0.12881	0.42827	-0.12203	0.45319	-0.11779	0.46916
33 - O	0.066243	0.68465	-0.047115	0.77282	0.12674	0.4358	0.055784	0.73244	0.077834	0.63309
34 - C	0.051167	0.75386	0.2891	0.070408	0.010648	0.94801	0.008575	0.95812	0.018563	0.90948
35 - C	0.07887	0.62856	-0.019317	0.90582	-0.11505	0.4796	-0.23265	0.14855	-0.089895	0.5812
36 - F	0.091591	0.57406	-0.21334	0.18625	0.024405	0.88117	0.078776	0.62897	0.059553	0.71509
37 - F	-0.052863	0.74597	0.20259	0.20994	0.12146	0.4553	-0.10459	0.52068	0.23303	0.14787
38 - O	-0.15114	0.35187	-0.15237	0.34793	0.039859	0.80708	0.21579	0.18113	0.075666	0.64261
39 - F	-0.12825	0.43032	-0.16697	0.3031	0.08801	0.58918	-0.040424	0.8044	-0.1061	0.51465
40 - C	0.10149	0.53321	0.081603	0.61667	0.1323	0.41577	0.094512	0.56185	-0.014794	0.92781
41 - F	-0.14558	0.37007	-0.095172	0.55911	-0.25367	0.11424	-0.15953	0.32547	-0.10158	0.53283
42 - F	-0.25847	0.10732	0.075384	0.64386	0.027138	0.86798	-0.12127	0.45601	0.040424	0.8044
43 - O	0.017998	0.91223	0.03609	0.82503	-0.034205	0.83403	0.18441	0.25466	0.039765	0.80753
44 - C	-0.15576	0.33718	0.062097	0.70346	0.024029	0.883	0.075855	0.64178	-0.029871	0.85482
45 - F	0.049659	0.7609	-0.12495	0.44237	-0.22521	0.16235	-0.43176	0.005404	-0.012533	0.93882
46 - O	0.011308	0.94479	-0.083676	0.60772	0.023557	0.88528	-0.079718	0.62486	-0.059365	0.71596
47 - O	0.11779	0.46916	0.065678	0.68721	-0.19402	0.23029	-0.20994	0.19352	-0.07887	0.62856
48 - O	0.068505	0.67447	-0.29371	0.06584	-0.14709	0.36508	-0.19129	0.23705	-0.042121	0.79636
49 - C	-0.10846	0.5053	-0.11929	0.46345	-0.2188	0.17496	0.009235	0.9549	-0.056161	0.7307
50 - C	-0.047586	0.77061	-0.039482	0.80887	-0.20712	0.19972	-0.059836	0.7138	0.018657	0.90903
51 - T	0.088576	0.58678	-0.1388	0.39302	-0.098847	0.54397	-0.13786	0.39627	-0.090554	0.57842
52 - F	0.23915	0.13721	0.061815	0.70475	0.037409	0.81873	-0.25612	0.11067	-0.042592	0.79413

Table B2: Local NC and C1 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.015116	0.91615	-0.058649	0.68268	-0.11748	0.41163	0.034772	0.8086	-0.012665	0.92971
2 -C	-0.33396	0.016618	-0.2587	0.066798	-0.26115	0.064166	-0.35675	0.010178	-0.34277	0.013806
3 - T	-0.014526	0.91942	-0.073084	0.61028	-0.09156	0.52282	-0.052067	0.71671	-0.032593	0.82039
4 -F	0.05765	0.68781	0.15497	0.27753	0.1528	0.28443	0.14204	0.3201	0.16923	0.23517
5 - O	-0.026646	0.85275	-0.16251	0.25455	-0.23183	0.10165	-0.0057196	0.96823	0.056606	0.69318
6 - T	0.10377	0.46866	-0.022788	0.87389	0.093103	0.51581	0.011575	0.93575	0.064959	0.65064
7 - O	0.0016342	0.99092	-0.014526	0.91942	0.044758	0.75514	-0.073402	0.60873	0.024422	0.86492
8 - C	-0.22075	0.11955	-0.25761	0.067996	-0.11612	0.41711	-0.18248	0.19996	-0.24576	0.082148
9 - F	0.093421	0.51437	0.12987	0.3637	-0.016569	0.90813	-0.058331	0.68431	0.032684	0.81989
10 - F	0.28253	0.044559	0.34032	0.014544	0.28907	0.039654	0.27863	0.047718	0.35194	0.011321
11 - O	-0.25965	0.065765	-0.27477	0.051017	-0.27191	0.053579	-0.054972	0.70162	0.063052	0.66026
12 - F	0.22515	0.11217	0.21095	0.13731	0.26374	0.061479	0.27481	0.050977	0.32806	0.018763
13 - C	0.11984	0.40224	-0.11221	0.43305	0.054927	0.70185	0.14522	0.30928	-0.029688	0.83616
14 - F	-0.094147	0.51109	-0.025375	0.8597	0.014118	0.92167	-0.098641	0.49104	-0.10654	0.45681
15 - F	0.21694	0.12624	0.19633	0.16734	0.15475	0.27824	0.21167	0.13593	0.040037	0.78028
16 - O	-0.14944	0.29527	-0.056924	0.69154	-0.05125	0.72097	0.026646	0.85275	0.061055	0.67039
17 - C	-0.053701	0.70821	0.040401	0.77834	-0.018975	0.89486	-0.087701	0.54056	-0.0098505	0.9453
18 - F	-0.19892	0.16171	-0.13505	0.34473	-0.13536	0.34359	-0.10146	0.47869	-0.10205	0.47613
19 - O	0.041989	0.76986	0.032093	0.82309	-0.10155	0.4783	-0.14817	0.29945	-0.11539	0.42005
20 - O	-0.15897	0.26518	0.020745	0.88511	0.1005	0.48286	0.063325	0.65888	0.098369	0.49224
21 - O	0.063824	0.65636	0.078214	0.58538	0.04208	0.76938	-0.048935	0.7331	-0.11435	0.4243
22 - F	-0.10041	0.48325	-0.036587	0.7988	0.0059466	0.96697	-0.037178	0.79563	-0.063143	0.6598
23 - C	-0.18848	0.18533	-0.13187	0.35631	-0.17331	0.22389	-0.20945	0.14019	-0.09224	0.51972
24 - C	-0.052475	0.71458	-0.17381	0.22254	-0.20663	0.14572	-0.12747	0.37273	-0.12647	0.37652
25 - T	0.1207	0.39883	0.065776	0.64653	0.011984	0.93348	-0.13546	0.34326	-0.10727	0.45373
26 - F	-0.1513	0.28923	-0.038131	0.79051	-0.17359	0.22315	-0.19342	0.17384	-0.080393	0.57494
27 - C	0.051885	0.71766	0.24917	0.077863	0.26578	0.059421	0.21508	0.1296	0.12515	0.38155
28 - C	-0.36633	0.0081968	-0.31612	0.023827	-0.25325	0.072956	-0.32543	0.019794	-0.30559	0.029204
29 - T	0.11848	0.40764	0.1749	0.21961	0.24259	0.086312	0.21716	0.12583	0.21181	0.13567
30 - F	0.018475	0.89761	-0.021834	0.87912	0.055517	0.6988	0.059057	0.68059	-0.0271	0.85027
31 - O	-0.20668	0.14563	-0.18357	0.19724	-0.15901	0.26504	0.012892	0.92846	0.057378	0.68921
32 - T	0.17486	0.21973	0.12102	0.39758	0.14276	0.3176	0.20863	0.14178	0.18861	0.18501
33 - O	-0.19864	0.16229	-0.22284	0.116	-0.062871	0.66118	-0.12184	0.39438	-0.063824	0.65636
34 - C	-0.036224	0.80076	-0.13595	0.34147	-0.12383	0.38662	-0.040764	0.7764	-0.14817	0.29945
35 - C	-0.071768	0.61675	0.14472	0.31096	0.048299	0.73644	-0.0006355	0.99647	-0.0016342	0.99092
36 - F	0.10241	0.47455	0.037768	0.79246	-0.010531	0.94153	0.0074446	0.95865	0.12138	0.39616
37 - F	0.12011	0.40116	0.21735	0.12551	0.47773	0.00039246	0.28067	0.046043	0.21925	0.12214
38 - O	-0.16673	0.24225	-0.19973	0.15995	-0.1853	0.19299	-0.053202	0.7108	0.013346	0.92594
39 - F	0.14145	0.32213	0.13736	0.33645	0.25502	0.070907	0.28603	0.041878	0.27713	0.048977
40 - C	-0.10091	0.48107	0.0080347	0.95538	0.19424	0.172	0.049434	0.73048	0.23959	0.090388
41 - F	-0.13891	0.33099	-0.039493	0.7832	-0.03223	0.82235	-0.14022	0.32639	-0.1552	0.27682
42 - F	0.13709	0.33742	0.30732	0.02826	0.34976	0.011873	0.14512	0.30958	0.20259	0.15394
43 - O	-0.26033	0.065034	-0.17091	0.23048	-0.020654	0.88561	0.07658	0.59326	0.13123	0.35865
44 - C	-0.17477	0.21997	0.08121	0.57105	-0.049888	0.7281	0.069135	0.62976	-0.16296	0.2532
45 - F	-0.026646	0.85275	0.022515	0.87538	0.013664	0.92419	0.030459	0.83197	0.17563	0.21767
46 - O	0.016977	0.90587	0.012302	0.93172	0.12202	0.39367	0.063461	0.65819	0.0542	0.70562
47 - O	-0.13409	0.34818	0.048118	0.7374	0.003223	0.98209	0.1227	0.39102	0.28185	0.045098
48 - O	-0.073992	0.60584	0.13269	0.35331	0.13954	0.32876	0.32865	0.018539	0.2567	0.069006
49 - C	0.012529	0.93047	0.12034	0.40026	0.07322	0.60962	-0.026419	0.85399	0.031322	0.82728
50 - C	0.024603	0.86393	0.1124	0.4323	0.093829	0.51253	0.041989	0.76986	0.080665	0.57364
51 - T	-0.09619	0.50193	-0.089017	0.53448	0.10205	0.47613	0.079076	0.58123	0.011122	0.93826
52 - F	-0.2281	0.10742	-0.070814	0.62145	0.0030414	0.9831	-0.087928	0.53951	-0.10146	0.47869

Table B3: Remote NC and C1 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.032603	0.8417	0.034205	0.83403	0.083958	0.6065	0.15604	0.33629	0.26177	0.10275
2 -C	0.11732	0.47095	0.10582	0.51578	-0.19044	0.23918	-0.02808	0.86344	-0.066714	0.68253
3 - T	-0.059647	0.71466	0.066526	0.68338	0.080378	0.62199	0.096208	0.55482	0.22945	0.15438
4 -F	-0.019694	0.90399	0.094701	0.56107	-0.20693	0.20014	-0.097527	0.54938	-0.35091	0.026411
5 - O	0.16028	0.32316	0.005277	0.97422	-0.037974	0.81604	-0.028269	0.86253	-0.14332	0.37763
6 - T	-0.015077	0.92643	-0.18789	0.24563	0.2155	0.18171	0.13861	0.39367	0.073216	0.65345
7 - O	-0.035901	0.82592	-0.21494	0.18289	-0.11713	0.47167	0.14945	0.35736	0.087916	0.58958
8 - C	0.24943	0.12063	0.18167	0.26189	0.043346	0.79057	-0.027138	0.86798	0.030907	0.84984
9 - F	0.11807	0.46808	-0.04589	0.77857	-0.039671	0.80798	-0.002356	0.98849	-0.09046	0.57881
10 - F	0.064641	0.6919	0.2352	0.14403	0.25253	0.11592	0.051261	0.75342	0.010271	0.94985
11 - O	0.053334	0.74378	0.029211	0.85799	0.16273	0.31572	0.049565	0.76134	0.024311	0.88163
12 - F	-0.037598	0.81784	-0.19741	0.22208	0.21531	0.18211	-0.001037	0.99494	-0.11816	0.46773
13 - C	0.25498	0.11231	0.098093	0.54706	0.15567	0.33747	0.17385	0.28333	0.27562	0.085174
14 - F	0.058516	0.71985	0.07953	0.62568	0.14427	0.37447	0.1012	0.53436	-0.091685	0.57366
15 - F	-0.031473	0.84713	0.019505	0.90491	0.14719	0.36477	-0.011496	0.94387	-0.049376	0.76222
16 - O	0.14926	0.35798	0.25489	0.11245	0.10535	0.51766	0.040613	0.8035	-0.077551	0.63433
17 - C	-0.2107	0.19189	-0.21013	0.19311	-0.090554	0.57842	-0.062663	0.70089	-0.049659	0.7609
18 - F	-0.086503	0.5956	-0.079153	0.62733	0.022898	0.88847	0.014606	0.92872	0.057668	0.72375
19 - O	0.06417	0.69404	0.020259	0.90125	0.06172	0.70518	0.14973	0.35644	0.13032	0.42284
20 - O	0.10149	0.53321	0.052957	0.74553	0.023746	0.88436	0.21588	0.18093	-0.032038	0.84441
21 - O	0.039953	0.80663	-0.28127	0.07871	-0.078682	0.62938	-0.11345	0.48578	-0.24632	0.12548
22 - F	0.02205	0.89257	0.17432	0.282	-0.056255	0.73026	0.063416	0.69746	0.066243	0.68465
23 - C	0.047115	0.77282	0.082451	0.613	0.064076	0.69446	0.081226	0.61831	0.064924	0.69062
24 - C	-0.001037	0.99494	0.14144	0.384	0.08443	0.60448	0.12061	0.45848	-0.03119	0.84848
25 - T	-0.10525	0.51804	-0.1633	0.31402	-0.10582	0.51578	0.066526	0.68338	0.07708	0.6364
26 - F	-0.15793	0.33041	-0.34055	0.031537	-0.30502	0.055641	-0.41715	0.007407	-0.26723	0.095511
27 - C	0.006219	0.96962	-0.1323	0.41577	0.020354	0.90079	-0.050601	0.7565	-0.13258	0.41477
28 - C	0.14417	0.37478	0.11157	0.4931	-0.2057	0.20288	0.0147	0.92827	-0.040519	0.80395
29 - T	-0.16217	0.31743	-0.31369	0.048712	-0.036184	0.82458	0.049847	0.76002	-0.227	0.15895
30 - F	0.098752	0.54435	0.14266	0.37985	-0.055313	0.73461	-0.013946	0.93194	0.006879	0.9664
31 - O	-0.032132	0.84396	-0.12222	0.45249	0.006879	0.9664	-0.095172	0.55911	-0.21607	0.18054
32 - T	-0.33979	0.031939	-0.45569	0.003128	-0.1568	0.33393	-0.12589	0.43891	-0.082733	0.61178
33 - O	-0.055313	0.73461	-0.091968	0.57247	-0.14229	0.38112	-0.078682	0.62938	-0.15755	0.33158
34 - C	0.092533	0.57011	0.16876	0.29787	-0.017621	0.91406	-0.13202	0.41678	-0.014323	0.9301
35 - C	0.092816	0.56892	0.30521	0.055483	-0.001508	0.99263	-0.020165	0.90171	-0.073028	0.65428
36 - F	-0.27063	0.091219	-0.14587	0.36913	0.084807	0.60286	0.020259	0.90125	-0.001602	0.99217
37 - F	-0.009423	0.95398	0.27421	0.086852	0.024782	0.87935	-0.072368	0.65721	0.09112	0.57604
38 - O	-0.018469	0.90994	0.024123	0.88254	0.16735	0.302	-0.055501	0.73374	-0.084995	0.60205
39 - F	-0.13984	0.38946	-0.3528	0.025558	-0.10111	0.53474	0.1273	0.43374	0.042215	0.79591
40 - C	0.023463	0.88573	-0.039294	0.80977	-0.086597	0.5952	-0.055218	0.73505	0.16547	0.30755
41 - F	0.090837	0.57723	0.10846	0.5053	0.23124	0.1511	0.18997	0.24036	-0.010365	0.94939
42 - F	-0.15227	0.34824	-0.14634	0.36757	-0.087445	0.59158	-0.12617	0.43787	0.014606	0.92872
43 - O	0.089801	0.5816	0.21908	0.17439	0.10818	0.50642	0.035996	0.82547	-0.005937	0.971
44 - C	-0.008386	0.95904	0.12193	0.45354	0.007161	0.96502	-0.085655	0.59922	-0.13475	0.40711
45 - F	0.066338	0.68423	0.012815	0.93744	-0.15171	0.35005	0.065207	0.68934	-0.024029	0.883
46 - O	0.090931	0.57683	0.024311	0.88163	0.013757	0.93285	-0.031567	0.84667	0.21776	0.17706
47 - O	-0.25112	0.11804	0.12024	0.4599	-0.050978	0.75474	-0.087728	0.59038	-0.18535	0.25219
48 - O	-0.26667	0.096241	-0.39784	0.011014	-0.31312	0.049141	-0.17169	0.28946	-0.14851	0.36044
49 - C	0.26205	0.10236	0.070107	0.6673	0.001319	0.99355	-0.14511	0.37163	-0.056349	0.72983
50 - C	0.12419	0.44515	-0.050224	0.75826	-0.029965	0.85437	-0.076609	0.63847	-0.059647	0.71466
51 - T	0.02073	0.89897	-0.053617	0.74247	-0.083958	0.6065	0.018092	0.91177	0.15934	0.32605
52 - F	0.023275	0.88664	0.051072	0.7543	0.051261	0.75342	-0.013381	0.93469	-0.18111	0.2634

Table B4: Remote NC and C1 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.073493	0.60828	-0.052929	0.71222	0.060329	0.6741	0.13704	0.33758	0.051159	0.72145
2 -C	0.041127	0.77446	-0.063551	0.65773	-0.005901	0.96722	-0.061827	0.66647	-0.071132	0.61988
3 - T	-0.047981	0.73811	-0.094782	0.50823	-0.081482	0.56975	0.032093	0.82309	-0.008353	0.95361
4 -F	0.056561	0.69341	0.031458	0.82654	0.10758	0.45239	0.035453	0.80492	-0.083071	0.56222
5 - O	-0.13255	0.35381	-0.052385	0.71505	-0.079576	0.57884	-0.11003	0.44209	0.01902	0.89461
6 - T	0.15148	0.28864	0.10091	0.48107	0.14549	0.30836	0.23573	0.095857	0.26873	0.056548
7 - O	-0.038539	0.78831	-0.021517	0.88087	-0.009397	0.94782	0.026919	0.85126	-0.054745	0.70279
8 - C	0.01616	0.91038	-0.20936	0.14036	-0.14857	0.2981	-0.13523	0.34408	-0.1779	0.21168
9 - F	-0.27373	0.051941	-0.23237	0.10082	-0.25489	0.071063	-0.2691	0.056202	-0.25761	0.067996
10 - F	0.14939	0.29542	0.064641	0.65224	0.13364	0.34983	0.12474	0.38312	0.041036	0.77495
11 - O	-0.047391	0.74122	-0.052884	0.71245	-0.079122	0.58102	-0.055063	0.70115	0.038721	0.78734
12 - F	0.14617	0.30608	0.089063	0.53427	0.086067	0.54816	0.23419	0.098115	0.32112	0.021585
13 - C	0.017704	0.90187	-0.064868	0.65109	-0.16818	0.23811	0.00463	0.97428	-0.10836	0.44913
14 - F	-0.043442	0.76213	-0.011666	0.93524	-0.075127	0.60031	-0.12125	0.39669	-0.10046	0.48306
15 - F	0.17908	0.20862	0.040401	0.77834	0.069634	0.62729	0.07549	0.59854	0.055608	0.69833
16 - O	0.10186	0.47692	0.086702	0.5452	0.13087	0.35999	0.12406	0.38574	0.033909	0.81326
17 - C	-0.24009	0.089699	-0.18493	0.19388	-0.23301	0.09987	-0.32461	0.020123	-0.35997	0.00947
18 - F	-0.10495	0.46359	-0.14231	0.31916	-0.19093	0.17957	-0.1833	0.19791	-0.26442	0.060787
19 - O	0.30423	0.029968	0.13936	0.3294	0.13232	0.35464	0.077124	0.59063	0.009805	0.94556
20 - O	0.069316	0.62886	0.05706	0.69084	0.037314	0.7949	0.097007	0.49828	-0.008443	0.95311
21 - O	-0.17327	0.22401	-0.17713	0.21371	-0.14953	0.29498	-0.10531	0.46204	-0.067455	0.63813
22 - F	-0.086385	0.54668	-0.035453	0.80492	-0.046438	0.74625	-0.11371	0.4269	-0.084478	0.5556
23 - C	-0.04957	0.72977	-0.001362	0.99243	0.012801	0.92896	-0.00513	0.9715	0.033955	0.81301
24 - C	0.045349	0.75201	0.026692	0.8525	0.026737	0.85226	0.01734	0.90387	0.005402	0.96999
25 - T	-0.078441	0.58429	-0.13428	0.34752	-0.073039	0.61051	-0.1513	0.28923	-0.12674	0.37549
26 - F	-0.25044	0.076309	-0.28489	0.042734	-0.26319	0.062037	-0.30319	0.030565	-0.2976	0.033927
27 - C	0.041354	0.77325	-0.012892	0.92846	-0.065367	0.64858	0.032184	0.8226	0.012892	0.92846
28 - C	0.064187	0.65453	-0.028462	0.84284	0.003132	0.9826	-0.012302	0.93172	-0.033546	0.81522
29 - T	-0.090969	0.52552	-0.18484	0.1941	-0.17486	0.21973	-0.17944	0.20768	-0.23478	0.097247
30 - F	-0.02769	0.84705	0.024967	0.86194	0.017704	0.90187	-0.070633	0.62234	-0.092104	0.52034
31 - O	-0.15021	0.29276	-0.12424	0.38504	-0.18543	0.19265	-0.13142	0.35798	-0.060782	0.67178
32 - T	0.18357	0.19724	0.22152	0.11823	0.14739	0.302	0.15606	0.27413	0.15847	0.2667
33 - O	-0.14467	0.31112	-0.12715	0.37394	-0.073584	0.60784	-0.029097	0.83938	-0.075626	0.59788
34 - C	0.080347	0.57515	0.001997	0.9889	0.076489	0.5937	0.049162	0.73191	-0.007354	0.95915
35 - C	0.16296	0.2532	0.083162	0.5618	0.091786	0.52179	0.11889	0.40602	0.12225	0.39278
36 - F	0.006628	0.96319	0.046756	0.74457	0.026101	0.85573	-0.006855	0.96193	0.020972	0.88386
37 - F	0.23478	0.097247	0.19474	0.17088	0.21698	0.12616	0.13605	0.34114	0.080801	0.57299
38 - O	0.02188	0.87887	0.037359	0.79465	-0.09215	0.52014	-0.013891	0.92293	0.075127	0.60031
39 - F	0.20641	0.14617	0.28557	0.042219	0.29261	0.037188	0.32025	0.021959	0.30201	0.031252
40 - C	0.096326	0.50132	0.11594	0.41785	0.11285	0.43043	0.22724	0.10879	0.14671	0.30426
41 - F	-0.094964	0.50742	-0.027509	0.84804	-0.15361	0.28183	-0.11893	0.40584	-0.070542	0.62279
42 - F	0.23101	0.10289	0.24204	0.087043	0.22792	0.10771	0.15089	0.29055	0.096326	0.50132
43 - O	-0.049661	0.72929	-0.027826	0.84631	-0.060238	0.67456	-0.074264	0.60451	0.054019	0.70656
44 - C	-0.25044	0.076309	-0.16791	0.23888	-0.058422	0.68385	-0.068182	0.6345	-0.16728	0.24069
45 - F	0.023105	0.87214	-0.034045	0.81252	0.11721	0.41273	0.06859	0.63247	0.021698	0.87987
46 - O	-0.20754	0.14392	-0.022561	0.87513	0.02533	0.85995	0.075944	0.59634	0.093829	0.51253
47 - O	0.000908	0.99496	0.059738	0.67711	0.027554	0.84779	-0.06228	0.66417	-0.041172	0.77422
48 - O	-0.14108	0.32339	-0.11212	0.43343	-0.093557	0.51376	-0.069997	0.62549	0.025784	0.85747
49 - C	0.11226	0.43286	0.12887	0.36743	0.16483	0.24775	0.06968	0.62706	0.091423	0.52344
50 - C	0.14522	0.30928	0.14803	0.29989	0.16056	0.26037	0.10486	0.46398	0.10391	0.46808
51 - T	-0.27291	0.052673	-0.19447	0.17149	-0.11171	0.43511	-0.073266	0.60939	-0.006582	0.96344
52 - F	-0.27509	0.050738	-0.28199	0.044989	-0.18657	0.1899	-0.2139	0.13177	-0.21875	0.12302

Table B5: NPPC and C1 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.10676	0.51202	0.039388	0.80932	-0.10723	0.51015	0.28928	0.070217	0.25593	0.11094
2 -C	0.085278	0.60084	-0.060213	0.71207	-0.16754	0.30144	0.083205	0.60975	0.074159	0.64927
3 - T	0.021861	0.89349	-0.053522	0.74291	-0.035619	0.82727	-0.032886	0.84035	-0.060684	0.70991
4 -F	0.05569	0.73287	0.34969	0.026979	0.17056	0.2927	-0.20363	0.20757	0.19647	0.22434
5 - O	-0.15972	0.32489	-0.020636	0.89942	-0.17461	0.28121	-0.11986	0.46131	-0.019505	0.90491
6 - T	-0.093193	0.56735	-0.25272	0.11564	-0.34036	0.031637	-0.11072	0.49641	0.10874	0.50419
7 - O	0.15096	0.35248	0.066243	0.68465	-0.23661	0.14157	0.14766	0.36322	-0.22653	0.15984
8 - C	0.32848	0.038504	0.33018	0.037454	0.06304	0.69917	0.21861	0.17534	0.27251	0.0889
9 - F	-0.07953	0.62568	0.024971	0.87844	-0.086691	0.5948	0.18139	0.26264	0.24829	0.12238
10 - F	0.088293	0.58798	-0.039482	0.80887	-0.032792	0.8408	0.1649	0.30923	0.20005	0.21584
11 - O	0.095078	0.5595	-0.087068	0.59319	0.22719	0.1586	-0.070861	0.66393	0.094795	0.56068
12 - F	-0.42281	0.0065668	-0.2058	0.20267	-0.0053711	0.97376	0.042403	0.79502	-0.04344	0.79012
13 - C	-0.17027	0.29351	0.0092345	0.9549	0.10375	0.52408	0.072086	0.65847	0.2744	0.086627
14 - F	0.20109	0.21342	-0.18695	0.24805	0.063322	0.69789	0.095737	0.55677	0.039294	0.80977
15 - F	-0.014794	0.92781	0.10516	0.51841	-0.020448	0.90034	-0.18224	0.26038	-0.3331	0.035702
16 - O	0.17941	0.26797	-0.031473	0.84713	0.096491	0.55365	-0.015548	0.92414	-0.22021	0.17212
17 - C	0.12401	0.44584	-0.060684	0.70991	-0.023652	0.88482	0.11402	0.48359	-0.094041	0.56381
18 - F	0.014794	0.92781	-0.015925	0.92231	-0.048905	0.76443	0.053617	0.74247	-0.092156	0.57168
19 - O	0.24151	0.13327	-0.0007538	0.99632	-0.021673	0.8944	-0.28853	0.070984	-0.0082922	0.9595
20 - O	-0.0044288	0.97836	-0.26205	0.10236	0.1617	0.31885	0.10836	0.50568	0.068882	0.67278
21 - O	0.037032	0.82053	-0.22587	0.16109	0.20193	0.21146	-0.25442	0.11313	-0.0043346	0.97882
22 - F	0.15293	0.34613	-0.19204	0.23517	0.15746	0.33188	-0.29136	0.068141	0.070012	0.66772
23 - C	-0.05258	0.74728	-0.018469	0.90994	-0.027609	0.86571	-0.17385	0.28333	-0.21032	0.1927
24 - C	0.0067845	0.96686	-0.079247	0.62691	-0.054653	0.73767	0.053428	0.74334	0.05324	0.74422
25 - T	0.024782	0.87935	-0.028552	0.86117	0.1943	0.2296	-0.29824	0.061597	0.21418	0.18447
26 - F	0.04033	0.80484	0.14361	0.37668	0.028457	0.86162	-0.013569	0.93377	-0.041272	0.80038
27 - C	-0.029494	0.85663	0.32632	0.039879	0.12457	0.44376	-0.062003	0.70389	0.16848	0.29869
28 - C	-0.075195	0.64469	0.085183	0.60124	-0.22474	0.16326	0.1159	0.47635	-0.22069	0.17118
29 - T	-0.018092	0.91177	0.16113	0.32057	-0.068316	0.67532	-0.061909	0.70432	0.26328	0.10071
30 - F	0.085466	0.60003	-0.057951	0.72245	0.11637	0.47454	-0.0084807	0.95858	0.21767	0.17726
31 - O	0.17018	0.29378	-0.20768	0.19847	0.0019788	0.99033	-0.20052	0.21474	-0.058045	0.72201
32 - T	-0.05748	0.72461	0.032603	0.8417	0.11213	0.4909	-0.18657	0.24902	0.22012	0.17231
33 - O	-0.41659	0.0074962	-0.19845	0.21962	-0.12118	0.45636	0.1322	0.41611	0.067657	0.67828
34 - C	0.38926	0.013042	0.092816	0.56892	-0.076514	0.63888	0.069353	0.67067	0.023463	0.88573
35 - C	0.075666	0.64261	0.1665	0.30449	0.058799	0.71855	-0.20335	0.20821	0.12278	0.45038
36 - F	0.15962	0.32518	-0.24085	0.13437	0.26347	0.10046	-0.061532	0.70604	0.0097056	0.9526
37 - F	0.019223	0.90628	-0.057292	0.72548	-0.023934	0.88345	-0.012156	0.94066	-0.17074	0.29216
38 - O	0.053145	0.74466	-0.14285	0.37921	0.29871	0.061167	0.14078	0.38624	0.12108	0.45671
39 - F	-0.2221	0.16839	0.17084	0.29189	-0.14417	0.37478	-0.17187	0.28893	0.044288	0.78612
40 - C	-0.24377	0.12956	-0.23981	0.1361	-0.15717	0.33276	0.024123	0.88254	-0.31868	0.045047
41 - F	-0.13136	0.41913	-0.34884	0.027377	0.21192	0.18926	-0.052015	0.74991	-0.0094229	0.95398
42 - F	0.39727	0.011139	-0.055501	0.73374	0.058045	0.72201	-0.015736	0.92322	0.178	0.27182
43 - O	-0.20872	0.19619	-0.018186	0.91131	0.0040519	0.9802	-0.25612	0.11067	-0.24151	0.13327
44 - C	-0.12061	0.45848	0.12061	0.45848	0.4245	0.0063313	0.066809	0.6821	-0.084147	0.60569
45 - F	-0.13371	0.41076	-0.011213	0.94525	-0.11128	0.4942	-0.0093287	0.95444	-0.0077268	0.96226
46 - O	-0.30201	0.058229	-0.035807	0.82637	-0.033923	0.83538	0.065584	0.68763	-0.3919	0.012386
47 - O	0.165	0.30895	0.054842	0.73679	0.056632	0.72852	-0.083582	0.60812	0.042121	0.79636
48 - O	-0.084807	0.60286	0.044194	0.78656	-0.076514	0.63888	0.37174	0.018184	-0.22191	0.16876
49 - C	0.013381	0.93469	0.35779	0.023407	-0.013852	0.93239	-0.037126	0.82008	0.040142	0.80574
50 - C	-0.089047	0.58478	0.16396	0.31204	0.16697	0.3031	0.11034	0.49789	-0.032415	0.84261
51 - T	-0.18318	0.25788	0.061815	0.70475	0.14059	0.38688	0.1274	0.4334	-0.27958	0.080608
52 - F	0.11373	0.48469	-0.1584	0.32895	0.0077268	0.96226	-0.058045	0.72201	0.15689	0.33364

Table B6: NPPC and C1 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.13278	0.35298	0.018112	0.89961	0.15211	0.2866	0.06051	0.67317	-0.043805	0.7602
2 -C	-0.055744	0.69763	-0.15298	0.28385	-0.27332	0.052306	-0.11757	0.41127	0.011575	0.93575
3 - T	0.16242	0.25482	0.31953	0.022278	0.25153	0.074997	-0.060011	0.67572	0.13505	0.34473
4 -F	0.00099867	0.99445	0.12188	0.3942	-0.062916	0.66095	-0.05075	0.72358	0.087837	0.53993
5 - O	-0.092785	0.51725	-0.022243	0.87688	0.32162	0.021371	0.027872	0.84606	0.24758	0.07984
6 - T	0.36914	0.0076822	0.01153	0.936	0.10286	0.47258	0.10177	0.47731	0.27649	0.04952
7 - O	0.079757	0.57797	0.12379	0.38679	-0.16246	0.25468	-0.22842	0.10692	-0.24944	0.077528
8 - C	0.05361	0.70868	-0.068908	0.63089	0.007717	0.95714	-0.20972	0.13966	-0.18176	0.20178
9 - F	-0.15738	0.27005	-0.07726	0.58997	-0.32198	0.021216	0.093421	0.51437	0.053565	0.70891
10 - F	0.10681	0.45566	0.045122	0.75321	0.057333	0.68944	0.0813	0.57061	0.049071	0.73239
11 - O	0.049389	0.73072	-0.24781	0.079555	0.043805	0.7602	-0.10295	0.47219	0.1528	0.28443
12 - F	0.24567	0.082265	-0.042897	0.76502	0.0071268	0.96041	0.062734	0.66187	0.00013618	0.99924
13 - C	-0.12515	0.38155	0.086158	0.54774	-0.011712	0.93499	-0.0271	0.85027	-0.03913	0.78515
14 - F	-0.14031	0.32607	0.063279	0.65911	0.12769	0.37187	-0.12465	0.38347	0.0046756	0.97402
15 - F	0.026828	0.85176	-0.0073992	0.9589	0.14462	0.31127	0.0075808	0.95789	0.1464	0.30532
16 - O	-0.091968	0.52096	0.0032684	0.98184	-0.15911	0.26477	0.14295	0.31698	0.018929	0.89511
17 - C	-0.092649	0.51787	0.17399	0.22205	-0.085159	0.5524	-0.050932	0.72263	0.028462	0.84284
18 - F	-0.11689	0.414	0.25443	0.071585	-0.18593	0.19144	-0.1917	0.17779	-0.010895	0.93952
19 - O	0.24227	0.086738	-0.2005	0.15831	0.060056	0.67548	0.067501	0.6379	-0.11634	0.4162
20 - O	-0.0887	0.53594	-0.31603	0.02387	0.045258	0.75249	0.23351	0.099124	-0.1158	0.4184
21 - O	-0.10622	0.45817	-0.0062644	0.9652	0.04671	0.74481	-0.097415	0.49647	-0.12043	0.3999
22 - F	-0.34477	0.013228	0.27495	0.050858	-0.12402	0.38591	-0.12265	0.39119	0.10695	0.45508
23 - C	-0.24862	0.078537	0.067682	0.63699	-0.15143	0.28879	-0.052566	0.71411	-0.36447	0.0085532
24 - C	-0.22388	0.11426	0.064323	0.65384	0.0019065	0.98941	0.0043124	0.97604	-0.20314	0.15281
25 - T	0.2104	0.13835	-0.086839	0.54457	-0.08643	0.54647	0.077487	0.58888	-0.09796	0.49405
26 - F	-0.086067	0.54816	-0.29007	0.038946	-0.043124	0.76382	-0.055471	0.69904	-0.069907	0.62594
27 - C	0.10009	0.48465	0.34999	0.011815	0.17826	0.21074	-0.025602	0.85846	0.01725	0.90437
28 - C	0.034726	0.80884	-0.094102	0.5113	-0.036361	0.80003	0.073039	0.61051	-0.074628	0.60274
29 - T	0.11294	0.43006	-0.071178	0.61966	0.027509	0.84804	0.14526	0.30913	0.043215	0.76333
30 - F	0.14912	0.29631	0.10745	0.45296	-0.097642	0.49546	-0.073084	0.61028	0.047573	0.74026
31 - O	-0.19179	0.17758	-0.16015	0.2616	-0.13441	0.34703	0.15125	0.28938	0.23056	0.10359
32 - T	-0.03981	0.7815	-0.13164	0.35714	-0.14671	0.30426	0.011348	0.937	-0.12079	0.39847
33 - O	-0.10954	0.44418	-0.057106	0.69061	0.087474	0.54161	-0.18834	0.18565	-0.12238	0.39225
34 - C	0.22924	0.10563	0.030505	0.83172	0.13591	0.34163	0.093421	0.51437	0.055608	0.69833
35 - C	0.094374	0.51007	-0.0039039	0.97831	-0.21648	0.12705	0.0035407	0.98033	0.065912	0.64585
36 - F	-0.046892	0.74385	0.041944	0.7701	-0.012166	0.93248	-0.076035	0.5959	-0.12683	0.37514
37 - F	0.0024967	0.98613	-0.017295	0.90412	0.14989	0.29379	0.098913	0.48984	0.30922	0.027246
38 - O	-0.19896	0.16161	-0.093784	0.51273	0.038085	0.79075	-0.12275	0.39084	-0.05824	0.68478
39 - F	0.31331	0.025176	0.1197	0.40277	-0.17958	0.20733	-0.071223	0.61943	-0.20573	0.14754
40 - C	-0.083252	0.56137	0.050387	0.72548	-0.17295	0.22487	0.20704	0.14491	0.16542	0.24604
41 - F	0.14199	0.32025	-0.0023605	0.98688	-0.13595	0.34147	-0.24463	0.083617	-0.032093	0.82309
42 - F	0.081346	0.5704	0.10168	0.47771	0.11512	0.42116	0.16383	0.25067	0.089017	0.53448
43 - O	0.08475	0.55432	-0.24032	0.089387	0.14281	0.31745	-0.069498	0.62796	-0.2735	0.052143
44 - C	-0.11453	0.42356	0.31331	0.025176	0.20169	0.15583	-0.016569	0.90813	0.080574	0.57407
45 - F	-0.10391	0.46808	0.18612	0.191	0.096507	0.50051	-0.011167	0.93801	0.15983	0.26256
46 - O	-0.020064	0.88886	0.21203	0.13524	-0.045984	0.74865	0.03981	0.7815	-0.02769	0.84705
47 - O	0.11117	0.43737	-0.045394	0.75177	-0.035089	0.80688	0.010168	0.94354	0.18021	0.2057
48 - O	0.0028144	0.98436	-0.21435	0.13093	-0.038812	0.78685	-0.030732	0.83049	0.14544	0.30852
49 - C	-0.039901	0.78101	0.19102	0.17936	0.30382	0.0302	0.26011	0.065277	0.30695	0.028457
50 - C	0.15007	0.2932	0.079485	0.57928	0.27781	0.048402	0.26065	0.064696	0.15157	0.28835
51 - T	-0.18916	0.18372	-0.036587	0.7988	-0.11989	0.40206	0.054155	0.70585	0.092331	0.51931
52 - F	-0.044985	0.75394	-0.09855	0.49144	0.034726	0.80884	-0.13037	0.36184	-0.32484	0.020031

Table B7: PPC and C1 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.25442	0.11313	-0.17885	0.26951	-0.19722	0.22254	-0.025913	0.87389	-0.23661	0.14157
2 -C	-0.31802	0.045518	-0.084901	0.60245	0.17838	0.27079	0.15039	0.3543	0.11713	0.47167
3 - T	-0.28495	0.074719	-0.22841	0.1563	-0.0068787	0.9664	0.096774	0.55249	-0.013004	0.93653
4 -F	-0.13513	0.40579	0.014229	0.93056	0.055218	0.73505	-0.079907	0.62404	0.20146	0.21255
5 - O	-0.15812	0.32983	-0.058516	0.71985	0.11618	0.47526	0.086126	0.59721	0.17527	0.27937
6 - T	-0.14436	0.37415	-0.26695	0.095875	0.015831	0.92276	-0.063699	0.69617	0.11854	0.4663
7 - O	-0.19025	0.23965	-0.090272	0.57961	0.15661	0.33452	0.21513	0.1825	0.29192	0.067583
8 - C	-0.30266	0.057655	-0.27694	0.08363	-0.11977	0.46167	-0.22493	0.1629	-0.089424	0.58319
9 - F	-0.040142	0.80574	-0.2318	0.15008	0.015265	0.92551	0.13098	0.42048	0.079059	0.62774
10 - F	-0.21315	0.18665	-0.29503	0.064579	-0.26441	0.099204	-0.015171	0.92597	-0.1339	0.4101
11 - O	-0.047397	0.77149	-0.16028	0.32316	-0.0196	0.90445	-0.0097056	0.9526	0.050319	0.75782
12 - F	-0.23661	0.14157	-0.29192	0.067583	-0.18026	0.26568	-0.28014	0.079971	0.1208	0.45777
13 - C	-0.15859	0.32837	-0.098752	0.54435	-0.17734	0.27363	-0.23595	0.14272	-0.18507	0.25293
14 - F	0.092722	0.56932	0.14078	0.38624	0.097999	0.54744	-0.15962	0.32518	0.065961	0.68593
15 - F	-0.081697	0.61626	-0.14417	0.37478	-0.059741	0.71423	0.20354	0.20778	0.031944	0.84487
16 - O	-0.032226	0.84351	-0.099412	0.54165	-0.0091403	0.95536	-0.06172	0.70518	-0.0011308	0.99447
17 - C	-0.29258	0.066937	-0.19722	0.22254	0.053805	0.7416	0.2139	0.18506	0.016207	0.92093
18 - F	-0.14502	0.37195	-0.094701	0.56107	-0.066526	0.68338	0.13861	0.39367	0.048999	0.76398
19 - O	-0.13597	0.40282	-0.073782	0.65094	0.083958	0.6065	-0.068599	0.67405	0.023934	0.88345
20 - O	-0.45089	0.0035015	-0.28354	0.076235	-0.0076326	0.96272	0.15953	0.32547	-0.030625	0.8512
21 - O	-0.21362	0.18566	-0.11779	0.46916	-0.027138	0.86798	0.14982	0.35614	0.19449	0.22914
22 - F	-0.0084807	0.95858	0.11119	0.49457	0.016019	0.92185	-0.32566	0.040306	0.080095	0.62322
23 - C	-0.03609	0.82503	0.15096	0.35248	-0.26686	0.095997	-0.25489	0.11245	-0.0055595	0.97284
24 - C	0.17696	0.27467	0.15944	0.32576	-0.038823	0.81201	-0.14813	0.36167	0.0097999	0.95214
25 - T	-0.16924	0.29651	-0.05258	0.74728	0.27289	0.088442	-0.10799	0.50717	0.10365	0.52446
26 - F	-0.34714	0.028189	-0.25376	0.1141	-0.074724	0.64677	-0.052486	0.74772	0.17734	0.27363
27 - C	-0.07887	0.62856	-0.13955	0.39043	-0.030813	0.85029	-0.016019	0.92185	0.16631	0.30504
28 - C	-0.3902	0.012804	-0.12457	0.44376	0.077362	0.63516	0.026102	0.87298	-0.11845	0.46665
29 - T	-0.083393	0.60894	-0.090837	0.57723	0.004523	0.9779	0.17489	0.28042	-0.02629	0.87207
30 - F	-0.33282	0.035868	-0.26281	0.10134	-0.017998	0.91223	-0.13399	0.40976	0.096868	0.5521
31 - O	-0.21192	0.18926	-0.16443	0.31063	0.058988	0.71768	-0.17442	0.28174	-0.16839	0.29897
32 - T	-0.10177	0.53207	-0.016584	0.9191	0.12947	0.42589	0.39209	0.012341	-0.11939	0.46309
33 - O	-0.08622	0.59681	0.090083	0.5804	0.0061249	0.97008	0.010931	0.94663	-0.011213	0.94525
34 - C	-0.33866	0.032551	-0.22351	0.16562	-0.14803	0.36198	-0.057668	0.72375	-0.19176	0.23588
35 - C	-0.099977	0.53935	-0.14464	0.37321	-0.037315	0.81918	-0.31557	0.047301	-0.13484	0.40678
36 - F	0.17659	0.27571	0.20561	0.20309	0.047492	0.77105	-0.25008	0.11962	-0.17922	0.26848
37 - F	-0.22059	0.17137	-0.033734	0.83629	-0.3364	0.033804	0.010554	0.94847	0.30898	0.052386
38 - O	-0.063699	0.69617	-0.078399	0.63062	0.057009	0.72678	-0.15953	0.32547	0.02139	0.89577
39 - F	-0.15783	0.33071	-0.03119	0.84848	-0.047963	0.76884	0.25781	0.10825	0.021484	0.89531
40 - C	-0.063793	0.69575	-0.20137	0.21277	-0.12005	0.4606	0.3723	0.017995	0.15246	0.34763
41 - F	0.18978	0.24084	0.1748	0.28069	-0.073687	0.65136	-0.010836	0.94709	-0.16311	0.31458
42 - F	-0.095549	0.55755	0.030719	0.85075	-0.20165	0.21211	-0.19063	0.2387	0.068693	0.67363
43 - O	0.22191	0.16876	0.033734	0.83629	0.21484	0.18309	-0.031661	0.84622	-0.16641	0.30477
44 - C	-0.30794	0.053223	-0.11439	0.48214	-0.034394	0.83313	-0.016302	0.92047	0.051826	0.75079
45 - F	-0.32613	0.040001	-0.16292	0.31515	-0.12815	0.43066	-0.050884	0.75518	0.033451	0.83764
46 - O	-0.16801	0.30007	-0.17941	0.26797	-0.17414	0.28253	-0.063511	0.69703	0.22125	0.17006
47 - O	-0.34752	0.028007	-0.18186	0.26138	0.027703	0.86526	-0.072839	0.65512	0.28928	0.070217
48 - O	-0.21126	0.19067	-0.1356	0.40414	-0.1013	0.53398	0.27251	0.0889	-0.21758	0.17745
49 - C	-0.16839	0.29897	-0.089424	0.58319	0.21023	0.19291	-0.2433	0.13033	-0.092156	0.57168
50 - C	-0.079247	0.62691	-0.078305	0.63103	0.21032	0.1927	-0.12872	0.42861	-0.25291	0.11536
51 - T	-0.10573	0.51615	-0.22153	0.1695	-0.33272	0.035924	-0.10912	0.5027	0.10149	0.53321
52 - F	-0.33565	0.03423	-0.23642	0.1419	0.12118	0.45636	-0.12919	0.42691	0.09291	0.56853

Table B8: PPC and C1 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.057196	0.69014	-0.063052	0.66026	-0.39842	0.003783	-0.088019	0.53909	0.17286	0.22512
2 -C	-0.048163	0.73716	0.026737	0.85226	0.037949	0.79148	0.13468	0.34604	0.060919	0.67109
3 - T	-0.14708	0.30305	-0.014844	0.91766	-0.20332	0.15243	-0.10817	0.4499	0.1631	0.2528
4 -F	0.16015	0.2616	0.13659	0.3392	0.10123	0.47968	-0.067319	0.63881	-0.14708	0.30305
5 - O	0.12256	0.39155	0.074537	0.60318	0.06909	0.62999	0.042353	0.76792	-0.081527	0.56953
6 - T	-0.13468	0.34604	-0.16219	0.25549	-0.17749	0.21275	-0.0017704	0.99016	0.18398	0.19622
7 - O	-0.21748	0.12526	-0.21657	0.12689	-0.072176	0.61474	-0.30832	0.027725	0.28875	0.039882
8 - C	-0.0093511	0.94807	-0.10885	0.44703	-0.17277	0.22537	0.12202	0.39367	0.17336	0.22376
9 - F	-0.21598	0.12795	-0.063915	0.6559	-0.061827	0.66647	-0.018929	0.89511	-0.17631	0.21586
10 - F	-0.13645	0.33968	-0.28966	0.039234	-0.028008	0.84532	-0.059057	0.68059	-0.064641	0.65224
11 - O	-0.070996	0.62055	-0.088427	0.5372	0.36951	0.0076179	-0.010622	0.94103	-0.063642	0.65727
12 - F	-0.14894	0.29691	-0.25879	0.066699	0.043351	0.76261	0.18557	0.19232	0.02415	0.86642
13 - C	-0.26683	0.058391	-0.14585	0.30714	-0.12016	0.40098	0.046983	0.74338	0.13332	0.35099
14 - F	-0.036678	0.79832	-0.19188	0.17737	-0.055744	0.69763	0.21893	0.1227	0.22193	0.11754
15 - F	-0.10926	0.44532	-0.1656	0.24551	-0.21916	0.1223	0.20264	0.15384	-0.0090788	0.94958
16 - O	-0.044259	0.75779	-0.05302	0.71175	-0.04149	0.77252	0.01153	0.936	-0.18811	0.18619
17 - C	-0.15643	0.273	-0.24436	0.083972	-0.0096689	0.94631	-0.0065821	0.96344	-0.036814	0.79758
18 - F	-0.05874	0.68222	-0.078486	0.58407	0.063461	0.65819	0.13128	0.35848	0.11752	0.41145
19 - O	-0.17508	0.21912	-0.15942	0.2638	-0.12719	0.37376	-0.013618	0.92444	0.18389	0.19645
20 - O	-0.35489	0.010608	-0.31036	0.026657	-0.0013164	0.99269	-0.31013	0.026774	-0.2084	0.14222
21 - O	0.023741	0.86866	0.11367	0.42708	-0.10091	0.48107	-0.13595	0.34147	-0.011757	0.93474
22 - F	0.019519	0.89186	-0.1557	0.27526	-0.13595	0.34147	0.32534	0.01983	0.22547	0.11165
23 - C	-0.10359	0.46944	-0.15811	0.26782	-0.02188	0.87887	0.0047664	0.97352	-0.018385	0.89811
24 - C	-0.11276	0.43081	-0.17658	0.21514	-0.037768	0.79246	0.079802	0.57776	-0.16083	0.25955
25 - T	-0.013664	0.92419	0.021562	0.88062	-0.23283	0.10014	0.12556	0.37998	0.040718	0.77664
26 - F	-0.20405	0.15094	-0.22361	0.11471	0.099322	0.48804	0.088019	0.53909	0.068545	0.6327
27 - C	-0.040582	0.77737	-0.077442	0.58909	0.00054473	0.99697	0.081255	0.57083	0.15407	0.28039
28 - C	-0.061645	0.66739	-0.055698	0.69786	0.022198	0.87713	-0.010531	0.94153	0.07835	0.58472
29 - T	-0.14994	0.29364	-0.33433	0.016493	-0.2213	0.11862	-0.24749	0.079954	-0.098596	0.49124
30 - F	-0.08416	0.55709	0.029461	0.8374	-0.074991	0.60097	-0.07313	0.61006	-0.095055	0.50701
31 - O	-0.094964	0.50742	0.044168	0.75827	0.10205	0.47613	0.041762	0.77107	-0.20032	0.1587
32 - T	-0.23283	0.10014	-0.16351	0.2516	0.2296	0.10507	-0.066048	0.64517	0.19075	0.17999
33 - O	-0.094192	0.51089	-0.18303	0.19859	-0.094056	0.5115	0.16487	0.24762	-0.03568	0.8037
34 - C	-0.050251	0.7262	-0.058876	0.68152	0.17749	0.21275	0.11153	0.43587	0.20473	0.14955
35 - C	0.097415	0.49647	-0.0007263	0.99596	0.012256	0.93197	-0.058422	0.68385	-0.025511	0.85896
36 - F	0.15107	0.28996	0.041535	0.77228	0.22965	0.105	-0.093738	0.51294	-0.026828	0.85176
37 - F	-0.16383	0.25067	0.032184	0.8226	0.10559	0.46087	-0.045303	0.75225	-0.0071268	0.96041
38 - O	-0.11671	0.41473	0.031685	0.82531	0.10863	0.44799	-0.078078	0.58603	-0.14385	0.31389
39 - F	-0.10972	0.44342	-0.1611	0.25874	-0.037541	0.79368	0.17722	0.21347	0.14313	0.31636
40 - C	-0.14304	0.31667	-0.065276	0.64904	-0.096916	0.49869	0.080438	0.57472	-0.030777	0.83024
41 - F	0.086657	0.54541	-0.086203	0.54753	0.029324	0.83814	0.059012	0.68082	0.011348	0.937
42 - F	-0.1399	0.3275	-0.070678	0.62212	-0.049071	0.73239	0.035952	0.80223	-0.13341	0.35066
43 - O	0.058694	0.68245	0.080302	0.57537	0.17041	0.23187	-0.10073	0.48186	0.077714	0.58778
44 - C	-0.23768	0.093059	-0.3085	0.027629	-0.13173	0.35681	-0.11285	0.43043	0.0547	0.70303
45 - F	-0.18067	0.20454	-0.14317	0.31621	-0.11594	0.41785	-0.068182	0.6345	0.074219	0.60473
46 - O	-0.12288	0.39031	-0.11103	0.43794	-0.082254	0.56609	0.062916	0.66095	-0.10159	0.4781
47 - O	0.023968	0.86741	-0.036951	0.79685	0.057423	0.68897	0.11417	0.42504	0.099821	0.48584
48 - O	-0.042625	0.76647	-0.0019519	0.98915	-0.046211	0.74745	-0.046847	0.74409	-0.38698	0.0050268
49 - C	0.20936	0.14036	0.12061	0.39919	0.00099867	0.99445	0.030187	0.83345	0.0882	0.53825
50 - C	0.24876	0.078368	0.10177	0.47731	0.12547	0.38033	0.23841	0.092035	0.03972	0.78199
51 - T	-0.17853	0.21003	-0.15502	0.27739	-0.16355	0.25147	0.11348	0.42783	-0.15339	0.28255
52 - F	-0.22329	0.11524	-0.23995	0.089887	0.076716	0.5926	-0.07263	0.61251	-0.051159	0.72145

Table B9: Local NC and C1 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.094199	0.5684	-0.24291	0.13622	-0.26585	0.10188	-0.090139	0.58526	-0.18495	0.25967
2 -C	-0.2762	0.088745	-0.069634	0.67359	0.12678	0.44183	-0.044765	0.7867	0.10171	0.53782
3 - T	-0.13521	0.41183	-0.10354	0.5305	-0.17571	0.28464	-0.045882	0.78151	-0.18251	0.26611
4 -F	-0.055829	0.73568	-0.091865	0.57807	0.11958	0.46841	-0.12881	0.43449	-0.030757	0.85255
5 - O	0.057352	0.72875	0.19429	0.23595	0.006091	0.97065	0.032076	0.84629	-0.1007	0.5419
6 - T	0.027509	0.86797	0.25803	0.11274	-0.016038	0.9228	-0.17571	0.28464	-0.032686	0.84341
7 - O	0.37355	0.019159	0.17398	0.28947	0.15389	0.34961	0.13724	0.40478	0.1348	0.41325
8 - C	-0.31691	0.049334	-0.034614	0.8343	-0.058672	0.72275	-0.050855	0.75849	-0.22585	0.16681
9 - F	-0.17632	0.28295	-0.042633	0.79664	-0.16302	0.32139	-0.27397	0.091462	-0.26331	0.10532
10 - F	-0.16728	0.30873	0.044866	0.78623	0.014414	0.9306	0.12059	0.46462	-0.00406	0.98043
11 - O	-0.010557	0.94914	0.063341	0.70166	0.02223	0.89314	0.10628	0.51961	0.059484	0.71907
12 - F	0.083845	0.61182	-0.10709	0.51641	-0.12394	0.45221	-0.13064	0.42795	-0.013907	0.93304
13 - C	-0.02152	0.89654	0.038573	0.81565	-0.22484	0.16878	-0.016444	0.92085	-0.14343	0.3837
14 - F	0.076435	0.64373	0.052581	0.75056	0.035934	0.82807	-0.032381	0.84485	0.0404	0.80708
15 - F	0.038877	0.81422	0.43841	0.005244	0.14607	0.37492	0.20911	0.20141	0.15957	0.33188
16 - O	-0.28676	0.076739	-0.33112	0.03949	-0.21367	0.19151	-0.04781	0.77256	0.060194	0.71585
17 - C	0.073086	0.65837	0.12922	0.43303	0.11643	0.48028	0.10009	0.54436	0.10973	0.50606
18 - F	0.24971	0.12525	0.26057	0.10913	0.094301	0.56798	0.066589	0.68712	-0.23854	0.14362
19 - O	0.061006	0.71218	0.004162	0.97994	0.19479	0.2347	0.12993	0.43048	0.098057	0.5526
20 - O	0.24088	0.13962	0.048115	0.77115	0.11917	0.46993	0.25184	0.12195	0.17642	0.28266
21 - O	0.042329	0.79806	-0.005481	0.97358	-0.078872	0.63317	0.054205	0.74311	-0.006395	0.96918
22 - F	-0.043039	0.79474	0.079785	0.62923	0.10851	0.51082	-0.035223	0.83142	0.061311	0.7108
23 - C	-0.040299	0.80756	0.007207	0.96527	-0.1885	0.25047	0.039791	0.80994	0.1279	0.43778
24 - C	-0.16779	0.30724	0.14911	0.36493	-0.070243	0.67089	0.15703	0.33973	0.20992	0.19962
25 - T	0.084048	0.61096	0.15977	0.33126	0.13714	0.40513	0.094605	0.56673	0.10922	0.50804
26 - F	0.34076	0.033769	-0.003959	0.98092	0.098564	0.55053	0.091256	0.5806	0.001015	0.99511
27 - C	-0.03837	0.81661	-0.095519	0.56297	-0.044156	0.78954	-0.10293	0.53293	-0.00203	0.99021
28 - C	-0.32208	0.045542	-0.12222	0.45858	0.13947	0.3971	-0.18332	0.26395	0.089022	0.58994
29 - T	-0.11897	0.4707	-0.17683	0.28154	-0.075014	0.64993	-0.053495	0.74636	0.039284	0.81232
30 - F	-0.084861	0.6075	0.20393	0.21304	-0.18444	0.261	-0.1885	0.25047	-0.17906	0.27541
31 - O	0.13714	0.40513	0.062224	0.70668	-0.2964	0.066918	-0.4309	0.006172	-0.29214	0.07113
32 - T	0.081206	0.62311	-0.18688	0.25465	0.007106	0.96576	0.16525	0.31472	0.086282	0.60148
33 - O	-0.019185	0.90771	0.079278	0.63141	0.11176	0.49818	0.17419	0.2889	0.19835	0.22611
34 - C	-0.14231	0.38745	-0.066183	0.68893	-0.057149	0.72967	0.2287	0.1614	0.2626	0.1063
35 - C	0.13714	0.40513	-0.088616	0.59164	-0.05857	0.72321	0.006801	0.96722	-0.027103	0.86991
36 - F	-0.075826	0.64638	-0.00873	0.95794	-0.024666	0.88151	-0.07674	0.64241	-0.088921	0.59036
37 - F	-0.051058	0.75756	-0.15216	0.35511	0.13521	0.41183	0.076232	0.64462	-0.22738	0.1639
38 - O	-0.05522	0.73847	-0.088109	0.59377	0.05857	0.72321	-0.012993	0.93743	-0.12546	0.44663
39 - F	0.2624	0.10658	0.20748	0.20501	-0.026798	0.87135	-0.1412	0.39123	0.004771	0.977
40 - C	-0.1416	0.38985	0.12404	0.45184	-0.096838	0.55757	0.18129	0.26937	0.038674	0.81518
41 - F	0.17662	0.2821	0.081003	0.62398	0.13125	0.42578	0.033092	0.84149	-0.006903	0.96673
42 - F	-0.09562	0.56256	-0.10181	0.53741	-0.26757	0.099595	0.16241	0.32323	-0.019794	0.9048
43 - O	-0.069939	0.67224	0.029945	0.8564	-0.017561	0.9155	-0.057656	0.72736	0.12029	0.46575
44 - C	0.17845	0.27707	-0.078567	0.63449	-0.023144	0.88878	-0.046694	0.77774	0.25133	0.12273
45 - F	0.035629	0.82951	-0.10425	0.52766	0.030452	0.85399	-0.002741	0.98679	-0.11866	0.47184
46 - O	0.011267	0.94572	0.10252	0.53456	0.008324	0.95989	0.13034	0.42903	0.22687	0.16487
47 - O	-0.041517	0.80186	0.024159	0.88393	-0.005177	0.97505	-0.10719	0.51601	0.12374	0.45296
48 - O	-0.00538	0.97407	0.014313	0.93109	0.11328	0.4923	0.03634	0.82616	0.060397	0.71493
49 - C	0.14617	0.37458	-0.28595	0.077615	0.029742	0.85736	0.066082	0.68938	-0.18221	0.26692
50 - C	0.30077	0.062812	-0.049739	0.76364	-0.023042	0.88926	0.066995	0.68531	-0.19337	0.2382
51 - T	-0.007816	0.96233	0.026392	0.87329	0.089022	0.58994	0.036746	0.82425	0.25012	0.12462
52 - F	0.3027	0.061062	0.19723	0.22879	0.15186	0.35608	0.13612	0.40865	0.003857	0.98141

Table B10: Local NC and C1 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.35524	0.033496	-0.18007	0.2933	-0.21712	0.20339	-0.32155	0.055836	-0.17504	0.30722
2 -C	-0.14832	0.38798	0.10004	0.56157	-0.11127	0.51824	-0.16845	0.32606	-0.062734	0.71625
3 - T	-0.35485	0.033703	-0.24229	0.15452	-0.34852	0.037237	-0.3968	0.016572	-0.31496	0.061343
4 -F	0.25868	0.12766	0.27727	0.10159	0.18575	0.27808	0.14406	0.40191	0.21157	0.21546
5 - O	-0.027366	0.87412	0.064541	0.70843	0.031496	0.85531	-0.12456	0.46916	-0.15425	0.36905
6 - T	-0.048793	0.77749	-0.038596	0.82316	0.14935	0.38465	-0.18033	0.2926	-0.14974	0.38341
7 - O	0.10004	0.56157	0.1549	0.36703	0.017813	0.91787	-0.056151	0.74497	-0.045953	0.79014
8 - C	0.096167	0.57689	-0.1083	0.52953	-0.077321	0.65399	-0.21466	0.20866	-0.15554	0.36501
9 - F	-0.055764	0.74668	0.084936	0.62235	0.063767	0.71177	-0.024526	0.88709	-0.008003	0.96305
10 - F	0.15038	0.38134	-0.024913	0.88532	-0.18356	0.2839	-0.12779	0.45764	-0.16858	0.32568
11 - O	0.28127	0.096551	0.22641	0.18423	0.1296	0.45125	0.087905	0.61019	0.064541	0.70843
12 - F	-0.021944	0.89891	-0.21066	0.21748	-0.088422	0.60808	-0.086227	0.61705	-0.083646	0.62767
13 - C	-0.46083	0.0046772	-0.1376	0.42354	-0.16884	0.32493	-0.26591	0.11699	-0.17465	0.30831
14 - F	0.25778	0.12905	0.15425	0.36905	-0.067768	0.69453	-0.16122	0.34754	-0.014845	0.93152
15 - F	0.10507	0.54194	0.026204	0.87942	0.02104	0.90306	0.036143	0.83423	-0.1114	0.51775
16 - O	-0.070092	0.68459	0.016523	0.9238	0.062992	0.71513	0.13024	0.44898	0.12586	0.46453
17 - C	0.12805	0.45672	0.075901	0.65996	0.25016	0.14115	-0.044404	0.79706	-0.15361	0.37108
18 - F	0.012005	0.9446	-0.074223	0.66704	0.059636	0.72972	-0.15503	0.36662	-0.13631	0.42794
19 - O	-0.17801	0.29896	-0.0577	0.73818	0.20963	0.21979	0.14664	0.39344	0.09849	0.56768
20 - O	-0.070221	0.68404	0.26965	0.11173	0.038467	0.82374	0.0051633	0.97616	-0.09436	0.5841
21 - O	-0.20214	0.23708	-0.21428	0.2095	0.0033562	0.9845	-0.009552	0.95591	-0.01975	0.90898
22 - F	0.15787	0.3578	0.034078	0.84359	0.037305	0.82898	-0.016135	0.92558	0.086744	0.61493
23 - C	-0.10198	0.55398	-0.005809	0.97318	0.13166	0.444	0.0059378	0.97258	-0.09152	0.59552
24 - C	-0.1527	0.37394	-0.029947	0.86235	0.16923	0.3238	0.083129	0.6298	-0.1305	0.44807
25 - T	-0.12986	0.45034	0.020395	0.90602	0.23596	0.16591	0.18975	0.26767	0.16045	0.34989
26 - F	0.13876	0.4196	-0.03937	0.81967	0.020395	0.90602	0.040016	0.81676	0.050342	0.77061
27 - C	-0.058475	0.73479	0.042468	0.80574	0.032529	0.85061	-0.02388	0.89005	0.10649	0.53646
28 - C	-0.084807	0.62288	-0.006454	0.9702	-0.095263	0.58049	-0.16329	0.34132	-0.068543	0.69121
29 - T	-0.054473	0.75235	-0.11333	0.51045	0.0040016	0.98152	-0.021299	0.90187	-0.040403	0.81502
30 - F	0.35162	0.03547	0.46083	0.0046772	0.40313	0.014775	0.14754	0.39049	0.23958	0.15933
31 - O	-0.057184	0.74044	0.030334	0.86059	-0.042726	0.80458	-0.11747	0.49506	-0.13425	0.43504
32 - T	-0.0086485	0.96007	-0.049568	0.77405	0.0005163	0.99762	-0.091391	0.59604	-0.1558	0.3642
33 - O	0.21131	0.21604	-0.032529	0.85061	-0.10533	0.54094	0.0080031	0.96305	0.05628	0.74441
34 - C	-0.11669	0.49793	-0.029431	0.8647	-0.070479	0.68294	-0.1882	0.27167	-0.06467	0.70787
35 - C	0.15554	0.36501	0.13463	0.43371	0.028915	0.86706	-0.01265	0.94163	-0.001291	0.99404
36 - F	-0.12831	0.45581	-0.011876	0.9452	0.02117	0.90246	-0.04221	0.8069	-0.070092	0.68459
37 - F	-0.21221	0.21403	0.14677	0.39301	-0.081838	0.63514	-0.17517	0.30686	-0.082226	0.63354
38 - O	0.09152	0.59552	0.055247	0.74895	-0.018201	0.91609	0.0054215	0.97497	-0.094876	0.58204
39 - F	-0.14173	0.40962	-0.11914	0.48887	-0.13915	0.41829	0.084678	0.62341	-0.041565	0.80979
40 - C	-0.13902	0.41873	-0.07887	0.64751	-0.01833	0.9155	-0.097845	0.57023	0.056796	0.74214
41 - F	-0.0009036	0.99583	-0.062992	0.71513	-0.13154	0.44446	-0.30476	0.070712	-0.12818	0.45626
42 - F	-0.20356	0.23373	-0.044534	0.79648	0.035627	0.83657	-0.043759	0.79995	-0.049568	0.77405
43 - O	0.018072	0.91668	0.10946	0.5251	0.23209	0.17317	0.087518	0.61177	0.082871	0.63087
44 - C	-0.05486	0.75065	0.028656	0.86823	0.044534	0.79648	0.15051	0.38092	0.024009	0.88946
45 - F	-0.022202	0.89773	0.043243	0.80227	0.13089	0.44671	0.098361	0.56819	0.09436	0.5841
46 - O	-0.018717	0.91372	0.055635	0.74724	0.20072	0.24046	0.02104	0.90306	0.18343	0.28424
47 - O	0.30606	0.069468	0.06338	0.71345	0.051633	0.76489	0.023364	0.89241	0.045824	0.79071
48 - O	0.030722	0.85883	0.071512	0.67854	0.12018	0.48509	0.037821	0.82665	0.1833	0.28459
49 - C	0.032271	0.85179	0.09991	0.56208	0.30902	0.066671	0.17788	0.29932	0.11321	0.51094
50 - C	0.14431	0.40106	0.13244	0.44131	0.14857	0.38715	0.15103	0.37927	0.14522	0.39808
51 - T	0.043243	0.80227	0.046083	0.78956	0.11269	0.51288	0.0018072	0.99165	0.24552	0.14894
52 - F	0.017684	0.91846	-0.19685	0.24984	0.063121	0.71457	0.025946	0.8806	-0.010327	0.95234

Table B11: Remote NC and C1 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.034817	0.83334	-0.019185	0.90771	-0.32005	0.047	-0.229	0.16083	-0.30402	0.059888
2 -C	-0.11765	0.47567	-0.003045	0.98532	-0.024971	0.88006	0.11217	0.49661	0.30635	0.057854
3 - T	0.003959	0.98092	0.05654	0.73244	0.028727	0.86218	-0.053901	0.7445	-0.14546	0.37693
4 -F	-0.062833	0.70394	0.043039	0.79474	0.13257	0.4211	-0.027306	0.86894	-0.063341	0.70166
5 - O	0.32137	0.046048	0.2017	0.21821	-0.013196	0.93645	0.21784	0.1828	0.19652	0.2305
6 - T	-0.022027	0.89411	-0.072477	0.66105	0.03502	0.83238	0.040502	0.80661	0.097244	0.55591
7 - O	-0.095925	0.56131	0.074608	0.6517	0.18444	0.261	0.041009	0.80423	0.27498	0.090219
8 - C	0.028625	0.86266	-0.05989	0.71723	-0.19144	0.24301	-0.26412	0.10421	-0.22809	0.16255
9 - F	0.26057	0.10913	0.20951	0.20051	-0.054916	0.73986	-0.24088	0.13962	-0.2019	0.21773
10 - F	-0.04984	0.76318	-0.075217	0.64904	0.03634	0.82616	0.019489	0.90626	-0.02761	0.86749
11 - O	0.024768	0.88103	0.20088	0.2201	0.28392	0.079839	0.42248	0.007379	0.15642	0.34163
12 - F	0.036238	0.82664	0.035528	0.82999	0.005583	0.97309	-0.019388	0.90674	0.090139	0.58526
13 - C	-0.094808	0.56589	0.06192	0.70806	-0.13744	0.40407	-0.24514	0.13254	-0.20515	0.21026
14 - F	0.12394	0.45221	0.073999	0.65437	-0.094504	0.56715	-0.003654	0.98239	-0.002436	0.98826
15 - F	-0.13998	0.39537	-0.077044	0.64109	-0.1212	0.46235	-0.020606	0.90091	-0.005481	0.97358
16 - O	-0.10293	0.53293	0.009643	0.95354	0.035934	0.82807	-0.10841	0.51122	0	1
17 - C	-0.12496	0.44849	-0.13998	0.39537	-0.14302	0.38506	-0.11014	0.50448	-0.054104	0.74357
18 - F	0.14911	0.36493	0.29001	0.073312	0.11663	0.47951	0.035832	0.82855	0.018271	0.91209
19 - O	0.015125	0.92719	0.087398	0.59677	-0.069533	0.67404	0.014211	0.93157	0.28158	0.082457
20 - O	0.004568	0.97798	-0.17368	0.29033	-0.062732	0.7044	-0.028727	0.86218	-0.010963	0.94719
21 - O	-0.095925	0.56131	0.031569	0.8487	-0.1415	0.3902	-0.11044	0.5033	0.018576	0.91063
22 - F	-0.052886	0.74916	-0.10181	0.53741	-0.17084	0.29842	-0.06801	0.68079	-0.099985	0.54477
23 - C	0.060702	0.71355	-0.25874	0.11172	-0.1012	0.53986	-0.108	0.51282	-0.093489	0.57134
24 - C	0.083947	0.61139	-0.24565	0.13172	-0.014719	0.92914	0.008121	0.96087	0.008019	0.96136
25 - T	-0.051667	0.75476	0.077044	0.64109	0.085571	0.60449	0.16881	0.30428	0.30452	0.059441
26 - F	0.093895	0.56966	-0.29914	0.064316	-0.18596	0.25702	-0.1013	0.53945	-0.11196	0.49739
27 - C	-0.16718	0.30902	-0.26382	0.10462	-0.18048	0.27155	-0.073999	0.65437	-0.23733	0.14574
28 - C	-0.12597	0.44478	-0.011673	0.94377	-0.042735	0.79616	0.16576	0.31321	0.27092	0.095268
29 - T	-0.24402	0.13437	-0.3097	0.055032	-0.26209	0.107	-0.22697	0.16467	-0.16069	0.32847
30 - F	0.18018	0.27238	-0.00538	0.97407	-0.14901	0.36526	-0.16678	0.31022	-0.13064	0.42795
31 - O	0.18129	0.26937	0.045069	0.78528	0.052683	0.75009	0.10516	0.52403	0.06801	0.68079
32 - T	0.004365	0.97896	-0.22504	0.16839	0.067503	0.68305	0.13419	0.41538	0.35802	0.025232
33 - O	-0.13724	0.40478	-0.24017	0.14083	-0.18809	0.25151	0.00203	0.99021	0.025275	0.87861
34 - C	-0.077247	0.6402	-0.25235	0.12118	-0.075116	0.64948	0.15165	0.35674	0.08618	0.60191
35 - C	0.049637	0.76411	0.03096	0.85158	-0.10222	0.53578	-0.15856	0.33501	-0.010354	0.95012
36 - F	-0.012485	0.93987	0.17612	0.28351	0.14323	0.38438	-0.19865	0.22538	-0.19652	0.2305
37 - F	-0.18759	0.25281	-0.30229	0.061427	-0.12161	0.46084	-0.1279	0.43778	-0.11785	0.4749
38 - O	0.16353	0.31987	0.20109	0.21963	0.12496	0.44849	0.4646	0.002885	0.25976	0.11027
39 - F	0.11054	0.5029	0.02152	0.89654	0.13653	0.40724	-0.046897	0.7768	0.079075	0.63229
40 - C	0.16962	0.30193	0.022535	0.89169	0.051261	0.75662	0.039893	0.80946	0.098767	0.54971
41 - F	0.13714	0.40513	0.19916	0.22418	0.058367	0.72413	0.048013	0.77162	0.024362	0.88296
42 - F	-0.21713	0.18427	-0.22179	0.17478	-0.12354	0.45371	-0.16637	0.31141	-0.044156	0.78954
43 - O	0.06801	0.68079	-0.11826	0.47337	-0.086891	0.59891	-0.15551	0.34449	-0.12211	0.45896
44 - C	-0.12019	0.46613	-0.27356	0.091962	-0.048927	0.7674	0.008527	0.95891	-0.042633	0.79664
45 - F	0.00406	0.98043	-0.26077	0.10884	-0.24484	0.13304	-0.065473	0.69211	-0.19804	0.22684
46 - O	0.26321	0.10546	0.16069	0.32847	0.20758	0.20478	0.13501	0.41254	0.19794	0.22708
47 - O	-0.065473	0.69211	-0.20484	0.21096	-0.22251	0.17336	0.07004	0.67179	-0.10374	0.52969
48 - O	0.47039	0.002513	0.14566	0.37626	0.20139	0.21892	0.10323	0.53171	0.23448	0.15077
49 - C	-0.005888	0.97162	-0.071766	0.66417	0.050855	0.75849	-0.044866	0.78623	0.046389	0.77915
50 - C	0.20505	0.2105	0.1616	0.32569	0.15673	0.34068	0.1349	0.41289	0.18698	0.25438
51 - T	0.26889	0.097873	0.16394	0.31865	0.29985	0.063654	0.27752	0.08717	0.34178	0.033209
52 - F	0.12079	0.46386	-0.090849	0.5823	-0.05116	0.75709	0.070243	0.67089	0.08618	0.60191

Table B12: Remote NC and C1 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.079257	0.64589	0.04789	0.78151	0.023622	0.89123	0.02672	0.87707	-0.068672	0.69066
2 -C	-0.056022	0.74554	0.10159	0.55549	0.12779	0.45764	0.035111	0.83891	0.039241	0.82025
3 - T	0.2339	0.16975	0.32748	0.051213	0.38428	0.02067	0.34117	0.04172	0.2521	0.138
4 -F	0.049439	0.77462	0.06338	0.71345	-0.15529	0.36581	-0.31445	0.061793	-0.3138	0.062358
5 - O	-0.056151	0.74497	-0.10043	0.56005	0.017813	0.91787	-0.12031	0.48461	-0.068156	0.69287
6 - T	0.13876	0.4196	0.11953	0.48745	0.15348	0.37149	0.12121	0.48131	0.15245	0.37475
7 - O	-0.024655	0.8865	-0.046857	0.78611	-0.08868	0.60703	-0.091907	0.59396	-0.069963	0.68514
8 - C	-0.20679	0.22625	-0.21957	0.1982	-0.097974	0.56972	-0.19208	0.26175	-0.15193	0.37639
9 - F	-0.11153	0.51726	-0.12185	0.47897	-0.17181	0.31637	-0.20795	0.22359	-0.25455	0.13408
10 - F	-0.23596	0.16591	-0.30231	0.073125	-0.3471	0.03807	-0.29224	0.083708	-0.27378	0.10614
11 - O	0.26436	0.11922	0.19517	0.25399	0.13644	0.4275	0.17375	0.31086	0.16574	0.33401
12 - F	0.098361	0.56819	0.089325	0.60441	-0.002453	0.98867	-0.03653	0.83248	0.069963	0.68514
13 - C	0.20666	0.22654	0.1953	0.25367	0.050342	0.77061	0.039628	0.8185	0.0071	0.96722
14 - F	-0.10456	0.54394	-0.10094	0.55802	-0.088422	0.60808	-0.11656	0.4984	-0.11953	0.48745
15 - F	-0.25158	0.13883	-0.20563	0.22892	-0.19027	0.26635	-0.13915	0.41829	-0.17465	0.30831
16 - O	0.1669	0.33059	0.17297	0.31306	0.18265	0.28632	0.27456	0.10512	0.31006	0.065719
17 - C	-0.036401	0.83307	-0.14238	0.40747	-0.154	0.36986	-0.26643	0.11626	-0.29495	0.080749
18 - F	-0.16523	0.33554	-0.005034	0.97675	-0.16226	0.34442	-0.12521	0.46685	-0.19414	0.25656
19 - O	0.022848	0.89477	0.0648	0.70731	0.12766	0.45809	0.16406	0.339	0.28992	0.086311
20 - O	-0.19285	0.25979	-0.15619	0.363	-0.17633	0.30361	-0.22099	0.19524	-0.1327	0.44041
21 - O	0.047373	0.78381	-0.040403	0.81502	-0.031367	0.85589	-0.025687	0.88178	0.053053	0.75861
22 - F	-0.13773	0.4231	-0.15193	0.37639	-0.087518	0.61177	-0.13941	0.41742	-0.084549	0.62394
23 - C	0.055118	0.74951	-0.066478	0.70008	-0.00426	0.98033	-0.031238	0.85648	-0.09707	0.5733
24 - C	0.043372	0.80169	-0.022073	0.89832	-0.013683	0.93687	-0.1194	0.48792	-0.20434	0.23192
25 - T	-0.028656	0.86823	0.004776	0.97795	0.12237	0.47709	0.13218	0.4422	0.21053	0.21776
26 - F	-0.16716	0.32983	-0.17555	0.30578	-0.31896	0.057947	-0.25894	0.12727	-0.2734	0.10666
27 - C	-0.28424	0.092936	-0.21247	0.21346	-0.1944	0.25591	-0.30554	0.069964	-0.24293	0.15339
28 - C	-0.002453	0.98867	0.082226	0.63354	0.14289	0.40575	0.13476	0.43326	0.10559	0.53994
29 - T	-0.14754	0.39049	-0.15412	0.36946	-0.1811	0.29049	-0.1651	0.33593	-0.11372	0.509
30 - F	0.27094	0.10996	0.2623	0.12224	0.10572	0.53945	0.019621	0.90957	0.012263	0.94341
31 - O	0.052279	0.76204	-0.11721	0.49601	-0.067381	0.69619	-0.085324	0.62076	-0.057055	0.74101
32 - T	-0.10985	0.52362	-0.047373	0.78381	-0.090874	0.59813	-0.084162	0.62554	0.10146	0.556
33 - O	0.18343	0.28424	0.15309	0.37271	0.10391	0.54644	0.18523	0.27944	0.27417	0.10563
34 - C	-0.10249	0.55197	-0.043372	0.80169	0.010456	0.95174	0.10766	0.532	0.032271	0.85179
35 - C	-0.019104	0.91194	-0.089842	0.60231	0.040016	0.81676	-0.14625	0.3947	-0.14715	0.39175
36 - F	-0.13838	0.42091	-0.011876	0.9452	-0.097458	0.57176	-0.12973	0.45079	-0.1904	0.26602
37 - F	-0.076675	0.6567	-0.061185	0.72297	-0.084807	0.62288	0.000645	0.99702	-0.068156	0.69287
38 - O	0.14199	0.40876	0.15322	0.3723	-0.014715	0.93212	-0.039241	0.82025	0.009939	0.95412
39 - F	-0.04789	0.78151	0.001807	0.99165	-0.16084	0.34871	-0.17491	0.30759	0.011488	0.94698
40 - C	0.16884	0.32493	0.22848	0.18015	0.30476	0.070712	0.36789	0.027281	0.30567	0.069839
41 - F	-0.20369	0.23343	-0.15361	0.37108	-0.17078	0.31933	-0.1305	0.44807	-0.084807	0.62288
42 - F	-0.12986	0.45034	-0.062218	0.71849	-0.064929	0.70675	-0.03382	0.84476	-0.065058	0.7062
43 - O	-0.026204	0.87942	-0.008261	0.96186	0.049181	0.77577	0.0577	0.73818	0.064025	0.71066
44 - C	-0.249	0.14307	-0.20653	0.22684	-0.2925	0.083423	-0.35524	0.033496	-0.39138	0.018254
45 - F	-0.032658	0.85003	-0.064929	0.70675	0.008132	0.96246	-0.035627	0.83657	-0.055764	0.74668
46 - O	0.23855	0.16119	0.20059	0.24077	0.34117	0.04172	0.36969	0.026476	0.33897	0.043138
47 - O	-0.17607	0.30433	-0.15232	0.37516	-0.22641	0.18423	-0.28063	0.097351	-0.30489	0.070587
48 - O	-0.12431	0.47009	-0.14987	0.38299	-0.15735	0.35939	-0.21441	0.20922	-0.15903	0.35423
49 - C	0.10456	0.54394	0.11243	0.51385	0.21583	0.20615	0.18704	0.27469	0.30102	0.07442
50 - C	0.15813	0.357	0.1265	0.46223	0.24719	0.14609	0.22331	0.19047	0.23196	0.17342
51 - T	0.086744	0.61493	0.052795	0.75975	0.1518	0.3768	0.22073	0.19578	0.13709	0.4253
52 - F	-0.16148	0.34676	-0.12327	0.47382	-0.28437	0.092781	-0.32632	0.052092	-0.31677	0.05979

Table B13: NPPC and C1 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.012891	0.93791	-0.19733	0.22854	0.026189	0.87425	-0.081308	0.62268	0.25732	0.11377
2 -C	0.33305	0.038287	-0.069634	0.67359	0.073796	0.65526	0.076841	0.64197	-0.16048	0.32908
3 - T	0.053698	0.74543	0.14363	0.38302	-0.18363	0.26314	-0.17947	0.2743	-0.27316	0.092465
4 -F	-0.52205	0.00065263	-0.011876	0.94279	0.19601	0.23173	0.18068	0.27101	-0.24626	0.13073
5 - O	-0.025478	0.87764	-0.276	0.08899	-0.14059	0.39329	-0.18342	0.26368	-0.35375	0.027153
6 - T	-0.2286	0.16159	-0.0076131	0.96331	-0.07471	0.65126	0.15602	0.3429	-0.11389	0.48997
7 - O	0.068822	0.67719	0.014414	0.9306	0.11105	0.50093	0.18505	0.2594	0.12871	0.43486
8 - C	0.23306	0.15333	-0.13836	0.40093	-0.23276	0.15388	-0.17957	0.27403	0.015023	0.92767
9 - F	0.16282	0.322	0.28767	0.075763	0.01888	0.90917	-0.012688	0.93889	-0.087804	0.59505
10 - F	-0.0404	0.80708	0.26128	0.10813	-0.0007106	0.99657	-0.015734	0.92426	0.29295	0.070312
11 - O	0.14719	0.37124	-0.096635	0.5584	0.030148	0.85543	-0.024159	0.88393	-0.027204	0.86942
12 - F	0.31873	0.047968	-0.14658	0.37324	-0.18972	0.24736	0.03431	0.83573	0.079684	0.62966
13 - C	-0.13836	0.40093	-0.073695	0.6557	-0.14708	0.37157	0.019388	0.90674	0.10689	0.51721
14 - F	-0.21164	0.19587	0.0097447	0.95305	0.14729	0.3709	-0.074608	0.6517	0.16089	0.32785
15 - F	-0.011876	0.94279	0.35467	0.026732	0.12232	0.4582	0.21753	0.18343	-0.15125	0.35804
16 - O	-0.18545	0.25834	-0.070751	0.66865	-0.18789	0.25203	0.15145	0.35739	-0.14617	0.37458
17 - C	-0.38461	0.015624	-0.11947	0.46879	0.093692	0.5705	-0.058265	0.72459	-0.50784	0.00096587
18 - F	-0.044257	0.78906	0.13775	0.40302	0.094098	0.56882	0.24819	0.12765	-0.063036	0.70303
19 - O	-0.2087	0.2023	-0.1074	0.51521	-0.14272	0.38609	0.23793	0.14468	0.13429	0.41502
20 - O	-0.29985	0.063654	-0.035223	0.83142	0.075319	0.6486	0.03705	0.82281	0.36614	0.021883
21 - O	0.13673	0.40653	0.11968	0.46803	-0.16708	0.30932	0.27976	0.084553	0.094301	0.56798
22 - F	-0.21784	0.1828	-0.25915	0.11114	0.078364	0.63536	-0.072477	0.66105	0.054916	0.73986
23 - C	0.32016	0.046926	0.037152	0.82234	0.043953	0.79048	0.17368	0.29033	0.061209	0.71126
24 - C	-0.055525	0.73707	0.0087297	0.95794	0.12983	0.43085	-0.0099478	0.95207	0.14658	0.37324
25 - T	-0.053292	0.7473	0.039588	0.81089	-0.18921	0.24865	0.26565	0.10215	-0.098158	0.55218
26 - F	0.051261	0.75662	0.12648	0.44293	0.011064	0.9467	-0.10212	0.53619	-0.23773	0.14503
27 - C	-0.0404	0.80708	-0.048419	0.76974	-0.29904	0.06441	-0.12425	0.45109	0.18414	0.2618
28 - C	0.17216	0.29464	-0.097955	0.55301	0.13937	0.39745	0.14637	0.37391	-0.25844	0.11216
29 - T	-0.22626	0.16603	0.10415	0.52807	-0.38187	0.016444	-0.11592	0.48221	-0.024565	0.882
30 - F	0.29732	0.066041	0.1417	0.38951	0.032279	0.84533	-0.11206	0.497	0.1415	0.3902
31 - O	0.078872	0.63317	0.075725	0.64683	0.047912	0.77209	-0.20068	0.22058	-0.066386	0.68803
32 - T	0.14577	0.37593	0.17541	0.28549	0.093895	0.56966	-0.23925	0.1424	0.14221	0.3878
33 - O	-0.15246	0.35414	-0.17551	0.2852	-0.016241	0.92183	-0.14516	0.37794	0.1143	0.48841
34 - C	0.12414	0.45146	-0.22393	0.17056	0.078567	0.63449	-0.058773	0.72229	-0.10871	0.51003
35 - C	0.1276	0.43888	-0.10943	0.50725	-0.0033498	0.98385	-0.11988	0.46727	0.05116	0.75709
36 - F	0.070243	0.67089	-0.11359	0.49113	0.077247	0.6402	-0.06192	0.70806	-0.084759	0.60794
37 - F	-0.20677	0.2066	0.14648	0.37358	-0.082424	0.61789	-0.11501	0.48569	0.086383	0.60105
38 - O	0.19144	0.24301	-0.06933	0.67494	0.056641	0.73198	-0.12648	0.44293	-0.16292	0.3217
39 - F	0.19449	0.23545	-0.46927	0.0025809	0.078161	0.63624	0.097447	0.55508	0.089428	0.58823
40 - C	0.19175	0.24224	-0.17246	0.29378	-0.012384	0.94035	0.25712	0.11407	-0.000406	0.99804
41 - F	0.082729	0.61659	0.13937	0.39745	-0.088413	0.59249	-0.10963	0.50646	0.090646	0.58314
42 - F	-0.006598	0.9682	0.27854	0.085972	-0.013399	0.93548	0.030757	0.85255	0.42481	0.0070255
43 - O	-0.19469	0.23495	-0.050449	0.76037	0.20291	0.21538	-0.019997	0.90383	-0.1215	0.46122
44 - C	-0.20809	0.20365	0.14871	0.36626	-0.0003045	0.99853	-0.028524	0.86315	-0.30341	0.060428
45 - F	0.088413	0.59249	-0.13206	0.42289	0.15561	0.34417	0.038979	0.81375	0.018271	0.91209
46 - O	-0.13247	0.42146	-0.074405	0.65259	0.21611	0.18638	-0.12008	0.46651	0.022027	0.89411
47 - O	-0.053089	0.74823	-0.21713	0.18427	0.032482	0.84437	-0.083845	0.61182	0.12912	0.4334
48 - O	0.32543	0.043216	-0.13795	0.40232	-0.10415	0.52807	-0.13074	0.42758	0.098564	0.55053
49 - C	-0.011572	0.94426	0.14384	0.38234	-0.21773	0.18301	-0.10963	0.50646	0.058773	0.72229
50 - C	-0.13023	0.4294	-0.046491	0.77868	-0.10496	0.52484	-0.039385	0.81184	0.32239	0.045326
51 - T	-0.3302	0.040071	-0.21215	0.19477	0.22961	0.15968	-0.010151	0.9511	0.078973	0.63273
52 - F	-0.18748	0.25307	0.05319	0.74776	-0.055626	0.73661	-0.024565	0.882	0.0034513	0.98336

Table B14: NPPC and C1 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.40803	0.013498	0.009294	0.9571	-0.013037	0.93984	-0.032658	0.85003	0.072674	0.6736
2 -C	0.27301	0.10717	-0.2237	0.18968	0.22047	0.19631	-0.020008	0.90779	0.074352	0.66649
3 - T	0.047115	0.78496	-0.12573	0.465	0.092811	0.59032	-0.24022	0.15818	0.040016	0.81676
4 -F	0.084807	0.62288	-0.12108	0.48179	0.37511	0.024178	-0.069317	0.6879	0.12431	0.47009
5 - O	0.1691	0.32418	0.13709	0.4253	-0.016394	0.9244	-0.19259	0.26044	-0.12495	0.46777
6 - T	0.22383	0.18942	-0.13115	0.44581	-0.2774	0.10143	0.12069	0.4832	0.32322	0.054497
7 - O	0.26088	0.12435	-0.015619	0.92796	0.16122	0.34754	-0.26346	0.12053	-0.047632	0.78266
8 - C	-0.1416	0.41005	-0.18872	0.27033	0.095392	0.57998	0.014199	0.93449	0.098619	0.56717
9 - F	0.10056	0.55954	0.052924	0.75918	-0.044146	0.79822	0.25687	0.13044	-0.083775	0.62713
10 - F	-0.1296	0.45125	0.34246	0.040903	-0.026978	0.87589	0.037821	0.82665	-0.024009	0.88946
11 - O	-0.027366	0.87412	-0.1092	0.52608	-0.18007	0.2933	-0.048019	0.78093	-0.2104	0.21805
12 - F	-0.030593	0.85941	-0.063251	0.71401	-0.17052	0.32007	-0.084936	0.62235	0.34039	0.042216
13 - C	-0.16871	0.3253	-0.0019362	0.99106	0.1021	0.55348	0.22744	0.18218	0.070092	0.68459
14 - F	-0.40029	0.01556	0.2947	0.081027	0.052149	0.76261	-0.018072	0.91668	-0.059636	0.72972
15 - F	-0.078741	0.64805	0.10998	0.52313	-0.039758	0.81792	-0.12598	0.46407	-0.23609	0.16567
16 - O	-0.093069	0.58928	-0.078353	0.64966	-0.10172	0.55499	0.09991	0.56208	0.026204	0.87942
17 - C	0.1407	0.41308	-0.052149	0.76261	0.23441	0.16879	-0.22564	0.18578	-0.17878	0.29683
18 - F	0.097328	0.57227	0.12986	0.45034	-0.23364	0.17024	0.038467	0.82374	-0.020524	0.90542
19 - O	-0.0506	0.76946	0.10352	0.54794	0.18343	0.28424	0.27159	0.10909	0.17736	0.30075
20 - O	0.039112	0.82083	-0.057442	0.73931	-0.16484	0.33669	0.019492	0.91016	-0.076675	0.6567
21 - O	-0.022202	0.89773	-0.060669	0.72522	0.029947	0.86235	0.068543	0.69121	0.21234	0.21375
22 - F	-0.090874	0.59813	0.13993	0.41568	0.18846	0.271	-0.023364	0.89241	-0.4323	0.008462
23 - C	0.084033	0.62607	0.041565	0.80979	0.17581	0.30506	0.11049	0.52117	-0.0012908	0.99404
24 - C	0.04221	0.8069	-0.11204	0.51531	0.46263	0.0044972	0.068672	0.69066	-0.10314	0.54945
25 - T	-0.07745	0.65345	-0.072545	0.67415	0.30799	0.067634	0.18136	0.28979	0.086227	0.61705
26 - F	-0.063638	0.71233	-0.052795	0.75975	0.17168	0.31674	-0.12056	0.48367	0.020653	0.90483
27 - C	-0.006196	0.97139	-0.29108	0.085002	0.14793	0.38924	0.017168	0.92084	0.053828	0.7552
28 - C	0.32309	0.054599	-0.090745	0.59865	0.28876	0.087636	-0.021815	0.89951	-0.088809	0.60651
29 - T	0.015748	0.92737	0.072415	0.6747	0.16445	0.33784	0.17336	0.31196	0.10817	0.53002
30 - F	0.10675	0.53547	0.13438	0.4346	0.04079	0.81328	-0.016264	0.92499	0.22538	0.18629
31 - O	0.057442	0.73931	0.15735	0.35939	-0.45024	0.005862	0.16639	0.33211	0.34943	0.036714
32 - T	-0.028785	0.86764	-0.30773	0.067876	0.24668	0.14696	-0.58604	0.00017301	0.0029689	0.98629
33 - O	-0.16406	0.339	0.066349	0.70063	0.12456	0.46916	0.15968	0.35225	0.13115	0.44581
34 - C	-0.13618	0.42839	-0.12598	0.46407	0.14561	0.39681	0.18678	0.27537	-0.09849	0.56768
35 - C	0.25197	0.13821	-0.26591	0.11699	0.036789	0.83132	0.21841	0.20064	-0.25326	0.13613
36 - F	0.0037434	0.98271	0.21015	0.21863	-0.046986	0.78553	0.22073	0.19578	0.21854	0.20037
37 - F	-0.16187	0.34559	0.26088	0.12435	-0.30425	0.071215	0.12482	0.46824	-0.12082	0.48273
38 - O	-0.098361	0.56819	0.23687	0.16425	-0.087776	0.61071	-0.11049	0.52117	-0.11088	0.5197
39 - F	-0.11643	0.49888	-0.17207	0.31563	0.28953	0.086751	-0.059636	0.72972	-0.010714	0.95055
40 - C	-0.014845	0.93152	0.031109	0.85707	-0.019362	0.91076	0.035111	0.83891	-0.059378	0.73085
41 - F	-0.05486	0.75065	0.052666	0.76032	0.073577	0.66977	0.25094	0.13988	-0.0089067	0.95888
42 - F	-0.028915	0.86706	0.015103	0.93034	-0.2339	0.16975	0.11411	0.50755	-0.23222	0.17293
43 - O	0.14987	0.38299	-0.37008	0.026306	0.13618	0.42839	-0.21699	0.20366	0.062089	0.71905
44 - C	-0.056796	0.74214	-0.088938	0.60598	0.0052924	0.97556	0.0051633	0.97616	-0.16368	0.34016
45 - F	-0.12444	0.46963	-0.0089067	0.95888	0.1984	0.24606	-0.41061	0.012863	-0.13218	0.4422
46 - O	0.257	0.13024	-0.10352	0.54794	0.21105	0.21661	0.10843	0.52904	0.23054	0.17614
47 - O	-0.090874	0.59813	0.039499	0.81909	0.19608	0.25175	0.020008	0.90779	-0.079902	0.6432
48 - O	-0.16406	0.339	-0.36479	0.028707	-0.083	0.63033	-0.016394	0.9244	0.16458	0.33746
49 - C	0.00025817	0.99881	0.30334	0.072101	0.055893	0.74611	0.048535	0.77863	0.019621	0.90957
50 - C	-0.051762	0.76432	-0.011488	0.94698	-0.012779	0.94103	0.16536	0.33516	0.22047	0.19631
51 - T	-0.067639	0.69509	-0.0577	0.73818	0.29031	0.085873	0.22577	0.18552	0.052795	0.75975
52 - F	0.16303	0.34209	-0.14651	0.39386	0.19427	0.25623	-0.062605	0.71681	0.028269	0.87

Table B15: PPC and C1 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.032178	0.84581	-0.13521	0.41183	-0.082018	0.61963	-0.060905	0.71264	-0.012993	0.93743
2 -C	-0.030757	0.85255	0.20992	0.19962	0.25996	0.10999	0.091459	0.57976	0.030554	0.85351
3 - T	-0.0072071	0.96527	-0.11166	0.49857	-0.24595	0.13122	-0.13247	0.42146	0.049637	0.76411
4 -F	0.17033	0.29987	0.11379	0.49035	0.20637	0.20751	-0.048521	0.76927	0.11166	0.49857
5 - O	-0.19571	0.23247	-0.11673	0.47913	0.027509	0.86797	0.20586	0.20866	-0.098463	0.55095
6 - T	-0.061514	0.70989	-0.1145	0.48763	-0.20403	0.21281	-0.006395	0.96918	0.011775	0.94328
7 - O	0.15318	0.35187	0.20829	0.2032	0.020708	0.90042	0.14221	0.3878	-0.038979	0.81375
8 - C	-0.064965	0.69438	0.010658	0.94865	0.1276	0.43888	0.34218	0.032987	0.0049739	0.97603
9 - F	-0.054713	0.74079	0.021621	0.89606	0.19601	0.23173	0.10628	0.51961	0.006801	0.96722
10 - F	0.042938	0.79522	0.082526	0.61746	0.078567	0.63449	0.31762	0.048799	-0.13105	0.4265
11 - O	0.10729	0.51561	-0.025884	0.87571	-0.053495	0.74636	0.14384	0.38234	0.093083	0.57302
12 - F	-0.098666	0.55012	-0.1013	0.53945	-0.17297	0.29234	-0.24768	0.12845	-0.15977	0.33126
13 - C	-0.17469	0.28747	-0.28067	0.0835	-0.31082	0.054117	0.060093	0.71631	-0.022839	0.89023
14 - F	-0.27133	0.094754	-0.1685	0.30517	0.16465	0.31653	-0.11511	0.4853	0.090443	0.58399
15 - F	0.27752	0.08717	0.1412	0.39123	-0.017358	0.91647	-0.17053	0.29929	0.11217	0.49661
16 - O	0.31417	0.051442	0.19703	0.22928	-0.027813	0.86652	-0.11694	0.47836	0.033802	0.83813
17 - C	-0.087601	0.59591	-0.073187	0.65793	-0.21997	0.17845	0.25874	0.11172	-0.17266	0.2932
18 - F	0.15764	0.33783	0.14434	0.38065	0.052378	0.75149	0.18028	0.2721	-0.1146	0.48724
19 - O	0.22616	0.16623	0.21682	0.1849	0.31102	0.053952	-0.20616	0.20797	-0.14333	0.38404
20 - O	-0.058468	0.72367	-0.011978	0.94231	0.31173	0.053377	0.17459	0.28776	-0.13876	0.39953
21 - O	-0.086891	0.59891	0.023347	0.88781	0.23316	0.15315	0.0056844	0.9726	0.18434	0.26127
22 - F	-0.02223	0.89314	0.011369	0.94524	0.31752	0.048875	-0.054205	0.74311	-0.11816	0.47375
23 - C	-0.020403	0.90188	0.11602	0.48182	0.082323	0.61832	-0.069025	0.67629	-0.28108	0.083035
24 - C	0.034513	0.83478	0.18038	0.27183	0.15399	0.34929	-0.16546	0.31412	-0.22443	0.16957
25 - T	0.24352	0.13521	0.25976	0.11027	0.1751	0.28634	-0.20373	0.21351	0.0015226	0.99266
26 - F	-0.13978	0.39606	-0.11318	0.49269	-0.10973	0.50606	-0.034513	0.83478	-0.21743	0.18364
27 - C	-0.11937	0.46917	-0.19155	0.24275	-0.34107	0.033601	-0.079582	0.6301	0.039385	0.81184
28 - C	0.034513	0.83478	0.17601	0.28379	0.31873	0.047968	-0.13013	0.42976	0.20027	0.22154
29 - T	-0.29914	0.064316	-0.32391	0.044261	-0.25966	0.11042	-0.3099	0.054865	0.13429	0.41502
30 - F	0.11937	0.46917	0.051058	0.75756	-0.11409	0.48919	-0.14526	0.37761	-0.17876	0.27624
31 - O	-0.15043	0.36066	-0.072375	0.66149	0.12343	0.45408	0.2222	0.17397	0.11866	0.47184
32 - T	-0.24727	0.1291	-0.1145	0.48763	-0.057149	0.72967	0.00020302	0.99902	0.079481	0.63054
33 - O	-0.096026	0.56089	-0.0075116	0.9638	-0.17429	0.28861	0.0092372	0.95549	-0.067503	0.68305
34 - C	-0.14465	0.37963	-0.11217	0.49661	0.29244	0.070822	-0.20637	0.20751	0.0078161	0.96233
35 - C	-0.039994	0.80899	0.04446	0.78812	0.19621	0.23124	0.033396	0.84005	-0.022129	0.89363
36 - F	-0.20931	0.20096	-0.23479	0.15022	0.022535	0.89169	-0.34777	0.030056	-0.087297	0.59719
37 - F	0.024057	0.88442	-0.053596	0.7459	-0.19205	0.24148	-0.089428	0.58823	0.038573	0.81565
38 - O	0.11267	0.49465	0.0028422	0.9863	0.10983	0.50567	0.072781	0.65971	0.010455	0.94963
39 - F	-0.13328	0.41859	-0.040299	0.80756	0.030757	0.85255	0.15003	0.36197	0.093793	0.57008
40 - C	0.0094402	0.95452	-0.13683	0.40618	-0.11704	0.47797	-0.0066995	0.96771	0.25184	0.12195
41 - F	-0.04913	0.76646	0.099579	0.54641	0.49485	0.0013623	0.039487	0.81137	0.01411	0.93206
42 - F	0.059281	0.71999	-0.18139	0.26909	-0.22778	0.16313	-0.037558	0.82043	0.02893	0.86122
43 - O	-0.25438	0.11811	-0.21621	0.18616	-0.27641	0.088501	0.29945	0.064031	-0.11633	0.48067
44 - C	-0.10374	0.52969	-0.11511	0.4853	0.21306	0.19281	0.083541	0.61312	-0.094707	0.56631
45 - F	-0.042938	0.79522	-0.097854	0.55342	-0.12282	0.45633	-0.013399	0.93548	-0.18454	0.26073
46 - O	-0.052987	0.74869	-0.018677	0.91015	-0.17997	0.27293	0.16292	0.3217	0.20373	0.21351
47 - O	-0.037456	0.8209	-0.062021	0.7076	-0.022941	0.88975	0.030452	0.85399	0.033396	0.84005
48 - O	-0.09826	0.55177	0.037152	0.82234	-0.053698	0.74543	0.38157	0.016538	0.060499	0.71447
49 - C	0.06933	0.67494	0.16891	0.30398	-0.14952	0.36361	-0.11582	0.4826	-0.0095417	0.95403
50 - C	0.095417	0.56339	0.17947	0.2743	0.0011166	0.99462	0.076841	0.64197	0.089733	0.58696
51 - T	0.036543	0.8252	0.06466	0.69574	-0.079887	0.62879	0.068822	0.67719	0.16048	0.32908
52 - F	0.045069	0.78528	0.036847	0.82377	0.028422	0.86363	-0.018271	0.91209	-0.22585	0.16681

Table B16: PPC and C1 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.051633	0.76489	-0.11101	0.51921	-0.034981	0.83949	-0.11721	0.49601	-0.11088	0.5197
2 -C	-0.017555	0.91906	-0.12508	0.46731	0.18175	0.28875	0.044921	0.79475	0.2086	0.22212
3 - T	-0.037692	0.82724	0.011876	0.9452	0.13812	0.42179	-0.1225	0.47662	-0.20395	0.23283
4 -F	0.0081322	0.96246	0.076546	0.65725	-0.1651	0.33593	-0.14845	0.38757	-0.10843	0.52904
5 - O	-0.061443	0.72185	-0.17981	0.294	-0.011359	0.94757	-0.174	0.31013	0.015232	0.92974
6 - T	-0.0033562	0.9845	0.073448	0.67032	0.011617	0.94639	-0.035111	0.83891	0.011359	0.94757
7 - O	0.1021	0.55348	0.078095	0.65075	-0.26501	0.11829	-0.025429	0.88296	0.10482	0.54294
8 - C	-0.18782	0.27268	-0.18097	0.29084	-0.097328	0.57227	0.11321	0.51094	-0.075384	0.66214
9 - F	0.0067123	0.96901	-0.058604	0.73423	-0.18136	0.28979	0.17943	0.29506	-0.040274	0.8156
10 - F	0.10056	0.55954	0.17581	0.30506	-0.069059	0.689	0.20137	0.23892	0.22409	0.18889
11 - O	-0.11127	0.51824	-0.3098	0.065956	-0.29082	0.085292	-0.28889	0.087488	-0.10107	0.55752
12 - F	-0.044921	0.79475	-0.031367	0.85589	-0.075384	0.66214	0.38247	0.021326	0.18472	0.28081
13 - C	-0.11062	0.52068	-0.19569	0.25271	-0.14057	0.41351	-0.067252	0.69675	-0.16226	0.34442
14 - F	-0.085324	0.62076	-0.030205	0.86118	0.092811	0.59032	0.070092	0.68459	0.03795	0.82607
15 - F	0.17646	0.30325	0.12999	0.44988	-0.11927	0.4884	0.017297	0.92024	-0.1043	0.54494
16 - O	-0.090745	0.59865	-0.20899	0.22125	-0.17981	0.294	0.010068	0.95353	-0.031883	0.85355
17 - C	-0.029173	0.86588	-0.0002582	0.99881	-0.14535	0.39766	-0.069317	0.6879	0.091778	0.59448
18 - F	0.1145	0.5061	0.013683	0.93687	0.18007	0.2933	0.10598	0.53845	-0.11747	0.49506
19 - O	0.08726	0.61282	0.028785	0.86764	0.26952	0.11191	-0.29108	0.085002	0.20653	0.22684
20 - O	0.11011	0.52264	0.075513	0.66159	0.16071	0.34911	-0.19453	0.25559	-0.27301	0.10717
21 - O	0.11127	0.51824	0.062605	0.71681	0.0023235	0.98927	-0.093198	0.58876	0.085711	0.61917
22 - F	0.15671	0.36139	0.14044	0.41394	0.29405	0.081726	0.16497	0.33631	0.067639	0.69509
23 - C	0.16884	0.32493	-0.018588	0.91431	0.014457	0.93331	-0.23996	0.15864	-0.07035	0.68349
24 - C	0.092165	0.59292	-0.098361	0.56819	-0.029044	0.86647	-0.27107	0.10979	-0.14173	0.40962
25 - T	0.17891	0.29648	0.16652	0.33173	0.15258	0.37434	0.11669	0.49793	0.57635	0.00023432
26 - F	0.11605	0.50032	0.017168	0.92084	0.22938	0.17839	-0.11101	0.51921	0.16652	0.33173
27 - C	-0.1034	0.54845	-0.011747	0.94579	0.050213	0.77118	-0.10172	0.55499	0.22731	0.18244
28 - C	0.08726	0.61282	-0.029173	0.86588	0.33587	0.045207	0.14612	0.39512	0.2024	0.23647
29 - T	-0.12986	0.45034	-0.13644	0.4275	-0.073577	0.66977	-0.24526	0.14938	0.050859	0.76832
30 - F	-0.18988	0.26734	-0.028269	0.87	0.34349	0.040259	-0.28024	0.097833	-0.13734	0.42442
31 - O	0.13399	0.43593	0.050342	0.77061	-0.079257	0.64589	-0.17607	0.30433	0.04789	0.78151
32 - T	0.010843	0.94995	-0.072286	0.67525	-0.089971	0.60179	0.076288	0.65833	0.15154	0.37762
33 - O	0.045437	0.79244	0.18123	0.29014	-0.24784	0.14501	0.046599	0.78726	0.053698	0.75577
34 - C	0.0047761	0.97795	0.018588	0.91431	0.060282	0.72691	0.26849	0.11335	-0.25029	0.14094
35 - C	0.22306	0.19099	0.23003	0.17714	0.044792	0.79533	0.24848	0.14393	0.19569	0.25271
36 - F	-0.05628	0.74441	-0.011101	0.94876	-0.018201	0.91609	0.023622	0.89123	0.010456	0.95174
37 - F	0.14741	0.39091	0.18059	0.29189	0.044275	0.79764	0.19659	0.25048	-0.007745	0.96424
38 - O	0.11914	0.48887	0.00038725	0.99821	0.041048	0.81212	-0.11424	0.50706	0.13373	0.43683
39 - F	-0.089971	0.60179	-0.026849	0.87648	0.16858	0.32568	0.29405	0.081726	0.067252	0.69675
40 - C	-0.013554	0.93747	0.062605	0.71681	0.042468	0.80574	-0.067639	0.69509	0.074223	0.66704
41 - F	0.082226	0.63354	0.12211	0.47803	0.10895	0.52706	0.070092	0.68459	0.040403	0.81502
42 - F	0.021944	0.89891	0.0052924	0.97556	-0.023106	0.89359	0.29173	0.084282	-0.087518	0.61177
43 - O	-0.026204	0.87942	-0.086744	0.61493	-0.10546	0.54044	0.049439	0.77462	-0.16639	0.33211
44 - C	-0.092294	0.5924	-0.069576	0.68679	-0.0041306	0.98092	0.086873	0.61441	-0.075643	0.66105
45 - F	0.13657	0.42706	0.11553	0.50224	-0.084678	0.62341	0.023751	0.89064	0.30438	0.071089
46 - O	-0.017168	0.92084	0.060023	0.72803	0.31858	0.058269	0.34375	0.0401	-0.004647	0.97854
47 - O	0.10766	0.532	0.00064541	0.99702	-0.21557	0.20671	-0.15529	0.36581	0.049955	0.77233
48 - O	0.027236	0.87471	0.031496	0.85531	-0.11411	0.50755	-0.089713	0.60283	-0.30902	0.066671
49 - C	0.10882	0.52756	0.15722	0.35979	-0.095521	0.57946	-0.087389	0.61229	0.022589	0.89596
50 - C	0.20627	0.22743	0.21428	0.2095	-0.09423	0.58462	0.10288	0.55046	-0.024526	0.88709
51 - T	0.064025	0.71066	0.054731	0.75122	0.12431	0.47009	0.037434	0.8284	-0.13463	0.43371
52 - F	0.13851	0.42047	0.18136	0.28979	0.14677	0.39301	-0.12766	0.45809	0.12857	0.45489

C Features vs. C2 correlation

The tables below show the results of the correlation tests between the features and the combination score C2 at all the frequency bands for each node in the brain. The tables show the Spearman's correlation coefficient as Rho and the P-value of each test.

Table C1: Local NC and C2 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.0245	0.88072	-0.27449	0.086514	-0.22549	0.16181	-0.052392	0.74816	0.035996	0.82547
2 -C	-0.23746	0.14011	0.065866	0.68636	-0.10394	0.52332	0.068222	0.67574	-0.0086691	0.95766
3 - T	-0.0065961	0.96778	-0.23765	0.13978	-0.19308	0.23261	-0.014511	0.92918	0.15774	0.331
4 -F	0.13381	0.41043	-0.12363	0.44724	-0.18224	0.26038	-0.15218	0.34854	-0.25206	0.11663
5 - O	-0.16829	0.29924	0.064736	0.69147	-0.087351	0.59198	0.12052	0.45883	0.23736	0.14027
6 - T	0.10554	0.51691	-0.026478	0.87116	0.040142	0.80574	0.039482	0.80887	-0.12014	0.46025
7 - O	-0.042497	0.79458	-0.18544	0.25195	-0.13296	0.41343	0.04768	0.77016	0.14031	0.38785
8 - C	0.0023557	0.98849	-0.096679	0.55287	0.016773	0.91818	0.04099	0.80172	0.070672	0.66477
9 - F	0.17706	0.27441	0.090743	0.57762	-0.15331	0.34493	-0.037315	0.81918	-0.14474	0.37289
10 - F	0.095454	0.55794	-0.099412	0.54165	-0.057009	0.72678	-0.11025	0.49826	-0.10997	0.49937
11 - O	-0.044382	0.78568	-0.077928	0.63268	-0.31652	0.046609	0.12504	0.44202	0.1388	0.39302
12 - F	0.23114	0.15127	0.08377	0.60731	-0.10488	0.51954	-0.074441	0.64802	-0.045419	0.78079
13 - C	-0.043722	0.78879	-0.16264	0.316	-0.26375	0.10008	0.03543	0.82817	0.029871	0.85482
14 - F	0.10488	0.51954	0.28749	0.07205	0.15143	0.35096	0.12909	0.42725	0.00018846	0.99908
15 - F	0.017244	0.91589	0.1714	0.29027	-0.14596	0.36882	-0.12825	0.43032	-0.053145	0.74466
16 - O	-0.048057	0.7684	0.038446	0.8138	-0.049188	0.7631	0.14747	0.36384	0.09602	0.5556
17 - C	0.044665	0.78434	0.13588	0.40315	0.18836	0.24442	-0.051261	0.75342	0.12306	0.44933
18 - F	-0.053711	0.74203	0.034676	0.83178	-0.081414	0.61749	0.082639	0.61219	-0.35298	0.025474
19 - O	-0.30615	0.054695	-0.32245	0.042431	-0.17734	0.27363	0.0064076	0.9687	0.1225	0.45144
20 - O	-0.039482	0.80887	0.033357	0.83809	0.1862	0.24999	0.047492	0.77105	-0.018092	0.91177
21 - O	-0.45843	0.0029308	-0.38917	0.013066	-0.12137	0.45566	0.066903	0.68168	-0.027798	0.8648
22 - F	0.069541	0.66982	0.072274	0.65763	0.20759	0.19868	0.022427	0.89075	-0.066338	0.68423
23 - C	-0.024971	0.87844	-0.038823	0.81201	-0.035713	0.82682	-0.085183	0.60124	-0.12891	0.42793
24 - C	-0.15906	0.32692	-0.26658	0.096363	-0.26233	0.10198	-0.044288	0.78612	-0.14775	0.36291
25 - T	-0.3887	0.013186	-0.35835	0.023174	-0.20815	0.19743	0.0036749	0.98204	0.038823	0.81201
26 - F	-0.14511	0.37163	0.23802	0.13914	0.024877	0.8789	-0.14785	0.3626	-0.045701	0.77946
27 - C	0.1601	0.32374	0.14257	0.38017	-0.07887	0.62856	-0.062945	0.6996	-0.10196	0.5313
28 - C	-0.24368	0.12972	-0.089706	0.58199	-0.085372	0.60043	0.04099	0.80172	0.019977	0.90262
29 - T	0.10026	0.53819	0.14737	0.36415	0.052863	0.74597	-0.057574	0.72418	-0.034205	0.83403
30 - F	0.22483	0.16308	0.21352	0.18586	0.33348	0.03548	0.097245	0.55054	-0.24556	0.12668
31 - O	-0.045419	0.78079	-0.19016	0.23989	-0.040519	0.80395	0.017621	0.91406	0.049753	0.76046
32 - T	0.0049942	0.9756	0.056915	0.72722	0.17536	0.27911	-0.11769	0.46951	0.067468	0.67913
33 - O	0.15162	0.35035	0.04523	0.78168	0.093381	0.56656	0.07708	0.6364	0.06973	0.66898
34 - C	-0.13786	0.39627	-0.1992	0.21784	-0.04099	0.80172	0.15105	0.35217	0.21795	0.17668
35 - C	-0.14445	0.37384	0.25979	0.10547	-0.04099	0.80172	-0.015171	0.92597	-0.1992	0.21784
36 - F	0.32038	0.043854	0.013381	0.93469	-0.049847	0.76002	0.12043	0.45919	0.24236	0.13187
37 - F	0.017998	0.91223	0.22238	0.16783	0.28071	0.079339	0.37353	0.017591	0.12994	0.42419
38 - O	-0.013192	0.93561	-0.067939	0.67701	-0.08622	0.59681	0.063511	0.69703	0.19854	0.21939
39 - F	0.074535	0.6476	0.10667	0.5124	0.047492	0.77105	0.003298	0.98389	0.082168	0.61423
40 - C	0.04947	0.76178	-0.36712	0.019793	-0.25385	0.11397	-0.069259	0.67109	0.073593	0.65177
41 - F	0.1861	0.25024	0.34676	0.028372	0.10233	0.52978	0.17253	0.28705	0.064264	0.69361
42 - F	0.3706	0.018568	0.36957	0.018925	0.033357	0.83809	0.17423	0.28227	0.18912	0.24251
43 - O	0.1503	0.35461	0.10017	0.53858	0.057197	0.72592	0.26771	0.094906	0.18695	0.24805
44 - C	-0.21249	0.18805	0.21286	0.18725	0.37419	0.017377	-0.084147	0.60569	0.24905	0.12121
45 - F	-0.19948	0.21717	-0.071426	0.66141	0.090272	0.57961	0.17696	0.27467	-0.15425	0.34193
46 - O	-0.051072	0.7543	-0.21824	0.1761	-0.16207	0.31771	0.089141	0.58438	0.014888	0.92735
47 - O	0.021484	0.89531	0.24754	0.12356	0.16726	0.30227	0.30983	0.051709	0.16631	0.30504
48 - O	0.23001	0.15334	0.086785	0.59439	-0.01894	0.90765	0.25423	0.11341	0.08132	0.6179
49 - C	0.039671	0.80798	0.017715	0.9136	-0.012627	0.93836	-0.17922	0.26848	-0.16773	0.30089
50 - C	-0.0098941	0.95168	0.02629	0.87207	0.08688	0.59399	-0.10827	0.50605	-0.20127	0.21299
51 - T	0.097999	0.54744	-0.044759	0.7839	-0.030248	0.85301	0.25301	0.11522	0.092816	0.56892
52 - F	-0.12306	0.44933	0.084618	0.60367	-0.13974	0.38978	-0.050319	0.75782	-0.074064	0.64969

Table C2: Local NC and C2 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.098209	0.49295	-0.029921	0.83489	0.00899	0.95008	0.17635	0.21575	0.14879	0.29739
2 -C	0.022793	0.87386	0.048446	0.73567	0.16019	0.26149	0.1986	0.16239	0.1507	0.29117
3 - T	0.14261	0.31812	0.029013	0.83984	0.021158	0.88284	0.16954	0.23429	0.1492	0.29605
4 -F	0.27233	0.053192	0.288	0.040425	0.13957	0.32865	0.14588	0.30703	0.20182	0.15554
5 - O	0.22271	0.11622	0.30557	0.029216	0.18302	0.1986	0.10234	0.47484	0.062249	0.66433
6 - T	0.16273	0.2539	0.28823	0.04026	0.19515	0.16996	0.17649	0.21539	-0.02638	0.85421
7 - O	0.10234	0.47484	0.10438	0.46602	-0.038367	0.78924	0.054939	0.70179	0.16405	0.25002
8 - C	0.0012259	0.99319	0.22112	0.11892	0.14697	0.30339	0.15896	0.26521	0.038866	0.78656
9 - F	0.12391	0.38633	0.12913	0.36647	0.20096	0.15735	0.083952	0.55807	0.07914	0.58093
10 - F	0.05898	0.68099	0.029331	0.83811	0.011396	0.93674	0.064383	0.65354	0.0094895	0.94731
11 - O	0.2643	0.06091	0.29295	0.036959	0.16795	0.23877	0.11814	0.40898	0.080683	0.57355
12 - F	0.18806	0.18631	0.27883	0.047552	0.31211	0.02577	0.1848	0.19422	0.17027	0.23227
13 - C	-0.038639	0.78778	-0.062522	0.66294	-0.053804	0.70767	-0.035325	0.80561	0.11742	0.41189
14 - F	-0.017435	0.90335	-0.11369	0.42698	-0.15537	0.27628	-0.15619	0.27373	-0.16182	0.25659
15 - F	0.0059934	0.96671	-0.020568	0.88609	-0.066154	0.64464	-0.030103	0.8339	0.0082182	0.95436
16 - O	-0.11673	0.41463	-0.127	0.37451	-0.18425	0.19556	-0.25617	0.069604	-0.28196	0.045011
17 - C	-0.055847	0.69709	-0.16586	0.24475	0.0091717	0.94907	0.15864	0.26618	0.10452	0.46544
18 - F	-0.16282	0.25363	-0.1111	0.43764	-0.093805	0.51263	-0.12	0.40159	-0.06629	0.64395
19 - O	0.012486	0.9307	-0.055121	0.70085	-0.051715	0.71854	-0.023928	0.86763	0.018752	0.89609
20 - O	-0.018253	0.89884	0.027197	0.84974	-0.10466	0.46485	-0.042317	0.76811	-0.11728	0.41244
21 - O	0.04041	0.77829	-0.089174	0.53376	-0.059343	0.67913	-0.021431	0.88134	-0.0013621	0.99243
22 - F	-0.026334	0.85446	-0.077596	0.58835	-0.11319	0.42902	-0.1067	0.45613	-0.11614	0.41701
23 - C	-0.096756	0.4994	-0.2114	0.13644	-0.26493	0.060268	-0.20532	0.14836	-0.26757	0.057668
24 - C	-0.18302	0.1986	-0.14384	0.31393	-0.18534	0.19288	-0.23397	0.098439	-0.25027	0.076516
25 - T	-0.053441	0.70956	-0.13966	0.32834	-0.13649	0.33957	-0.06629	0.64395	-0.0090808	0.94957
26 - F	0.19052	0.18053	0.23737	0.093498	0.24627	0.081495	0.11396	0.42586	-0.025517	0.85893
27 - C	-0.14075	0.32454	-0.19551	0.16916	-0.36392	0.0086616	-0.1502	0.29279	-0.078322	0.58485
28 - C	0.076597	0.59318	-0.0059934	0.96671	0.1363	0.34022	0.15737	0.27008	0.1008	0.48157
29 - T	-0.1694	0.23468	-0.079321	0.58006	-0.24082	0.08869	-0.25499	0.070945	-0.17285	0.22514
30 - F	0.201	0.15726	0.19606	0.16795	0.21749	0.12526	0.18584	0.19167	0.16132	0.25808
31 - O	0.10479	0.46427	0.10929	0.44522	0.12977	0.3641	0.0054485	0.96973	0.028514	0.84256
32 - T	0.11496	0.42179	0.20119	0.15688	0.31461	0.024546	0.1605	0.26054	0.047765	0.73925
33 - O	0.1838	0.19668	0.17535	0.21841	0.12477	0.38301	0.28682	0.04129	0.27678	0.049272
34 - C	0.10974	0.44332	0.040319	0.77878	0.22879	0.10633	0.10665	0.45632	0.049627	0.72947
35 - C	-0.32746	0.018996	-0.37831	0.006196	-0.45926	0.00069889	-0.32945	0.018237	-0.34421	0.013387
36 - F	0.075643	0.5978	0.027424	0.8485	0.041772	0.77102	0.049536	0.72994	-0.01857	0.89709
37 - F	0.031284	0.82749	0.21785	0.12461	0.17776	0.21205	0.070876	0.62114	0.18125	0.20306
38 - O	0.12618	0.37762	0.045041	0.75364	0.0988	0.49034	0.14947	0.29516	0.059979	0.67588
39 - F	0.33191	0.017341	0.43129	0.0015788	0.44001	0.0012337	0.32904	0.01839	0.19406	0.17241
40 - C	-0.10466	0.46485	-0.19106	0.17926	-0.28142	0.045444	-0.046494	0.74596	0.069423	0.62833
41 - F	-0.085905	0.54892	-0.10329	0.47071	-0.16137	0.25795	-0.11465	0.42308	-0.13058	0.36106
42 - F	-0.18811	0.1862	0.018934	0.89509	-0.11437	0.42419	-0.27851	0.047816	-0.22516	0.11216
43 - O	-0.08536	0.55146	0.070059	0.62518	-0.15397	0.28071	-0.06738	0.6385	-0.15778	0.26882
44 - C	0.20196	0.15526	-0.046085	0.74811	0.0097165	0.94605	0.1561	0.27402	0.079185	0.58071
45 - F	-0.045631	0.75052	0.10084	0.48137	0.13748	0.33601	0.027742	0.84677	-0.12078	0.39855
46 - O	-0.1329	0.35253	-0.22348	0.11493	-0.14525	0.30917	-0.097301	0.49697	0.12314	0.38932
47 - O	0.044088	0.7587	-0.044905	0.75436	0.040909	0.77562	0.21417	0.13126	-0.13635	0.34006
48 - O	0.08981	0.53083	-0.072511	0.6131	0.054122	0.70602	-0.025971	0.85644	-0.015891	0.91187
49 - C	-0.33481	0.016327	-0.29563	0.035188	-0.37749	0.0063174	-0.28414	0.043309	-0.29041	0.038708
50 - C	-0.29245	0.037297	-0.27451	0.051241	-0.35206	0.01129	-0.29063	0.038549	-0.28296	0.044224
51 - T	-0.14897	0.2968	-0.15692	0.27148	-0.042317	0.76811	-0.085814	0.54934	0.10625	0.45806
52 - F	0.1561	0.27402	0.072374	0.61377	0.050263	0.72614	0.12927	0.36596	0.021612	0.88034

Table C3: Remote NC and C2 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.12985	0.42453	-0.19176	0.23588	-0.036278	0.82413	-0.003581	0.98251	-0.11553	0.47779
2 -C	-0.09112	0.57604	-0.007633	0.96272	0.18818	0.2449	0.051638	0.75167	0.37729	0.016395
3 - T	-0.052297	0.7486	-0.18507	0.25293	-0.10149	0.53321	-0.007067	0.96548	-0.024029	0.883
4 -F	-0.081697	0.61626	-0.31256	0.049574	-0.12533	0.44098	-0.32255	0.042367	-0.24669	0.12489
5 - O	0.001037	0.99494	0.1127	0.4887	0.1143	0.4825	-0.064641	0.6919	-0.073028	0.65428
6 - T	0.05993	0.71336	0.053899	0.74116	-0.1699	0.2946	-0.015548	0.92414	0.13051	0.42216
7 - O	-0.087539	0.59118	-0.032132	0.84396	-0.013286	0.93515	0.016584	0.9191	0.00669	0.96732
8 - C	-0.23755	0.13995	0.004712	0.97698	0.17414	0.28253	0.079153	0.62733	0.04278	0.79324
9 - F	-0.18215	0.26063	-0.14634	0.36757	-0.23699	0.14092	-0.2645	0.099079	-0.22709	0.15877
10 - F	-0.11534	0.47851	-0.27006	0.091924	-0.2646	0.098954	-0.42799	0.00587	-0.3331	0.035702
11 - O	0.19505	0.22776	0.058799	0.71855	0.035336	0.82862	-0.037503	0.81829	0.074818	0.64636
12 - F	0.24038	0.13515	0.36966	0.018892	0.11147	0.49347	0.086974	0.59359	0.22973	0.15386
13 - C	-0.20014	0.21562	-0.073405	0.65261	0.10139	0.5336	0.17385	0.28333	-0.051732	0.75123
14 - F	-0.17291	0.28599	-0.19637	0.22457	-0.20966	0.19413	-0.15925	0.32634	-0.22474	0.16326
15 - F	0.033923	0.83538	-0.039859	0.80708	-0.1061	0.51465	-0.25008	0.11962	-0.22276	0.16709
16 - O	0.011308	0.94479	0.068505	0.67447	-0.016207	0.92093	0.02384	0.88391	0.094135	0.56342
17 - C	0.11571	0.47707	-0.013757	0.93285	0.050601	0.7565	0.042309	0.79547	0.066997	0.68125
18 - F	-0.21767	0.17726	-0.30568	0.055088	-0.20721	0.19951	-0.27053	0.091336	-0.26328	0.10071
19 - O	-0.38888	0.013138	-0.43223	0.005348	-0.27148	0.09017	-0.31463	0.048002	-0.3152	0.047581
20 - O	0.032509	0.84215	0.07218	0.65805	-0.078399	0.63062	0.083205	0.60975	0.02563	0.87526
21 - O	-0.16151	0.31943	-0.00801	0.96088	0.019505	0.90491	0.11798	0.46844	0.32603	0.040062
22 - F	-0.30926	0.052159	-0.33018	0.037454	-0.060213	0.71207	-0.12448	0.4441	-0.31953	0.044447
23 - C	0.005465	0.9733	0.071709	0.66015	0.147	0.36539	0.078399	0.63062	0.14803	0.36198
24 - C	0.076043	0.64095	0.12108	0.45671	0.10328	0.52598	-0.071991	0.65889	-0.11317	0.48687
25 - T	-0.43751	0.004756	-0.24811	0.12267	-0.099035	0.54319	-0.22238	0.16783	-0.077268	0.63557
26 - F	0.006785	0.96686	0.1764	0.27623	-0.042686	0.79369	-0.067939	0.67701	-0.037692	0.81739
27 - C	0.15227	0.34824	0.040707	0.80306	0.020919	0.89805	0.10394	0.52332	-0.10431	0.52181
28 - C	-0.06728	0.67998	0.028457	0.86162	0.19948	0.21717	0.011119	0.94571	0.31265	0.049502
29 - T	0.14822	0.36136	0.11524	0.47888	0.25819	0.10771	0.10262	0.52864	0.076985	0.63681
30 - F	-0.007538	0.96318	-0.17206	0.28839	-0.12485	0.44271	-0.091968	0.57247	-0.10017	0.53858
31 - O	0.16387	0.31232	0.2172	0.17822	0.17385	0.28333	0.071991	0.65889	0.078493	0.63021
32 - T	0.35901	0.022903	0.47661	0.001876	0.34318	0.03016	0.20184	0.21168	0.18902	0.24275
33 - O	0.046832	0.77415	-0.17734	0.27363	-0.092533	0.57011	0.011402	0.94433	0.08801	0.58918
34 - C	-0.02205	0.89257	0.056067	0.73113	0.31256	0.049574	0.11939	0.46309	0.31981	0.044249
35 - C	0.23812	0.13898	-0.13974	0.38978	0.038257	0.8147	0.040896	0.80216	-0.032886	0.84035
36 - F	-0.15944	0.32576	0.06483	0.69105	-0.050695	0.75606	0.11826	0.46737	0.23661	0.14157
37 - F	0.049565	0.76134	-0.076326	0.63971	0.061909	0.70432	0.046361	0.77636	0.11166	0.49273
38 - O	0.10214	0.53054	0.1257	0.4396	0.044665	0.78434	0.039482	0.80887	0.069353	0.67067
39 - F	0.20071	0.2143	0.43082	0.005518	0.33951	0.032092	0.19798	0.22074	0.12646	0.43684
40 - C	-0.10318	0.52636	-0.37494	0.017134	-0.05079	0.75562	0.035242	0.82908	-0.051072	0.7543
41 - F	-0.25103	0.11819	-0.27034	0.091571	-0.21334	0.18625	-0.28193	0.077982	-0.3332	0.035646
42 - F	0.12118	0.45636	0.20966	0.19413	0.088199	0.58838	0.13635	0.40151	0.10921	0.50233
43 - O	0.26997	0.092042	0.34931	0.027155	0.31152	0.050375	0.27327	0.087985	0.21173	0.18966
44 - C	-0.13126	0.41947	-0.2335	0.14703	-0.21522	0.1823	-0.27694	0.08363	0.040519	0.80395
45 - F	-0.1225	0.45144	-0.22445	0.1638	-0.12928	0.42657	-0.15058	0.35369	-0.10035	0.53781
46 - O	-0.078682	0.62938	-0.26403	0.099705	0.010554	0.94847	0.17121	0.29081	0.087539	0.59118
47 - O	0.28787	0.071661	0.08933	0.58359	0.12881	0.42827	0.15501	0.33955	0.099224	0.54242
48 - O	0.17715	0.27415	0.081414	0.61749	0.2956	0.064045	0.38766	0.013454	0.20523	0.20394
49 - C	-0.19458	0.22891	-0.016773	0.91818	-0.08556	0.59963	-0.041649	0.79859	-0.13173	0.41778
50 - C	-0.16339	0.31374	-0.12712	0.43443	-0.10723	0.51015	-0.066432	0.6838	-0.14728	0.36446
51 - T	0.058045	0.72201	-0.20514	0.20415	0.013663	0.93331	0.19637	0.22457	0.14144	0.384
52 - F	0.037974	0.81604	-0.11553	0.47779	-0.34545	0.02902	-0.37032	0.018665	-0.38125	0.015214

Table C4: Remote NC and C2 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.12	0.40159	-0.011033	0.93875	0.000636	0.99647	0.11778	0.41044	0.17621	0.21611
2 -C	-0.083907	0.55828	-0.008536	0.95259	0.026153	0.85545	0.032555	0.82059	0.03369	0.81444
3 - T	0.095531	0.50487	0.080184	0.57593	0.12908	0.36664	0.17258	0.22588	0.13794	0.33441
4 -F	0.26684	0.058376	0.26384	0.061371	0.17186	0.22787	0.27147	0.05398	0.27233	0.053192
5 - O	0.31651	0.023646	0.3423	0.013944	0.46712	0.000549	0.24173	0.087458	0.081546	0.56945
6 - T	0.14643	0.30521	0.13113	0.35904	0.22943	0.10534	0.088266	0.53795	0.025608	0.85843
7 - O	0.008218	0.95436	0.027288	0.84925	-0.048129	0.73734	0.025109	0.86116	-0.033418	0.81592
8 - C	-0.17036	0.23201	-0.10307	0.4717	-0.15301	0.28374	-0.074145	0.60509	-0.026289	0.8547
9 - F	-0.018843	0.89559	-0.10924	0.44541	-0.14488	0.31039	-0.066381	0.6435	0.089946	0.53021
10 - F	0.020023	0.88908	-0.002043	0.98865	-0.06461	0.65239	-0.041	0.77514	0.10429	0.46641
11 - O	0.29245	0.037297	0.32469	0.020093	0.46008	0.000682	0.25812	0.06743	0.10865	0.44788
12 - F	0.2984	0.033431	0.28446	0.043065	0.32959	0.018187	0.21068	0.13783	0.18943	0.18308
13 - C	0.15728	0.27036	0.07192	0.616	0.18312	0.19838	0.14366	0.31455	0.24237	0.086603
14 - F	-0.21363	0.13227	-0.30825	0.02776	-0.33231	0.017195	-0.31125	0.026204	-0.26257	0.062678
15 - F	-0.11011	0.4418	-0.17344	0.22353	-0.30117	0.031748	-0.18312	0.19838	0.011215	0.93774
16 - O	-0.013985	0.92241	-0.011033	0.93875	0.02697	0.85098	-0.056029	0.69616	-0.14184	0.32077
17 - C	-0.02924	0.8386	0.00336	0.98133	0.088765	0.53564	0.10157	0.4782	0.19238	0.17623
18 - F	-0.096711	0.4996	-0.17308	0.22452	-0.096666	0.4998	0.053078	0.71145	0.13067	0.36072
19 - O	-0.16986	0.2334	-0.11601	0.41756	-0.15133	0.28912	-0.16423	0.24949	-0.039683	0.78218
20 - O	-0.039729	0.78194	-0.10407	0.46739	-0.061977	0.66571	-0.11719	0.4128	0.046948	0.74356
21 - O	0.3932	0.004312	0.44256	0.001147	0.4969	0.000208	0.38839	0.004857	0.21422	0.13118
22 - F	-0.2539	0.072201	-0.29803	0.033657	-0.32074	0.021749	-0.29295	0.036959	-0.24427	0.084078
23 - C	-0.004495	0.97503	-0.093851	0.51243	-0.124	0.38598	-0.16772	0.23942	-0.14184	0.32077
24 - C	-0.088311	0.53774	-0.20205	0.15507	-0.19528	0.16966	-0.1912	0.17895	-0.10938	0.44484
25 - T	0.26602	0.059181	0.23824	0.092278	0.22602	0.11075	0.17149	0.22887	0.097528	0.49597
26 - F	0.0904	0.52812	0.051216	0.72115	0.073282	0.60931	0.075553	0.59824	0.12913	0.36647
27 - C	0.082227	0.56622	0.065972	0.64555	0.11042	0.44047	0.061568	0.66778	0.077369	0.58945
28 - C	-0.11365	0.42716	-0.028423	0.84305	0.009671	0.9463	-0.003269	0.98184	-0.026743	0.85222
29 - T	0.055393	0.69944	-0.049354	0.7309	-0.004086	0.9773	0.14234	0.31905	0.10175	0.47741
30 - F	0.17898	0.20887	0.15832	0.26715	0.11955	0.40339	0.17358	0.22317	0.17294	0.22489
31 - O	0.069605	0.62743	0.084997	0.55316	0.17512	0.21901	-0.020069	0.88883	-0.10543	0.46155
32 - T	0.26362	0.061603	0.20759	0.14382	0.32228	0.021089	0.29785	0.033771	0.24414	0.084256
33 - O	-0.049899	0.72804	-0.066199	0.64441	-0.1027	0.47327	-0.028241	0.84404	-0.079548	0.57897
34 - C	-0.016573	0.90811	0.076915	0.59164	0.095531	0.50487	0.063702	0.65697	0.095576	0.50467
35 - C	-0.23628	0.095058	-0.24269	0.086178	-0.21826	0.12389	-0.21063	0.13791	-0.23006	0.10435
36 - F	-0.27011	0.055245	-0.28287	0.044295	-0.28909	0.03964	-0.20346	0.15215	-0.18125	0.20306
37 - F	-0.006947	0.96141	0.10334	0.47052	0.030875	0.82971	0.14071	0.3247	0.10416	0.467
38 - O	0.18307	0.19849	0.2495	0.077458	0.34085	0.014381	0.13975	0.32802	0.042998	0.76449
39 - F	0.27905	0.047364	0.29063	0.038549	0.39089	0.004567	0.3586	0.009766	0.26471	0.060497
40 - C	-0.013621	0.92442	-0.022203	0.8771	-0.11015	0.44161	-0.10933	0.44503	-0.021204	0.88259
41 - F	-0.16563	0.2454	-0.28895	0.039737	-0.30044	0.032182	-0.27733	0.048808	-0.24482	0.083367
42 - F	-0.19102	0.17937	-0.26625	0.058957	-0.25649	0.069246	-0.1838	0.19668	-0.13435	0.34725
43 - O	-0.005857	0.96746	-0.058617	0.68285	-0.018253	0.89884	-0.083998	0.55785	-0.18066	0.20456
44 - C	0.055302	0.69991	0.024155	0.86639	0.003088	0.98284	0.12931	0.36579	0.16918	0.23531
45 - F	0.073964	0.60598	0.061023	0.67055	-0.063248	0.65927	0.086177	0.54765	0.09494	0.50752
46 - O	-0.12504	0.38196	-0.26294	0.062303	-0.20555	0.1479	-0.12604	0.37814	-0.021158	0.88284
47 - O	0.21517	0.12943	0.085905	0.54892	0.091444	0.52335	0.075507	0.59846	0.009081	0.94957
48 - O	-0.060251	0.67449	-0.052124	0.71641	-0.052442	0.71476	-0.0494	0.73066	-0.097619	0.49556
49 - C	-0.37885	0.006116	-0.3636	0.008725	-0.36659	0.008147	-0.38852	0.004841	-0.34875	0.012137
50 - C	-0.37567	0.006595	-0.39883	0.003744	-0.39701	0.00392	-0.36396	0.008653	-0.34294	0.013756
51 - T	-0.14607	0.30642	-0.15269	0.28475	-0.15247	0.28547	-0.061704	0.66709	-0.053259	0.7105
52 - F	-0.044542	0.75629	-0.016981	0.90585	-0.03705	0.79632	-0.007401	0.95889	0.026789	0.85198

Table C5: NPPC and C2 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.080566	0.62117	0.044476	0.78523	0.10874	0.50419	-0.35072	0.026498	-0.24707	0.12429
2 -C	0.19741	0.22208	0.25074	0.11862	0.009046	0.95582	-0.26658	0.096363	0.11128	0.4942
3 - T	0.083864	0.60691	0.061061	0.70819	-0.041272	0.80038	-0.081508	0.61708	-0.077834	0.63309
4 -F	-0.2091	0.19537	-0.11336	0.48614	-0.0094229	0.95398	0.051544	0.75211	0.10752	0.50903
5 - O	-0.11807	0.46808	0.15708	0.33305	0.10224	0.53016	0.27628	0.084399	0.068128	0.67617
6 - T	-0.016113	0.92139	0.0067845	0.96686	-0.0094229	0.95398	0.18855	0.24394	-0.035242	0.82908
7 - O	-0.016961	0.91727	0.06059	0.71035	-0.024405	0.88117	-0.090743	0.57762	0.12778	0.43203
8 - C	-0.027892	0.86435	-0.23312	0.14771	0.053051	0.74509	0.0062191	0.96962	-0.12778	0.43203
9 - F	0.0196	0.90445	0.10205	0.53092	0.14813	0.36167	-0.085655	0.59922	-0.17574	0.27806
10 - F	-0.020825	0.89851	-0.20759	0.19868	-0.18846	0.24418	-0.060118	0.7125	-0.012909	0.93698
11 - O	-0.21117	0.19087	-0.09291	0.56853	-0.27675	0.083849	-0.072934	0.6547	0.31133	0.050522
12 - F	0.034959	0.83043	0.10026	0.53819	0.098281	0.54628	0.17979	0.26695	0.11713	0.47167
13 - C	0.051167	0.75386	0.071237	0.66225	0.14992	0.35583	-0.24905	0.12121	-0.4702	0.0022017
14 - F	0.12928	0.42657	-0.037126	0.82008	-0.049565	0.76134	-0.045042	0.78257	0.10299	0.52712
15 - F	-0.01159	0.94341	-0.12174	0.45425	0.045324	0.78124	-0.06728	0.67998	0.0093287	0.95444
16 - O	-0.24047	0.13499	0.043346	0.79057	-0.33451	0.034878	0.05927	0.71639	-0.31331	0.048998
17 - C	0.027138	0.86798	-0.32528	0.040551	0.040048	0.80619	-0.10309	0.52674	0.0030153	0.98527
18 - F	-0.1356	0.40414	-0.10375	0.52408	-0.022521	0.89029	0.14803	0.36198	0.17508	0.2799
19 - O	0.086031	0.59761	-0.085372	0.60043	0.27873	0.08157	0.17301	0.28572	0.10478	0.51992
20 - O	0.21927	0.17401	-0.055124	0.73549	-0.08311	0.61016	0.05258	0.74728	-0.035148	0.82953
21 - O	-0.18064	0.26466	0.24302	0.13079	-0.025913	0.87389	0.11854	0.4663	0.15001	0.35553
22 - F	-0.15218	0.34854	0.18827	0.24466	-0.017621	0.91406	0.0084807	0.95858	-0.18497	0.25318
23 - C	-0.042969	0.79235	-0.076514	0.63888	-0.19402	0.23029	-0.084901	0.60245	-0.19505	0.22776
24 - C	-0.16377	0.3126	-0.27468	0.08629	-0.044476	0.78523	-0.081508	0.61708	-0.20193	0.21146
25 - T	0.050036	0.75914	0.29956	0.060401	0.029023	0.8589	0.29013	0.069362	0.089047	0.58478
26 - F	0.067845	0.67744	0.10403	0.52294	0.28495	0.074719	0.11854	0.4663	0.071803	0.65973
27 - C	0.26846	0.093943	-0.22361	0.16544	-0.18431	0.2549	-0.18281	0.25888	0.16207	0.31771
28 - C	0.10799	0.50717	0.17093	0.29162	-0.14182	0.38272	-0.12382	0.44654	0.035996	0.82547
29 - T	0.17828	0.27105	-0.16999	0.29433	-0.031944	0.84487	0.041744	0.79814	0.10968	0.50048
30 - F	-0.17743	0.27337	0.052109	0.74947	-0.10846	0.5053	0.10422	0.52219	-0.17037	0.29324
31 - O	-0.15341	0.34463	-0.094606	0.56146	-0.19515	0.22753	0.30304	0.057329	-0.039011	0.81111
32 - T	0.12796	0.43134	0.20504	0.20436	0.08556	0.59963	0.035619	0.82727	-0.11439	0.48214
33 - O	-0.068128	0.67617	0.18281	0.25888	0.13324	0.41243	-0.060778	0.70948	-0.16566	0.30699
34 - C	-0.15802	0.33012	-0.05079	0.75562	-0.20768	0.19847	0.40877	0.0088238	0.022898	0.88847
35 - C	-0.23435	0.14553	0.24471	0.12804	-0.23331	0.14737	-0.01225	0.9402	0.042309	0.79547
36 - F	0.019223	0.90628	0.196	0.22548	-0.17056	0.2927	0.1454	0.37069	-0.32726	0.039276
37 - F	0.31209	0.049937	-0.038257	0.8147	0.31586	0.047093	0.10639	0.51352	0.095737	0.55677
38 - O	-0.19279	0.2333	0.10422	0.52219	-0.09291	0.56853	-0.022992	0.88801	-0.27317	0.088099
39 - F	0.11732	0.47095	0.013475	0.93423	0.10271	0.52826	0.049188	0.7631	-0.082545	0.6126
40 - C	0.0038634	0.98112	-0.076609	0.63847	0.12306	0.44933	-0.10101	0.53513	0.15058	0.35369
41 - F	0.1061	0.51465	0.082545	0.6126	-0.16707	0.30282	0.0043346	0.97882	-0.090649	0.57802
42 - F	-0.15171	0.35005	0.043817	0.78834	0.32792	0.038859	0.29786	0.061942	0.094889	0.56029
43 - O	-0.045324	0.78124	0.019317	0.90582	-0.051355	0.75298	0.17677	0.27519	0.040424	0.8044
44 - C	-0.078022	0.63227	-0.079341	0.6265	-0.066055	0.6855	-0.0004712	0.9977	0.28278	0.077053
45 - F	-0.02629	0.87207	0.19421	0.22983	0.23736	0.14027	-0.11204	0.49127	0.07953	0.62568
46 - O	0.23171	0.15025	-0.16339	0.31374	0.03185	0.84532	0.10196	0.5313	0.093004	0.56814
47 - O	0.029305	0.85754	-0.034865	0.83088	-0.30804	0.053147	0.17366	0.28386	0.24283	0.1311
48 - O	-0.066149	0.68508	0.01404	0.93148	0.26384	0.099956	-0.15011	0.35522	0.052109	0.74947
49 - C	0.16584	0.30643	-0.24132	0.13358	-0.13597	0.40282	-0.43741	0.0047657	-0.24782	0.12311
50 - C	-0.012533	0.93882	-0.19882	0.21873	-0.14587	0.36913	-0.22134	0.16987	0.048999	0.76398
51 - T	-0.11647	0.47418	-0.15472	0.34044	-0.24895	0.12136	-0.031096	0.84894	0.33348	0.03548
52 - F	0.07642	0.6393	-0.058328	0.72071	0.21616	0.18035	0.25461	0.11286	-0.050978	0.75474

Table C6: NPPC and C2 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.22353	0.11486	0.13957	0.32865	-0.27556	0.050328	0.27619	0.049778	0.094078	0.51141
2 -C	0.21449	0.13068	0.056846	0.69194	0.14634	0.30551	0.015074	0.91638	0.075189	0.60001
3 - T	0.051307	0.72068	-0.063566	0.65766	-0.26852	0.056749	0.027243	0.8495	0.098346	0.49235
4 -F	-0.01294	0.92819	-0.089083	0.53417	-0.044178	0.75822	-0.21186	0.13558	0.17304	0.22464
5 - O	-0.017072	0.90535	0.03596	0.80218	0.07469	0.60244	-0.042317	0.76811	0.095122	0.50671
6 - T	0.027152	0.84999	0.13903	0.33056	0.10688	0.45536	0.1151	0.42124	0.058435	0.68378
7 - O	-0.072919	0.61109	0.18189	0.20145	0.19138	0.17853	0.12323	0.38897	0.15442	0.27928
8 - C	-0.05276	0.7131	-0.19932	0.16083	0.0068106	0.96217	-0.036777	0.79778	-0.048083	0.73758
9 - F	0.22398	0.1141	0.22343	0.11501	0.004041	0.97755	-0.097801	0.49476	0.37186	0.0072122
10 - F	0.0014529	0.99193	0.011851	0.93422	-0.075643	0.5978	0.071557	0.61779	-0.33899	0.014959
11 - O	-0.13953	0.32881	0.087812	0.54005	-0.06965	0.62721	-0.11365	0.42716	-0.02697	0.85098
12 - F	0.19678	0.16635	0.061432	0.66848	0.027924	0.84578	0.33368	0.016717	0.19388	0.17282
13 - C	0.077596	0.58835	0.17749	0.21277	-0.15029	0.2925	-0.077687	0.58792	-0.17204	0.22737
14 - F	0.21558	0.12869	-0.17603	0.2166	-0.025109	0.86116	0.09603	0.50264	-0.21213	0.13507
15 - F	-0.012032	0.93322	0.22534	0.11186	-0.0009535	0.9947	0.064565	0.65262	-0.26575	0.059451
16 - O	0.06906	0.63014	0.029921	0.83489	0.14793	0.30023	0.029331	0.83811	-0.081092	0.57161
17 - C	-0.2203	0.12032	0.0034053	0.98108	-0.26521	0.059995	0.034507	0.81003	-0.064883	0.65102
18 - F	-0.24568	0.082251	-0.14634	0.30551	0.042862	0.76521	0.058299	0.68448	-0.14216	0.31967
19 - O	-0.038594	0.78802	0.032555	0.82059	-0.22012	0.12064	-0.0024518	0.98638	0.0084906	0.95285
20 - O	0.14679	0.304	0.11265	0.43126	0.287	0.041156	-0.19397	0.17261	0.094078	0.51141
21 - O	-0.041182	0.77417	0.030648	0.83094	-0.21699	0.12615	0.072238	0.61443	-0.15819	0.26757
22 - F	0.012986	0.92794	-0.43456	0.0014404	-0.048356	0.73614	-0.22906	0.10591	-0.20064	0.15802
23 - C	-0.036823	0.79754	-0.14843	0.29859	-0.070921	0.62092	0.15292	0.28403	0.036006	0.80194
24 - C	-0.17476	0.21999	0.13349	0.35038	-0.082772	0.56364	0.1057	0.46038	0.22911	0.10583
25 - T	0.13503	0.34479	0.062204	0.66456	-0.20527	0.14845	0.020841	0.88459	-0.18756	0.1875
26 - F	-0.27787	0.048348	0.26761	0.057624	-0.030148	0.83366	-0.13894	0.33088	0.16418	0.24963
27 - C	-0.21027	0.13861	-0.15197	0.28707	0.00036323	0.99798	0.10166	0.4778	0.044133	0.75846
28 - C	0.098073	0.49355	0.038412	0.789	0.14965	0.29457	-0.010488	0.94177	0.067698	0.63692
29 - T	-0.4554	0.00078532	-0.055439	0.69921	-0.011987	0.93347	0.068742	0.63172	0.0060842	0.9662
30 - F	-0.068243	0.6342	-0.26848	0.056793	-0.061704	0.66709	-0.028014	0.84528	-0.043633	0.76111
31 - O	0.13812	0.33376	0.20809	0.14284	0.2297	0.10491	-0.1309	0.35988	-0.15042	0.29206
32 - T	-0.39529	0.0040933	-0.12568	0.37953	0.19083	0.17979	0.077687	0.58792	-0.051534	0.71949
33 - O	0.11247	0.43201	0.032963	0.81838	-0.025199	0.86067	0.011033	0.93875	0.19147	0.17832
34 - C	-0.10207	0.47602	0.069559	0.62766	0.21372	0.1321	-0.11315	0.42921	-0.14956	0.29486
35 - C	0.11115	0.43745	-0.018707	0.89634	0.2697	0.055628	-0.10325	0.47091	-0.22239	0.11676
36 - F	-0.026198	0.8552	0.054485	0.70414	0.30167	0.031452	0.021113	0.88309	0.15605	0.27416
37 - F	0.089537	0.53208	0.089855	0.53062	0.12246	0.39197	0.28718	0.041022	-0.041318	0.77344
38 - O	0.14334	0.31563	0.12604	0.37814	-0.15456	0.27885	0.095576	0.50467	0.10879	0.44731
39 - F	-0.24119	0.088196	-0.2643	0.06091	-0.094577	0.50916	-0.11692	0.4139	-0.043724	0.76063
40 - C	-0.023973	0.86738	-0.18075	0.20432	-0.16822	0.238	-0.051579	0.71925	-0.15533	0.27642
41 - F	0.0061296	0.96595	-0.13476	0.34577	0.028151	0.84454	0.13467	0.3461	-0.15596	0.27444
42 - F	0.079276	0.58028	0.013076	0.92743	-0.034371	0.81076	0.15846	0.26673	-0.028786	0.84107
43 - O	0.23006	0.10435	-0.1314	0.35804	-0.10529	0.46213	-0.01739	0.9036	-0.031238	0.82774
44 - C	-0.082545	0.56471	-0.11406	0.42549	-0.21313	0.1332	-0.0073101	0.9594	-0.16845	0.23736
45 - F	-0.15964	0.26314	0.088493	0.5369	-0.12309	0.3895	0.062249	0.66433	-0.15397	0.28071
46 - O	-0.04881	0.73376	-0.1951	0.17007	-0.0070377	0.96091	-0.24296	0.085815	0.010125	0.94378
47 - O	-0.0242	0.86614	0.093669	0.51325	-0.013757	0.92367	-0.10552	0.46116	0.088266	0.53795
48 - O	0.11719	0.4128	0.011533	0.93598	0.16813	0.23826	0.0083544	0.9536	-0.000454	0.99748
49 - C	0.1102	0.44142	-0.14103	0.32359	0.018661	0.89659	-0.20718	0.14463	-0.070831	0.62137
50 - C	-0.14947	0.29516	-0.12799	0.37074	0.0091263	0.94932	-0.33754	0.015423	-0.16346	0.25176
51 - T	0.069877	0.62608	-0.0033145	0.98158	0.10697	0.45498	-0.13866	0.33184	0.079911	0.57724
52 - F	-0.11383	0.42642	0.024836	0.86266	-0.17649	0.21539	0.26039	0.064971	0.11337	0.42828

Table C7: PPC and C2 correlation coefficients (Rho) and P-values, for controls in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.030719	0.85075	-0.14153	0.38368	-0.4066	0.0092256	-0.034017	0.83493	-0.077362	0.63516
2 -C	0.30276	0.057573	0.16405	0.31176	-0.04344	0.79012	0.16151	0.31943	-0.227	0.15895
3 - T	0.32	0.044117	0.24123	0.13374	-0.46201	0.0026896	0.024971	0.87844	-0.048999	0.76398
4 -F	0.14097	0.3856	-0.25112	0.11804	-0.21522	0.1823	-0.3788	0.015936	-0.08688	0.59399
5 - O	0.49715	0.0011002	0.41169	0.0083061	0.16594	0.30616	-0.078587	0.62979	-0.32321	0.041923
6 - T	0.25649	0.11013	0.15237	0.34793	-0.024123	0.88254	-0.20919	0.19516	-0.33696	0.033487
7 - O	0.0034865	0.98297	0.038634	0.8129	-0.023934	0.88345	0.22926	0.15473	-0.20881	0.19598
8 - C	0.22069	0.17118	0.15972	0.32489	-0.086785	0.59439	-0.0080095	0.96088	0.23981	0.1361
9 - F	-0.07463	0.64719	0.12174	0.45425	0.14002	0.38881	0.25668	0.10986	-0.011967	0.94158
10 - F	0.16189	0.31828	0.047586	0.77061	0.076891	0.63723	0.085466	0.60003	0.080001	0.62363
11 - O	0.34912	0.027244	0.3657	0.020308	-0.10139	0.5336	-0.037786	0.81694	-0.11722	0.47131
12 - F	0.32047	0.043789	0.2318	0.15008	0.061343	0.7069	-0.14031	0.38785	-0.10799	0.50717
13 - C	0.27034	0.091571	0.16509	0.30867	-0.19543	0.22685	0.018846	0.90811	-0.12288	0.45003
14 - F	-0.20429	0.20607	-0.082357	0.61341	0.15831	0.32925	-0.060495	0.71078	-0.18997	0.24036
15 - F	0.087916	0.58958	0.055218	0.73505	0.066526	0.68338	-0.13757	0.39725	0.17272	0.28652
16 - O	-0.20127	0.21299	-0.038917	0.81156	-0.086974	0.59359	-0.1503	0.35461	-0.10139	0.5336
17 - C	0.24773	0.12326	0.33065	0.037167	0.025725	0.8748	0.019034	0.9072	0.047869	0.76928
18 - F	0.10921	0.50233	0.0076326	0.96272	0.038257	0.8147	-0.38757	0.013478	0.089518	0.58279
19 - O	0.098281	0.54628	-0.0004712	0.9977	-0.010836	0.94709	-0.06728	0.67998	-0.22841	0.1563
20 - O	0.23529	0.14387	0.27091	0.090868	0.096962	0.55171	-0.1567	0.33423	0.14803	0.36198
21 - O	0.54794	0.00025232	0.42403	0.0063959	-0.011684	0.94295	-0.047869	0.76928	-0.11157	0.4931
22 - F	-0.17621	0.27675	-0.072557	0.65637	-0.064076	0.69446	0.14606	0.3685	0.10158	0.53283
23 - C	-0.11562	0.47743	-0.15736	0.33217	-0.15378	0.34343	0.10695	0.51128	0.08132	0.6179
24 - C	-0.13041	0.4225	-0.03788	0.81649	-0.0060307	0.97054	0.20429	0.20607	0.27327	0.087985
25 - T	-0.081414	0.61749	-0.24029	0.13531	-0.20825	0.19723	-0.042403	0.79502	-0.16528	0.30811
26 - F	0.33979	0.031939	0.36118	0.022034	0.0097056	0.9526	0.048717	0.76531	-0.073311	0.65303
27 - C	0.12693	0.43512	0.15312	0.34553	-0.069636	0.6694	-0.27345	0.087758	0.14803	0.36198
28 - C	0.26356	0.10033	0.10799	0.50717	0.040801	0.80261	0.02139	0.89577	-0.053993	0.74072
29 - T	0.2564	0.11026	0.19581	0.22593	-0.054465	0.73854	-0.33169	0.036541	0.18422	0.25515
30 - F	0.23124	0.1511	0.029682	0.85573	-0.013475	0.93423	0.21258	0.18785	0.060307	0.71164
31 - O	0.45145	0.0034555	0.41885	0.0071459	0.058045	0.72201	-0.097716	0.54861	-0.26582	0.097344
32 - T	0.27308	0.088213	0.1176	0.46987	-0.3543	0.024892	-0.46691	0.0023877	0.27826	0.082108
33 - O	0.030248	0.85301	-0.068599	0.67405	-0.10808	0.50679	-0.032038	0.84441	-0.40943	0.0087045
34 - C	0.31774	0.045721	0.24613	0.12578	0.13955	0.39043	0.0294	0.85709	0.12071	0.45813
35 - C	-0.18309	0.25813	-0.1077	0.50829	0.028457	0.86162	0.19081	0.23823	-0.12504	0.44202
36 - F	-0.19374	0.23098	-0.012627	0.93836	0.06238	0.70217	0.14492	0.37226	0.08801	0.58918
37 - F	0.21739	0.17783	0.16886	0.2976	0.00245	0.98803	0.11835	0.46701	-0.33875	0.0325
38 - O	0.43176	0.0054042	0.49602	0.001134	0.012344	0.93974	0.01159	0.94341	-0.097716	0.54861
39 - F	0.15538	0.33836	0.064359	0.69318	-0.28919	0.070312	-0.053899	0.74116	0.21465	0.18348
40 - C	0.052297	0.7486	0.055124	0.73549	-0.061249	0.70733	0.0068787	0.9664	-0.060684	0.70991
41 - F	-0.26365	0.10021	-0.29541	0.064223	-0.010177	0.9503	0.276	0.08473	0.042686	0.79369
42 - F	0.12702	0.43477	0.059365	0.71596	-0.086691	0.5948	0.18365	0.25664	0.054936	0.73636
43 - O	-0.28523	0.074418	-0.081414	0.61749	-0.25725	0.10905	0.017338	0.91543	-0.14606	0.3685
44 - C	0.26893	0.093346	0.29268	0.066845	0.024971	0.87844	-0.015359	0.92506	0.047492	0.77105
45 - F	0.063793	0.69575	0.20627	0.20161	-0.079341	0.6265	-0.049942	0.75958	0.16782	0.30062
46 - O	0.018375	0.9104	-0.025065	0.87799	0.17074	0.29216	0.00094229	0.9954	-0.079718	0.62486
47 - O	0.31209	0.049937	0.24594	0.12608	0.10874	0.50419	0.20288	0.20929	-0.041461	0.79948
48 - O	0.22087	0.17081	0.22172	0.16913	0.19741	0.22208	0.024877	0.8789	0.24302	0.13079
49 - C	0.014606	0.92872	-0.024405	0.88117	-0.057197	0.72592	0.032038	0.84441	-0.089518	0.58279
50 - C	-0.062663	0.70089	-0.11147	0.49347	-0.22973	0.15386	0.061249	0.70733	0.064076	0.69446
51 - T	-0.057857	0.72288	-0.065489	0.68806	0.062097	0.70346	0.16754	0.30144	-0.19741	0.22208
52 - F	0.32698	0.039457	0.37192	0.018121	0.15887	0.3275	-0.080378	0.62199	0.057857	0.72288

Table C8: PPC and C2 correlation coefficients (Rho) and P-values, for controls in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.19201	0.17706	0.060161	0.67495	0.022702	0.87436	0.074781	0.602	0.21281	0.13379
2 -C	0.049581	0.72971	0.0075825	0.95788	-0.019251	0.89333	-0.15542	0.27614	-0.017526	0.90285
3 - T	0.23415	0.098171	0.087721	0.54047	0.14824	0.29918	0.036914	0.79705	0.11378	0.4266
4 -F	-0.06116	0.66986	-0.2208	0.11946	0.0023156	0.98713	-0.1329	0.35253	-0.124	0.38598
5 - O	0.0078095	0.95662	-0.14761	0.30128	-0.13535	0.34364	0.083725	0.55914	-0.25658	0.069144
6 - T	0.12273	0.39091	-0.14084	0.32422	0.10438	0.46602	0.30307	0.03063	0.25912	0.066339
7 - O	-0.10965	0.4437	-0.063657	0.6572	0.13181	0.35653	0.012849	0.92869	-0.16881	0.23633
8 - C	0.025744	0.85768	-0.063702	0.65697	0.13213	0.35536	0.052578	0.71405	0.26448	0.060726
9 - F	-0.015301	0.91513	-0.13635	0.34006	0.0092171	0.94882	0.19551	0.16916	0.0064474	0.96418
10 - F	-0.078004	0.58638	-0.15279	0.28446	-0.25467	0.071309	0.017526	0.90285	-0.20446	0.15011
11 - O	-0.048356	0.73614	-0.12918	0.3663	-0.30748	0.028173	-0.032691	0.81985	-0.21136	0.13653
12 - F	0.17862	0.20981	-0.07864	0.58333	0.090718	0.52667	0.1615	0.25754	0.37227	0.0071438
13 - C	0.30321	0.030551	0.11796	0.40971	0.12327	0.38879	0.12046	0.3998	0.087131	0.54321
14 - F	-0.062749	0.66179	-0.12168	0.39498	0.071012	0.62047	-0.011623	0.93548	-0.050081	0.72709
15 - F	-0.0044496	0.97528	-0.07074	0.62182	0.12468	0.38336	0.06965	0.62721	-0.19851	0.16259
16 - O	-0.10057	0.48256	-0.12586	0.37883	-0.0070377	0.96091	0.049173	0.73185	0.17294	0.22489
17 - C	0.077096	0.59076	-0.035779	0.80316	-0.046903	0.7438	0.082136	0.56665	-0.033781	0.81395
18 - F	0.0015437	0.99142	-0.0069469	0.96141	0.21776	0.12477	0.2984	0.033431	0.078822	0.58246
19 - O	0.17844	0.21028	0.21394	0.13168	0.09939	0.48774	-0.08872	0.53585	-0.080048	0.57658
20 - O	0.017571	0.9026	-0.041681	0.7715	0.11928	0.40447	-0.12645	0.37658	0.081501	0.56966
21 - O	0.33722	0.015527	0.10234	0.47484	-0.064519	0.65285	0.11079	0.43896	-0.12382	0.38668
22 - F	-0.093714	0.51304	-0.18638	0.19034	-0.17962	0.20723	0.036142	0.80121	-0.039411	0.78364
23 - C	-0.19092	0.17958	-0.19528	0.16966	-0.14629	0.30566	-0.19333	0.17405	0.065064	0.65011
24 - C	-0.21295	0.13354	-0.24319	0.085514	-0.19024	0.18116	0.072465	0.61332	-0.02134	0.88184
25 - T	0.020704	0.88534	0.18371	0.19691	0.017708	0.90184	-0.014348	0.9204	-0.12577	0.37918
26 - F	0.12986	0.36376	-0.038548	0.78826	-0.14743	0.30189	0.026198	0.8552	-0.024382	0.86514
27 - C	0.23292	0.099994	0.25858	0.066932	0.16804	0.23851	-0.1339	0.34889	0.054712	0.70296
28 - C	0.013757	0.92367	0.030058	0.83415	-0.04209	0.76932	-0.23719	0.093757	0.13054	0.36123
29 - T	0.024609	0.8639	0.14003	0.32707	-0.16632	0.24344	-0.074872	0.60155	-0.22852	0.10676
30 - F	-0.0009535	0.9947	0.089719	0.53125	0.0168	0.90685	0.19338	0.17395	-0.11465	0.42308
31 - O	0.03201	0.82355	0.13331	0.35104	0.24178	0.087396	0.29399	0.03626	0.041182	0.77417
32 - T	0.015437	0.91438	0.12563	0.3797	-0.051307	0.72068	-0.10634	0.45768	-0.12059	0.39926
33 - O	-0.11746	0.41171	-0.15052	0.29176	0.13948	0.32897	-0.12259	0.39144	0.14143	0.32218
34 - C	-0.13199	0.35586	-0.12023	0.40069	0.25921	0.066241	-0.059343	0.67913	0.062431	0.6634
35 - C	-0.13817	0.3336	-0.083635	0.55957	0.099208	0.48854	-0.020341	0.88733	0.23024	0.10407
36 - F	0.19106	0.17926	0.010942	0.93925	-0.085996	0.54849	-0.21635	0.12729	0.15424	0.27985
37 - F	0.045995	0.74859	-0.083226	0.56149	0.12246	0.39197	0.29908	0.03301	-0.1665	0.24292
38 - O	-0.082681	0.56407	0.10089	0.48117	-0.0091717	0.94907	0.14511	0.30963	-0.003814	0.97881
39 - F	0.07755	0.58857	0.074145	0.60509	-0.084588	0.55508	0.02865	0.84182	-0.26875	0.056532
40 - C	0.27152	0.053939	0.28614	0.041796	0.31165	0.025997	-0.061795	0.66663	-0.041091	0.77465
41 - F	-0.078413	0.58442	0.053441	0.70956	0.16459	0.24843	-0.10988	0.44275	0.14611	0.30627
42 - F	0.15792	0.2684	0.058435	0.68378	0.34802	0.01233	0.18466	0.19455	-0.053395	0.70979
43 - O	-0.36323	0.0087968	-0.38566	0.0051911	-0.20455	0.14992	-0.16922	0.23518	-0.048764	0.734
44 - C	0.0077641	0.95688	-0.0097165	0.94605	0.17749	0.21277	-0.16718	0.24097	-0.085088	0.55274
45 - F	0.099208	0.48854	-0.13912	0.33024	-0.084134	0.55721	0.25744	0.068182	0.037186	0.79558
46 - O	0.091353	0.52376	0.093397	0.51448	-0.0023156	0.98713	-0.20323	0.15262	0.023701	0.86888
47 - O	0.059298	0.67936	-0.023202	0.87162	-0.16795	0.23877	-0.14175	0.32108	-0.027697	0.84702
48 - O	0.1852	0.19322	0.12295	0.39003	0.13576	0.34217	-0.090218	0.52896	0.054349	0.70485
49 - C	-0.072965	0.61087	-0.10616	0.45845	-0.13249	0.35403	-0.10216	0.47563	0.17022	0.23239
50 - C	-0.16677	0.24214	-0.15183	0.28751	-0.15801	0.26812	-0.038503	0.78851	-0.0040864	0.9773
51 - T	0.034416	0.81052	-0.074463	0.60354	-0.014711	0.91839	-0.21217	0.13498	0.049354	0.7309
52 - F	0.17862	0.20981	0.054939	0.70179	-0.2322	0.10109	0.055166	0.70061	-0.12577	0.37918

Table C9: Local NC and C2 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.49211	0.001462	-0.03502	0.83238	0.25692	0.11437	0.010963	0.94719	0.027204	0.86942
2 -C	-0.086789	0.59933	0.002233	0.98923	-0.16657	0.31081	0.2021	0.21726	0.14597	0.37525
3 - T	0.31772	0.048723	-0.009136	0.95598	0.30625	0.057941	0.12729	0.43999	0.1417	0.38951
4 -F	-0.058875	0.72183	-0.032787	0.84293	0.028016	0.86556	-0.081105	0.62355	-0.07806	0.63668
5 - O	-0.27864	0.085853	-0.10963	0.50646	-0.040197	0.80804	0.096838	0.55757	0.32158	0.045903
6 - T	0.005583	0.97309	-0.1076	0.51441	-0.14516	0.37794	-0.085774	0.60363	-0.019896	0.90431
7 - O	0.12181	0.46008	0.024159	0.88393	0.096229	0.56006	0.13927	0.39779	-0.02355	0.88684
8 - C	-0.32726	0.041989	-0.00538	0.97407	-0.16424	0.31774	-0.30361	0.060247	-0.093083	0.57302
9 - F	-0.20007	0.22201	-0.073898	0.65481	0.09156	0.57934	0.2289	0.16102	0.020302	0.90237
10 - F	-0.0808	0.62486	-0.03431	0.83573	0.023347	0.88781	-0.028219	0.86459	-0.13237	0.42182
11 - O	0.058875	0.72183	0.27813	0.08645	0.031366	0.84966	-0.13125	0.42578	0.049739	0.76364
12 - F	0.011369	0.94524	0.008019	0.96136	-0.083135	0.61485	0.054713	0.74079	0.16231	0.32354
13 - C	0.42349	0.007223	-0.074101	0.65392	0.11947	0.46879	0.08547	0.60492	0.068924	0.67674
14 - F	-0.3296	0.040461	-0.10963	0.50646	-0.082424	0.61789	0.00335	0.98385	0.081612	0.62137
15 - F	0.16048	0.32908	0.21246	0.19412	0.32026	0.046853	-0.032889	0.84245	-0.061108	0.71172
16 - O	0.12171	0.46046	0.14658	0.37324	0.001523	0.99266	-0.068721	0.67764	-0.073796	0.65526
17 - C	0.052987	0.74869	-0.01411	0.93206	-0.2963	0.067015	-0.21296	0.19303	-0.4581	0.003361
18 - F	0.097854	0.55342	0.015531	0.92524	0.098361	0.55136	-0.11998	0.46689	0.3163	0.049797
19 - O	0.1686	0.30487	0.22281	0.17276	0.02893	0.86122	-0.044257	0.78906	-0.005684	0.9726
20 - O	0.11176	0.49818	0.25641	0.11511	0.000812	0.99609	0.085571	0.60449	-0.07268	0.66016
21 - O	0.12293	0.45595	0.15246	0.35414	0.036035	0.82759	0.089936	0.58611	-0.031772	0.84774
22 - F	-0.17662	0.2821	-0.32422	0.04405	-0.02426	0.88345	-0.11054	0.5029	0.042227	0.79854
23 - C	0.071563	0.66507	0.059991	0.71677	0.29529	0.068001	-0.085267	0.60578	-0.046694	0.77774
24 - C	0.27641	0.088501	0.025884	0.87571	0.33579	0.036629	0.10384	0.52928	-0.014617	0.92962
25 - T	0.079582	0.6301	0.21946	0.17948	0.076638	0.64285	-0.023753	0.88587	-0.033904	0.83765
26 - F	0.13978	0.39606	-0.11318	0.49269	-0.1686	0.30487	-0.11968	0.46803	-0.012993	0.93743
27 - C	0.024971	0.88006	0.12557	0.44626	0.096737	0.55798	0.11206	0.497	-0.16627	0.31171
28 - C	-0.062833	0.70394	0.051566	0.75522	-0.18495	0.25967	0.14719	0.37124	0.23296	0.15351
29 - T	-0.027407	0.86846	0.11409	0.48919	0.013298	0.93596	0.061412	0.71035	-0.087195	0.59762
30 - F	-0.23306	0.15333	-0.10811	0.51242	0.13673	0.40653	-0.18119	0.26964	0.10191	0.537
31 - O	0.032584	0.84389	0.21164	0.19587	0.08953	0.58781	0.12435	0.45072	-0.01076	0.94817
32 - T	0.023753	0.88587	0.38197	0.016413	0.098463	0.55095	0.12912	0.4334	0.015429	0.92572
33 - O	0.089225	0.58909	-0.019388	0.90674	-0.02223	0.89314	0.009339	0.955	0.12871	0.43486
34 - C	-0.15409	0.34897	-0.1344	0.41467	-0.0269	0.87087	-0.15541	0.34481	0.24352	0.13521
35 - C	-0.10892	0.50923	-0.13937	0.39745	-0.10161	0.53822	-0.17815	0.27791	-0.15541	0.34481
36 - F	-0.19662	0.23026	0.017053	0.91793	0.10019	0.54395	0.022129	0.89363	0.18535	0.25861
37 - F	-0.13836	0.40093	0.034614	0.8343	0.051566	0.75522	-0.034208	0.83621	0.009339	0.955
38 - O	0.12222	0.45858	0.097041	0.55674	0.20961	0.20029	0.10882	0.50963	-0.009542	0.95403
39 - F	0.057758	0.7269	0.14475	0.37929	0.061311	0.7108	0.065473	0.69211	0.14891	0.36559
40 - C	0.14729	0.3709	0.016241	0.92183	0.042024	0.79948	0.12567	0.44589	0.12597	0.44478
41 - F	-0.27346	0.092088	0.19327	0.23845	-0.20291	0.21538	0.058672	0.72275	0.028219	0.86459
42 - F	0.039994	0.80899	0.17733	0.28014	0.013805	0.93352	-0.20342	0.21421	0.024057	0.88442
43 - O	0.019997	0.90383	0.038268	0.81709	0.14891	0.36559	-0.13907	0.39849	-0.19662	0.23026
44 - C	-0.16586	0.31291	-0.027813	0.86652	-0.15186	0.35608	-0.15937	0.33251	-0.25742	0.11363
45 - F	0.007004	0.96625	0.027509	0.86797	-0.27976	0.084553	-0.010049	0.95158	0.21652	0.18553
46 - O	0.2423	0.13723	0.25864	0.11187	0.2359	0.14824	0.2623	0.10672	0.2421	0.13757
47 - O	0.083541	0.61312	-0.032686	0.84341	0.20088	0.2201	-0.065574	0.69165	-0.1008	0.54149
48 - O	-0.022433	0.89217	0.34076	0.033769	-0.024159	0.88393	0.011166	0.94621	0.13166	0.42433
49 - C	0.05522	0.73847	-0.21591	0.1868	-0.21713	0.18427	-0.4171	0.008251	-0.23499	0.14986
50 - C	0.12922	0.43303	-0.23651	0.14716	-0.24717	0.12926	-0.34066	0.033826	-0.18566	0.25781
51 - T	0.31721	0.049104	0.32909	0.04079	0.22829	0.16216	0.2286	0.16159	0.29904	0.06441
52 - F	0.043242	0.7938	0.027712	0.86701	-0.17581	0.28436	-0.33163	0.039171	0.078567	0.63449

Table C10: Local NC and C2 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.11153	0.51726	-0.23015	0.17689	-0.3147	0.061567	-0.17904	0.29612	-0.11385	0.50851
2 -C	-0.031883	0.85355	0.024397	0.88768	0.10223	0.55297	0.13179	0.44355	0.31729	0.059352
3 - T	-0.25933	0.12668	-0.32619	0.052191	-0.33019	0.049206	-0.22073	0.19578	-0.22047	0.19631
4 -F	0.079515	0.64481	0.024268	0.88828	-0.066994	0.69786	-0.18588	0.27774	-0.33936	0.042885
5 - O	-0.065058	0.7062	0.013166	0.93925	-0.031496	0.85531	-0.19659	0.25048	-0.19556	0.25303
6 - T	-0.096296	0.57638	-0.11398	0.50803	-0.10778	0.53151	-0.069576	0.68679	-0.18743	0.27368
7 - O	0.13463	0.43371	0.21118	0.21632	0.29534	0.080333	0.089454	0.60388	0.1438	0.40276
8 - C	-0.32955	0.049678	-0.23093	0.17539	-0.055635	0.74724	-0.073964	0.66813	-0.081709	0.63568
9 - F	0.19078	0.26503	0.23906	0.16026	0.31858	0.058269	0.14741	0.39091	0.087002	0.61388
10 - F	-0.1904	0.26602	0.009681	0.95531	-0.26359	0.12035	-0.32193	0.055524	-0.2104	0.21805
11 - O	0.062347	0.71793	0.20189	0.23769	0.17659	0.3029	-0.10959	0.52461	-0.14535	0.39766
12 - F	-0.019879	0.90839	0.019621	0.90957	0.010198	0.95293	-0.057829	0.73762	-0.32322	0.054497
13 - C	-0.12573	0.465	-0.3178	0.058917	-0.18691	0.27503	-0.06609	0.70174	-0.083775	0.62713
14 - F	-0.12069	0.4832	0.092036	0.59344	0.064929	0.70675	0.19427	0.25623	0.16536	0.33516
15 - F	-0.15722	0.35979	-0.053311	0.75748	0.014845	0.93152	-0.20034	0.24139	0.024913	0.88532
16 - O	0.11837	0.49172	0.17968	0.29435	0.20963	0.21979	0.077321	0.65399	0.085324	0.62076
17 - C	-0.093714	0.58669	-0.10791	0.53101	0.15593	0.3638	-0.13321	0.43861	-0.12805	0.45672
18 - F	0.14987	0.38299	0.20847	0.22242	0.29224	0.083708	0.13592	0.42927	0.13786	0.42266
19 - O	0.48703	0.002592	0.57068	0.000279	0.31419	0.062018	0.36505	0.028586	0.36518	0.028526
20 - O	-0.044921	0.79475	0.034981	0.83949	0.24397	0.1516	0.31729	0.059352	0.38531	0.020303
21 - O	0.03666	0.8319	-0.016006	0.92618	0.13141	0.44491	0.27934	0.098965	0.23661	0.16472
22 - F	0.060798	0.72466	0.081064	0.63836	0.099523	0.5636	0.18549	0.27876	0.11256	0.51336
23 - C	-0.1327	0.44041	-0.020266	0.90661	-0.11282	0.51239	0.039499	0.81909	0.04221	0.8069
24 - C	-0.14651	0.39386	-0.081838	0.63514	-0.053053	0.75861	0.009294	0.9571	-0.002453	0.98867
25 - T	0.32632	0.052092	0.47657	0.003299	0.22822	0.18066	0.29715	0.078413	0.26372	0.12016
26 - F	0.23274	0.17195	0.009423	0.9565	-0.1407	0.41308	-0.35833	0.031876	-0.14974	0.38341
27 - C	0.20666	0.22654	0.060282	0.72691	0.11876	0.4903	0.1145	0.5061	0.29418	0.081586
28 - C	-0.049181	0.77577	-0.017297	0.92024	0.15826	0.35661	0.12224	0.47756	0.27637	0.10276
29 - T	0.27107	0.10979	0.21402	0.21007	0.13102	0.44626	0.19014	0.26668	0.12663	0.46177
30 - F	0.034852	0.84008	0.084936	0.62235	0.16561	0.3344	0.06338	0.71345	-0.058604	0.73423
31 - O	0.1274	0.45901	0.31922	0.057733	0.2774	0.10143	0.21066	0.21748	0.29328	0.082571
32 - T	0.16639	0.33211	0.34388	0.04002	0.35678	0.032678	0.054989	0.75008	0.030076	0.86176
33 - O	0.17568	0.30542	0.27417	0.10563	0.13812	0.42179	-0.067381	0.69619	0.019879	0.90839
34 - C	-0.030205	0.86118	-0.011617	0.94639	-0.19104	0.26437	-0.27701	0.10192	-0.09565	0.57895
35 - C	0.12895	0.45352	0.27998	0.098156	0.16187	0.34559	0.13012	0.44943	0.18872	0.27033
36 - F	0.02117	0.90246	0.069447	0.68735	0.082613	0.63194	-0.069059	0.689	-0.10056	0.55954
37 - F	-0.021428	0.90128	0.010456	0.95174	-0.22538	0.18629	-0.18885	0.27	-0.1842	0.28218
38 - O	-0.018717	0.91372	0.15438	0.36865	0.12379	0.47195	0	1	0.05486	0.75065
39 - F	0.21608	0.2056	0.22628	0.18449	0.21738	0.20284	0.20266	0.23586	0.14586	0.39597
40 - C	0.08868	0.60703	0.10443	0.54444	0.047761	0.78208	-0.082097	0.63407	0.011617	0.94639
41 - F	-0.12173	0.47943	0.16058	0.3495	0.21182	0.21489	0.11346	0.50997	0.1509	0.37968
42 - F	0.050213	0.77118	0.0071	0.96722	-0.035885	0.8354	0.049439	0.77462	0.029947	0.86235
43 - O	0.14147	0.41048	0.082871	0.63087	0.14328	0.40447	-0.054215	0.75349	0.037692	0.82724
44 - C	-0.22602	0.185	-0.10275	0.55096	-0.13954	0.41698	-0.030205	0.86118	-0.21712	0.20339
45 - F	-0.19027	0.26635	-0.097199	0.57279	-0.40997	0.01302	-0.34233	0.040984	-0.082226	0.63354
46 - O	0.1731	0.31269	0.010198	0.95293	0.017943	0.91728	-0.029818	0.86294	0.046083	0.78956
47 - O	-0.073964	0.66813	0.20563	0.22892	-0.17968	0.29435	-0.11372	0.509	-0.32568	0.052586
48 - O	0.023751	0.89064	-0.10636	0.53696	0.023106	0.89359	-0.24074	0.15726	-0.036143	0.83423
49 - C	0.25765	0.12925	0.076159	0.65887	0.21996	0.19739	0.21557	0.20671	0.15864	0.35542
50 - C	0.30257	0.072868	0.075384	0.66214	0.21673	0.20421	0.2561	0.13165	0.16949	0.32306
51 - T	0.20485	0.23072	0.062863	0.71569	0.041952	0.80806	0.035627	0.83657	0.067639	0.69509
52 - F	0.27585	0.10343	0.19582	0.25239	0.33265	0.047446	0.01975	0.90898	0.049826	0.7729

Table C11: Remote NC and C2 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.059991	0.71677	0.10689	0.51721	-0.03502	0.83238	-0.077958	0.63712	-0.11663	0.47951
2 -C	-0.022636	0.8912	0.15226	0.35478	-0.008933	0.95696	0.085774	0.60363	-0.005481	0.97358
3 - T	-0.12455	0.44997	0.025681	0.87667	0.063036	0.70303	0.097143	0.55632	0.11744	0.47644
4 -F	-0.2289	0.16102	0.23631	0.14752	0.025174	0.87909	0.052886	0.74916	0.1748	0.28719
5 - O	0.11389	0.48997	-0.15561	0.34417	-0.2625	0.10644	0.12364	0.45333	0.011978	0.94231
6 - T	-0.031163	0.85062	-0.10333	0.53131	-0.057758	0.7269	0.14708	0.37157	0.079582	0.6301
7 - O	0.17185	0.29551	-0.006598	0.9682	0.047201	0.77538	0.12912	0.4334	0.21388	0.19108
8 - C	0.13561	0.41041	0.024159	0.88393	-0.050551	0.7599	0.028828	0.8617	-0.056946	0.73059
9 - F	0.097752	0.55384	0.028219	0.86459	0.07136	0.66596	-0.14911	0.36493	0.04781	0.77256
10 - F	0.057961	0.72598	0.10608	0.52041	0.041009	0.80423	-0.041415	0.80233	0.024362	0.88296
11 - O	0.10618	0.52001	-0.004162	0.97994	-0.12841	0.43595	0.12364	0.45333	0.02426	0.88345
12 - F	-0.155	0.34609	-0.034919	0.83286	-0.035832	0.82855	0.012891	0.93791	0.034513	0.83478
13 - C	0.050754	0.75896	-0.062935	0.70349	0.17317	0.29176	0.21692	0.18469	0.29326	0.070007
14 - F	0.053698	0.74543	0.1347	0.4136	0.25773	0.11318	0.030452	0.85399	0.000609	0.99706
15 - F	0.36756	0.021337	0.19906	0.22442	0.15734	0.33878	0.025072	0.87958	0.10597	0.52082
16 - O	0.053393	0.74683	0.13632	0.40794	0.007715	0.96282	-0.001624	0.99217	0.10191	0.537
17 - C	-0.005786	0.97211	-0.086383	0.60105	-0.15338	0.35123	-0.12232	0.4582	-0.18505	0.2594
18 - F	0.34827	0.0298	0.15419	0.34865	0.10202	0.53659	0.042329	0.79806	0.17967	0.27375
19 - O	0.18952	0.24788	0.35091	0.0285	0.10608	0.52041	0.18556	0.25808	0.0471	0.77585
20 - O	-0.086992	0.59848	0.18302	0.26476	0.075116	0.64948	0.10019	0.54395	0.057656	0.72736
21 - O	-0.035223	0.83142	0.13409	0.41573	0.11186	0.49778	0.10861	0.51043	-0.018576	0.91063
22 - F	-0.10161	0.53822	0.13511	0.41218	0.22159	0.17518	0.050145	0.76177	-0.027915	0.86604
23 - C	0.036746	0.82425	-0.083338	0.61399	-0.11399	0.48958	0.065777	0.69075	-0.01614	0.92231
24 - C	-0.031975	0.84677	-0.24037	0.14049	-0.010861	0.94768	-0.095823	0.56172	-0.070345	0.67044
25 - T	0.080293	0.62704	0.25671	0.11466	0.11257	0.49504	0.081511	0.6218	-0.001015	0.99511
26 - F	-0.36309	0.023093	-0.21936	0.17968	-0.06801	0.68079	-0.065574	0.69165	-0.27174	0.094242
27 - C	0.058164	0.72505	-0.19012	0.24633	-0.12323	0.45483	-0.047607	0.7735	-0.041415	0.80233
28 - C	0.01614	0.92231	0.19155	0.24275	0.038674	0.81518	0.092271	0.57638	-0.016546	0.92037
29 - T	-0.14191	0.38882	-0.2153	0.18808	-0.12851	0.43559	-0.021926	0.8946	0.041923	0.79996
30 - F	-0.070548	0.66955	-0.28574	0.077835	-0.10618	0.52001	0.054307	0.74264	0.16678	0.31022
31 - O	-0.11369	0.49074	0.018068	0.91306	-0.24433	0.13387	0.038573	0.81565	-0.016241	0.92183
32 - T	-0.10912	0.50844	-0.082932	0.61572	-0.082932	0.61572	0.059281	0.71999	0.13815	0.40163
33 - O	0.20728	0.20546	0.26128	0.10813	0.072984	0.65882	0.11166	0.49857	0.29285	0.070413
34 - C	0.088007	0.5942	0.1344	0.41467	-0.005278	0.97456	0.029031	0.86074	0.040096	0.80851
35 - C	-0.12922	0.43303	-0.33264	0.038538	-0.21347	0.19194	-0.38045	0.016883	-0.34289	0.032601
36 - F	-0.30584	0.058291	-0.30848	0.056045	-0.303	0.06079	-0.11115	0.50054	-0.01482	0.92865
37 - F	-0.011572	0.94426	0.032686	0.84341	-0.11998	0.46689	0.056032	0.73476	0.23093	0.15723
38 - O	-0.12293	0.45595	-0.22403	0.17036	-0.12252	0.45745	0.003553	0.98287	-0.077856	0.63756
39 - F	-0.04375	0.79143	-0.009339	0.955	-0.021824	0.89508	-0.033701	0.83861	0.12293	0.45595
40 - C	0.10222	0.53578	0.07877	0.63361	0.15297	0.35252	0.17165	0.29609	0.044968	0.78576
41 - F	0.099376	0.54724	0.17297	0.29234	0.2825	0.081425	-0.008019	0.96136	-0.10537	0.52323
42 - F	-0.015734	0.92426	0.092068	0.57723	0.094098	0.56882	0.002944	0.98581	0.15906	0.33344
43 - O	0.21134	0.19652	0.11379	0.49035	0.027407	0.86846	0.17398	0.28947	0.14323	0.38438
44 - C	0.09156	0.57934	-0.21083	0.19763	-0.31386	0.051681	-0.34249	0.032821	-0.229	0.16083
45 - F	-0.21256	0.1939	0.010252	0.95061	0.008527	0.95891	0.1209	0.46348	0.007207	0.96527
46 - O	0.022636	0.8912	0.19317	0.2387	0.15175	0.35641	0.12607	0.44441	0.047912	0.77209
47 - O	-0.25286	0.12041	-0.3569	0.025724	-0.053393	0.74683	0.093184	0.5726	-0.076334	0.64417
48 - O	-0.02152	0.89654	0.038877	0.81422	0.044866	0.78623	0.068924	0.67674	0.14069	0.39295
49 - C	0.018271	0.91209	-0.12922	0.43303	-0.061006	0.71218	-0.27894	0.085497	-0.20393	0.21304
50 - C	0.13216	0.42253	-0.2018	0.21797	-0.18657	0.25543	-0.39679	0.012385	-0.28402	0.079726
51 - T	0.0673	0.68395	0.18282	0.2653	0.16059	0.32878	0.229	0.16083	0.10181	0.53741
52 - F	-0.053596	0.7459	-0.19439	0.2357	0.21134	0.19652	-0.048927	0.7674	0.059585	0.71861

Table C12: Remote NC and C2 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.045695	0.79129	0.007874	0.96365	-0.15503	0.36662	-0.01691	0.92202	-0.056022	0.74554
2 -C	-0.21996	0.19739	-0.15709	0.36019	-0.094489	0.58359	-0.000775	0.99642	0.10068	0.55904
3 - T	0.062992	0.71513	0.044017	0.7988	-0.1114	0.51775	-0.02672	0.87707	0.09436	0.5841
4 -F	-0.069834	0.68569	0.004776	0.97795	0.04789	0.78151	0.17684	0.30218	0.10778	0.53151
5 - O	-0.27198	0.10856	-0.1234	0.47335	-0.2388	0.16072	-0.16419	0.33861	0.017039	0.92143
6 - T	0.07319	0.67141	0.069447	0.68735	0.10159	0.55549	0.07603	0.65942	0.076804	0.65616
7 - O	-0.17284	0.31342	-0.06338	0.71345	0.065961	0.7023	-0.15361	0.37108	-0.16677	0.33097
8 - C	-0.44172	0.006995	-0.30631	0.069221	-0.27688	0.10209	-0.19104	0.26437	-0.17181	0.31637
9 - F	-0.15232	0.37516	-0.043114	0.80284	-0.040145	0.81618	-0.099523	0.5636	-0.048019	0.78093
10 - F	-0.026849	0.87648	-0.11747	0.49506	-0.085324	0.62076	-0.13889	0.41916	-0.087647	0.61124
11 - O	-0.12624	0.46315	-0.18356	0.2839	-0.11243	0.51385	-0.18588	0.27774	-0.076417	0.65779
12 - F	0.03098	0.85765	0.036918	0.83073	0.020266	0.90661	0.051246	0.7666	-0.054731	0.75122
13 - C	-0.079128	0.64643	-0.1163	0.49936	-0.18794	0.27234	-0.069834	0.68569	-0.091262	0.59656
14 - F	-0.16987	0.32193	0.067898	0.69398	0.061314	0.72241	-0.085582	0.6197	-0.083646	0.62767
15 - F	-0.018201	0.91609	-0.061314	0.72241	-0.089583	0.60336	-0.15309	0.37271	-0.016135	0.92558
16 - O	0.23867	0.16096	0.23183	0.17366	0.15348	0.37149	0.14857	0.38715	0.083129	0.6298
17 - C	0.16187	0.34559	-0.25984	0.1259	-0.1811	0.29049	0.091907	0.59396	-0.037821	0.82665
18 - F	0.054215	0.75349	0.11811	0.49267	0.030334	0.86059	0.12495	0.46777	0.042081	0.80748
19 - O	0.31328	0.062813	0.22589	0.18526	0.21337	0.21148	0.27249	0.10787	0.24552	0.14894
20 - O	0.12934	0.45216	0.10791	0.53101	0.19595	0.25207	0.24939	0.14243	0.332	0.047904
21 - O	-0.10133	0.55651	-0.10598	0.53845	-0.32929	0.049868	-0.13851	0.42047	-0.12792	0.45718
22 - F	-0.013037	0.93984	0.1083	0.52953	0.098619	0.56717	0.072028	0.67634	-0.056667	0.74271
23 - C	0.001936	0.99106	-0.031625	0.85472	-0.080419	0.64104	-0.018072	0.91668	0.044921	0.79475
24 - C	-0.30928	0.066432	-0.3533	0.034542	-0.37718	0.023348	-0.26527	0.11792	-0.13463	0.43371
25 - T	0.14457	0.4002	0.15503	0.36662	0.056538	0.74327	0.11385	0.50851	0.18394	0.28287
26 - F	0.005551	0.97437	-0.035627	0.83657	-0.079128	0.64643	-0.013425	0.93806	0.07177	0.67744
27 - C	0.01265	0.94163	0.048277	0.77978	0.16187	0.34559	0.20744	0.22477	0.20937	0.22037
28 - C	-0.20795	0.22359	-0.15219	0.37557	-0.091262	0.59656	0.022202	0.89773	0.10611	0.53795
29 - T	0.24177	0.15543	0.21867	0.2001	0.12043	0.48414	0.19169	0.26273	0.13825	0.42135
30 - F	-0.22525	0.18655	-0.14922	0.38507	-0.095392	0.57998	0.064541	0.70843	0.001678	0.99225
31 - O	-0.14057	0.41351	-0.031754	0.85413	-0.098361	0.56819	0.027495	0.87353	0.30128	0.074159
32 - T	0.32413	0.053786	0.33445	0.046181	0.14948	0.38424	0.13373	0.43683	0.06196	0.71961
33 - O	0.22757	0.18193	0.16135	0.34715	0.17052	0.32007	0.070092	0.68459	0.14457	0.4002
34 - C	-0.10766	0.532	-0.11359	0.50948	-0.14857	0.38715	-0.10636	0.53696	-0.005938	0.97258
35 - C	0.1376	0.42354	-0.05912	0.73197	-0.006454	0.9702	0.004002	0.98152	-0.11824	0.4922
36 - F	-0.042855	0.804	0.083904	0.6266	0.09152	0.59552	-0.013554	0.93747	-0.032142	0.85237
37 - F	0.17245	0.31453	0.039499	0.81909	0.12276	0.47569	0.14935	0.38465	0.21221	0.21403
38 - O	-0.28372	0.093557	-0.16484	0.33669	-0.11772	0.4941	-0.22383	0.18942	-0.038079	0.82549
39 - F	0.37034	0.026193	0.32297	0.054701	0.35782	0.032142	0.33265	0.047446	0.27275	0.10752
40 - C	0.048277	0.77978	-0.035627	0.83657	-0.037821	0.82665	-0.052408	0.76147	-0.089842	0.60231
41 - F	-0.04931	0.77519	0.081064	0.63836	0.053828	0.7552	-0.007616	0.96484	-0.074481	0.66595
42 - F	0.21815	0.20119	0.22615	0.18474	0.16484	0.33669	0.036918	0.83073	0.041565	0.80979
43 - O	-0.014586	0.93271	-0.068414	0.69176	-0.071125	0.68019	-0.13644	0.4275	-0.099394	0.56411
44 - C	0.062089	0.71905	-0.059636	0.72972	-0.024526	0.88709	0.14225	0.4079	0.041048	0.81212
45 - F	-0.11863	0.49077	-0.081451	0.63675	-0.19608	0.25175	-0.035111	0.83891	-0.10404	0.54594
46 - O	0.027624	0.87294	0.006712	0.96901	-0.10391	0.54644	-0.15361	0.37108	-0.098877	0.56615
47 - O	-0.000516	0.99762	-0.21686	0.20394	-0.19362	0.25785	-0.11798	0.49315	-0.24577	0.14849
48 - O	0.028527	0.86882	-0.021557	0.90069	0.005292	0.97556	-0.044017	0.7988	0.12366	0.47242
49 - C	-0.092423	0.59188	-0.16768	0.32832	-0.10507	0.54194	-0.088938	0.60598	-0.20059	0.24077
50 - C	-0.071899	0.67689	-0.12444	0.46963	-0.11759	0.49458	-0.026333	0.87883	-0.075255	0.66268
51 - T	0.14638	0.39428	0.070092	0.68459	-0.058604	0.73423	-0.088034	0.60966	-0.074094	0.66759
52 - F	0.30554	0.069964	0.056151	0.74497	0.23093	0.17539	0.28656	0.09018	0.13734	0.42442

Table C13: NPPC and C2 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.042735	0.79616	0.030046	0.85592	0.069634	0.67359	0.0029437	0.98581	0.18302	0.26476
2 -C	0.032178	0.84581	-0.20342	0.21421	0.081511	0.6218	-0.18099	0.27019	0.059991	0.71677
3 - T	0.14911	0.36493	0.024869	0.88054	0.006801	0.96722	-0.087906	0.59463	0.14099	0.39191
4 -F	0.048216	0.77068	-0.20251	0.21632	-0.30747	0.056901	-0.26697	0.1004	-0.0081206	0.96087
5 - O	0.075826	0.64638	0.0031467	0.98483	-0.13531	0.41147	0.057961	0.72598	0.061209	0.71126
6 - T	0.14231	0.38745	0.31315	0.052241	-0.010963	0.94719	-0.2488	0.12668	0.40441	0.010666
7 - O	0.10354	0.5305	-0.0069025	0.96673	0.29072	0.072579	-0.11481	0.48647	0.14516	0.37794
8 - C	-0.15531	0.34513	-0.19459	0.2352	0.057758	0.7269	-0.039284	0.81232	0.16972	0.30163
9 - F	-0.093793	0.57008	0.14313	0.38472	0.19672	0.23001	0.12617	0.44404	0.20535	0.2098
10 - F	-0.36401	0.022724	0.096026	0.56089	0.061412	0.71035	-0.061412	0.71035	0.0085267	0.95891
11 - O	-0.000406	0.99804	0.34025	0.034053	0.058773	0.72229	0.16201	0.32446	-0.12506	0.44812
12 - F	0.20911	0.20141	0.031873	0.84725	-0.071157	0.66686	-0.080191	0.62748	0.0017256	0.99168
13 - C	0.075826	0.64638	0.030655	0.85303	-0.043141	0.79427	0.06466	0.69574	0.13653	0.40724
14 - F	-0.084556	0.6088	-0.082018	0.61963	0.08821	0.59335	0.05857	0.72321	0.10973	0.50606
15 - F	-0.14851	0.36692	0.42471	0.0070406	-0.2358	0.14842	0.16739	0.30843	0.27062	0.095656
16 - O	0.075217	0.64904	0.10608	0.52041	0.12475	0.44923	0.10557	0.52242	0.042227	0.79854
17 - C	-0.10161	0.53822	0.13632	0.40794	0.029133	0.86025	0.21296	0.19303	-0.39456	0.012932
18 - F	-0.1478	0.36924	0.18789	0.25203	-0.061818	0.70851	-0.11582	0.4826	-0.13876	0.39953
19 - O	-0.044866	0.78623	-0.30006	0.063466	-0.15531	0.34513	0.27224	0.093604	-0.13572	0.41006
20 - O	-0.038573	0.81565	-0.20413	0.21258	-0.059687	0.71815	-0.17571	0.28464	0.030757	0.85255
21 - O	0.044968	0.78576	0.019591	0.90577	0.42065	0.0076656	-0.036949	0.82329	0.05187	0.75382
22 - F	-0.011166	0.94621	0.084759	0.60794	-0.29275	0.070515	-0.016038	0.9228	-0.10405	0.52847
23 - C	0.013196	0.93645	-0.1011	0.54027	0.18302	0.26476	0.28371	0.080064	-0.031163	0.85062
24 - C	0.042329	0.79806	-0.040197	0.80804	0.2358	0.14842	-0.0089327	0.95696	0.071665	0.66462
25 - T	-0.11988	0.46727	-0.15003	0.36197	0.12628	0.44367	0.25529	0.11675	-0.056743	0.73152
26 - F	-0.12719	0.44035	-0.18556	0.25808	-0.12496	0.44849	-0.18312	0.26449	-0.34634	0.030781
27 - C	0.027407	0.86846	-0.0029437	0.98581	-0.30168	0.061978	-0.07471	0.65126	0.082221	0.61876
28 - C	-0.059484	0.71907	-0.031772	0.84774	0.16617	0.31201	-0.2359	0.14824	0.16871	0.30457
29 - T	0.035426	0.83046	-0.059078	0.72091	0.14394	0.382	0.048521	0.76927	0.069431	0.67449
30 - F	0.038268	0.81709	-0.17947	0.2743	-0.098057	0.5526	0.20931	0.20096	0.16119	0.32692
31 - O	-0.16739	0.30843	0.20525	0.21003	0.016241	0.92183	0.0202	0.90285	0.049536	0.76458
32 - T	-0.22819	0.16236	0.10983	0.50567	-0.0013196	0.99364	-0.17571	0.28464	-0.20251	0.21632
33 - O	0.11755	0.47605	0.016343	0.92134	0.03167	0.84822	0.046897	0.7768	-0.073695	0.6557
34 - C	-0.20474	0.21119	-0.090748	0.58272	0.027204	0.86942	0.089834	0.58653	0.26077	0.10884
35 - C	-0.33711	0.035852	0.23631	0.14752	-0.23073	0.15761	0.03502	0.83238	-0.083642	0.61269
36 - F	-0.029234	0.85977	0.11988	0.46727	-0.11582	0.4826	-0.16566	0.31351	-0.23316	0.15315
37 - F	0.25935	0.11085	-0.016546	0.92037	0.18495	0.25967	-0.018576	0.91063	-0.33305	0.038287
38 - O	0.078973	0.63273	-0.0084251	0.9594	0.038573	0.81565	0.023753	0.88587	-0.22017	0.17804
39 - F	0.25377	0.11903	0.005989	0.97114	-0.20139	0.21892	-0.1074	0.51521	-0.11968	0.46803
40 - C	0.25143	0.12258	0.046998	0.77633	-0.035731	0.82903	0.0072071	0.96527	-0.11409	0.48919
41 - F	0.1749	0.2869	-0.23783	0.14485	0.057149	0.72967	-0.15449	0.34769	-0.057149	0.72967
42 - F	0.096128	0.56047	-0.20241	0.21655	-0.21966	0.17906	-0.24737	0.12894	-0.019185	0.90771
43 - O	0.15409	0.34897	0.021012	0.89897	-0.063442	0.70121	0.35518	0.0265	-0.039893	0.80946
44 - C	-0.14089	0.39226	0.040299	0.80756	-0.13389	0.41645	0.15886	0.33407	-0.19317	0.2387
45 - F	0.036644	0.82472	-0.034411	0.83525	0.029742	0.85736	-0.24301	0.13605	-0.33761	0.035556
46 - O	-0.017764	0.91452	0.10648	0.51881	-0.15541	0.34481	0.13693	0.40583	0.17591	0.28407
47 - O	0.098767	0.54971	-0.17165	0.29609	0.11714	0.47759	0.13643	0.40759	-0.18068	0.27101
48 - O	-0.064153	0.69802	0.13551	0.41076	-0.13643	0.40759	0.1143	0.48841	0.11318	0.49269
49 - C	-0.10943	0.50725	0.031975	0.84677	0.088007	0.5942	0.024159	0.88393	-0.024666	0.88151
50 - C	-0.21408	0.19065	0.37578	0.018396	-0.01888	0.90917	-0.10719	0.51601	-0.15064	0.36
51 - T	-0.072578	0.6606	0.037355	0.82138	-0.077146	0.64064	-0.26148	0.10785	-0.033092	0.84149
52 - F	0.11217	0.49661	0.045069	0.78528	-0.039994	0.80899	-0.060093	0.71631	-0.34472	0.031627

Table C14: NPPC and C2 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.0058087	0.97318	-0.038725	0.82258	-0.13308	0.43906	0.028785	0.86764	-0.19401	0.25688
2 -C	0.069059	0.689	-0.10882	0.52756	0.15851	0.35581	-0.23222	0.17293	0.12134	0.48084
3 - T	-0.034723	0.84066	0.19801	0.247	-0.099781	0.56259	0.20795	0.22359	0.12547	0.46592
4 -F	0.28773	0.088826	-0.36401	0.029073	0.22331	0.19047	-0.075513	0.66159	0.0011617	0.99463
5 - O	-0.0033562	0.9845	-0.17943	0.29506	-0.091262	0.59656	-0.13554	0.4306	-0.37434	0.024496
6 - T	-0.10946	0.5251	-0.17013	0.32119	0.1509	0.37968	0.19504	0.25431	0.12753	0.45855
7 - O	0.079644	0.64427	0.12431	0.47009	-0.063638	0.71233	-0.13489	0.43282	0.095909	0.57792
8 - C	0.095909	0.57792	-0.18898	0.26967	-0.24668	0.14696	-0.21015	0.21863	-0.0028398	0.98689
9 - F	-0.045566	0.79187	0.1944	0.25591	-0.0005163	0.99762	0.33148	0.048273	0.17336	0.31196
10 - F	0.055764	0.74668	0.028527	0.86882	-0.062347	0.71793	-0.11269	0.51288	0.1265	0.46223
11 - O	0.22383	0.18942	0.043372	0.80169	-0.026978	0.87589	0.052149	0.76261	0.3018	0.073641
12 - F	-0.093327	0.58824	-0.11333	0.51045	-0.085324	0.62076	-0.15929	0.35344	-0.35536	0.033427
13 - C	-0.027495	0.87353	0.20408	0.23252	-0.074481	0.66595	0.15542	0.36541	0.044017	0.7988
14 - F	0.21234	0.21375	-0.10727	0.53349	-0.01549	0.92855	0.073061	0.67196	0.040016	0.81676
15 - F	0.3067	0.068852	0.042597	0.80516	-0.24371	0.15205	0.08442	0.62447	0.23945	0.15956
16 - O	0.17749	0.30039	-0.033432	0.84651	0.075901	0.65996	-0.050084	0.77175	-0.071899	0.67689
17 - C	-0.13993	0.41568	0.1944	0.25591	-0.20576	0.22862	0.017297	0.92024	-0.04505	0.79418
18 - F	0.07177	0.67744	0.1123	0.51434	-0.13915	0.41829	-0.14561	0.39681	-0.054602	0.75179
19 - O	0.034594	0.84125	0.047502	0.78323	0.18627	0.27672	0.25042	0.14073	-0.10611	0.53795
20 - O	-0.17955	0.29471	-0.048922	0.77691	0.21828	0.20092	-0.30089	0.07455	0.20498	0.23042
21 - O	0.0506	0.76946	-0.2734	0.10666	-0.024526	0.88709	-0.13876	0.4196	0.031367	0.85589
22 - F	-0.022977	0.89418	-0.038467	0.82374	-0.071254	0.67964	0.05486	0.75065	-0.10469	0.54344
23 - C	-0.26397	0.11978	-0.03098	0.85765	0.15438	0.36865	0.084162	0.62554	0.073319	0.67086
24 - C	0.14548	0.39723	-0.13063	0.44762	0.23287	0.1717	-0.010068	0.95353	-0.0032271	0.9851
25 - T	0.11179	0.51628	-0.019879	0.90839	0.095005	0.58152	0.24745	0.14565	-0.20498	0.23042
26 - F	-0.14935	0.38465	0.10985	0.52362	-0.25687	0.13044	-0.035885	0.8354	-0.11721	0.49601
27 - C	-0.15619	0.363	0.26888	0.11281	-0.33613	0.045032	0.19375	0.25752	0.13386	0.43638
28 - C	0.077837	0.65183	-0.17181	0.31637	0.32748	0.051213	-0.035756	0.83599	0.20034	0.24139
29 - T	-0.14561	0.39681	-0.13825	0.42135	0.020911	0.90365	0.10133	0.55651	-0.12702	0.46039
30 - F	0.035756	0.83599	0.2317	0.17391	0.10094	0.55802	-0.11721	0.49601	-0.076933	0.65562
31 - O	0.23093	0.17539	0.31587	0.060563	0.11463	0.50562	0.068285	0.69232	0.15503	0.36662
32 - T	0.17775	0.29967	-0.0506	0.76946	-0.12198	0.4785	-0.31186	0.064079	-0.12018	0.48509
33 - O	0.044017	0.7988	-0.062734	0.71625	-0.049439	0.77462	0.13515	0.43193	0.093714	0.58669
34 - C	-0.25339	0.13592	-0.1012	0.55701	0.23803	0.16213	-0.25236	0.13758	0.16045	0.34989
35 - C	-0.085711	0.61917	0.0041306	0.98092	0.095392	0.57998	0.052666	0.76032	-0.070479	0.68294
36 - F	-0.32955	0.049678	0.018588	0.91431	0.22409	0.18889	-0.017813	0.91787	-0.17155	0.31711
37 - F	-0.073061	0.67196	0.0070996	0.96722	-0.19324	0.25882	0.15942	0.35304	0.18433	0.28184
38 - O	0.19517	0.25399	-0.02104	0.90306	0.21531	0.20726	0.13838	0.42091	0.19814	0.24669
39 - F	0.12366	0.47242	-0.2712	0.10961	0.15709	0.36019	-0.2641	0.11959	-0.018459	0.91491
40 - C	0.15116	0.37886	-0.15503	0.36662	0.057055	0.74101	-0.40558	0.014124	0.040274	0.8156
41 - F	-0.071641	0.67799	-0.30102	0.07442	-0.47477	0.0034363	0.064541	0.70843	0.10469	0.54344
42 - F	-0.28166	0.096073	0.039628	0.8185	0.12211	0.47803	0.22435	0.18837	0.22731	0.18244
43 - O	0.15916	0.35383	0.058991	0.73254	0.042726	0.80458	-0.15968	0.35225	0.20279	0.23556
44 - C	-0.17168	0.31674	0.17078	0.31933	-0.09849	0.56768	-0.16523	0.33554	-0.068414	0.69176
45 - F	-0.11721	0.49601	-0.075513	0.66159	0.15503	0.36662	-0.096425	0.57586	0.17684	0.30218
46 - O	0.37679	0.023502	-0.10869	0.52805	0.015619	0.92796	-0.050342	0.77061	-0.023235	0.893
47 - O	-0.10559	0.53994	0.12857	0.45489	-0.1145	0.5061	-0.037563	0.82782	0.023364	0.89241
48 - O	-0.12276	0.47569	-0.37202	0.02547	0.080935	0.6389	0.0083904	0.96126	0.02672	0.87707
49 - C	0.21583	0.20615	0.11721	0.49601	0.21621	0.20532	0.17968	0.29435	-0.038209	0.8249
50 - C	0.11734	0.49554	0.042726	0.80458	0.097974	0.56972	0.086615	0.61546	-0.16213	0.34481
51 - T	0.16084	0.34871	0.092552	0.59136	0.23893	0.16049	0.088422	0.60808	-0.074481	0.66595
52 - F	-0.27301	0.10717	0.19479	0.25495	-0.1478	0.38966	0.017943	0.91728	0.020524	0.90542

Table C15: PPC and C2 correlation coefficients (Rho) and P-values, for preterms in AS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	0.058367	0.72413	-0.05989	0.71723	-0.13358	0.41752	-0.1549	0.34641	0.12059	0.46462
2 -C	-0.13957	0.39675	-0.17703	0.28098	-0.086992	0.59848	0.19276	0.23971	-0.15318	0.35187
3 - T	-0.14627	0.37425	-0.13318	0.41895	-0.030757	0.85255	-0.064457	0.69665	0.089834	0.58653
4 -F	0.020708	0.90042	0.019591	0.90577	-0.023245	0.88829	-0.10029	0.54354	0.037761	0.81947
5 - O	0.1478	0.36924	0.14374	0.38268	-0.025478	0.87764	-0.095011	0.56506	-0.078973	0.63273
6 - T	0.09359	0.57092	0.16668	0.31052	0.11085	0.50172	-0.085977	0.60277	-0.067807	0.6817
7 - O	0.24413	0.1342	0.19408	0.23645	0.25012	0.12462	0.15033	0.36098	0.17967	0.27375
8 - C	-0.0036543	0.98239	0.019794	0.9048	0.128	0.43742	-0.084556	0.6088	0.34807	0.029902
9 - F	0.16901	0.30369	0.10953	0.50686	-0.059991	0.71677	-0.068924	0.67674	-0.034005	0.83717
10 - F	-0.005989	0.97114	-0.044156	0.78954	0.30432	0.059619	0.18322	0.26422	0.20637	0.20751
11 - O	0.17733	0.28014	0.25225	0.12133	-0.12475	0.44923	-0.097549	0.55466	0.11562	0.48337
12 - F	0.015835	0.92378	0.098057	0.5526	0.16932	0.30281	0.27651	0.08838	-0.0066995	0.96771
13 - C	0.025072	0.87958	0.092474	0.57554	-0.11836	0.47299	-0.38532	0.015418	0.10405	0.52847
14 - F	-0.195	0.23421	-0.18921	0.24865	-0.16647	0.31111	0.017662	0.91501	0.25489	0.11736
15 - F	0.22332	0.17176	0.073999	0.65437	0.19175	0.24224	0.19104	0.24403	0.085571	0.60449
16 - O	0.17855	0.27679	0.15358	0.35058	0.10577	0.52162	0.34289	0.032601	0.057961	0.72598
17 - C	-0.078872	0.63317	0.056134	0.73429	0.087601	0.59591	0.015734	0.92426	-0.0082221	0.96038
18 - F	0.1686	0.30487	0.22961	0.15968	0.22697	0.16467	-0.095823	0.56172	-0.054916	0.73986
19 - O	-0.045272	0.78434	-0.012993	0.93743	-0.024971	0.88006	0.0033498	0.98385	0.07268	0.66016
20 - O	0.027407	0.86846	0.028422	0.86363	-0.087195	0.59762	0.11085	0.50172	-0.018373	0.9116
21 - O	0.026798	0.87135	0.038573	0.81565	0.026494	0.8728	-0.085673	0.60406	0.11389	0.48997
22 - F	0.0029437	0.98581	0.048521	0.76927	-0.0808	0.62486	0.41882	0.0079621	0.23225	0.15481
23 - C	-0.20271	0.21585	-0.08415	0.61053	0.22687	0.16487	0.10313	0.53212	0.17693	0.28126
24 - C	-0.2355	0.14896	-0.18119	0.26964	-0.16251	0.32292	0.13582	0.4097	-0.18525	0.25887
25 - T	0.055322	0.738	-0.0043648	0.97896	-0.14242	0.38711	-0.12536	0.447	0.11623	0.48105
26 - F	0.091459	0.57976	0.045171	0.78481	-0.070954	0.66775	0.28727	0.076195	-0.24017	0.14083
27 - C	0.13135	0.42542	0.16942	0.30251	0.17561	0.28492	0.055017	0.73939	-0.33213	0.038853
28 - C	-0.12384	0.45258	-0.21763	0.18322	-0.12181	0.46008	-0.0034513	0.98336	-0.16312	0.32109
29 - T	0.099985	0.54477	0.22464	0.16918	0.05522	0.73847	0.23418	0.15131	-0.15744	0.33847
30 - F	-0.08283	0.61615	-0.098767	0.54971	-0.12871	0.43486	-0.15581	0.34353	-0.13023	0.4294
31 - O	-0.011775	0.94328	-0.048622	0.7688	-0.17622	0.28323	-0.029539	0.85833	0.0088312	0.95745
32 - T	0.018271	0.91209	0.044257	0.78906	0.043344	0.79332	0.0050754	0.97554	-0.03096	0.85158
33 - O	0.25418	0.11842	0.21459	0.18957	0.12191	0.45971	-0.031366	0.84966	-0.27316	0.092465
34 - C	-0.080293	0.62704	-0.2088	0.20208	-0.18586	0.25728	0.087601	0.59591	-0.1887	0.24995
35 - C	0.044054	0.79001	0.29133	0.071955	0.24981	0.12509	0.048013	0.77162	0.0028422	0.9863
36 - F	0.056235	0.73383	-0.044968	0.78576	0.072477	0.66105	0.21824	0.18196	-0.13318	0.41895
37 - F	0.19682	0.22977	0.083236	0.61442	0.019489	0.90626	0.069127	0.67584	-0.062123	0.70714
38 - O	0.0058875	0.97162	0.06598	0.68984	-0.059281	0.71999	-0.074405	0.65259	-0.019388	0.90674
39 - F	-0.040096	0.80851	-0.070142	0.67134	-0.070345	0.67044	-0.013196	0.93645	0.1346	0.41396
40 - C	0.27235	0.093477	0.22799	0.16274	0.11278	0.49426	0.0012181	0.99413	-0.18647	0.2557
41 - F	-0.10963	0.50646	-0.11196	0.49739	0.037862	0.81899	0.17652	0.28238	0.0027407	0.98679
42 - F	0.19307	0.23896	0.0078161	0.96233	0.19733	0.22854	-0.09826	0.55177	0.19723	0.22879
43 - O	0.2897	0.073628	0.23326	0.15296	0.41283	0.0090039	-0.0404	0.80708	-0.080394	0.6266
44 - C	-0.086282	0.60148	-0.053596	0.7459	-0.18221	0.26692	0.093895	0.56966	-0.20413	0.21258
45 - F	0.22667	0.16525	0.19896	0.22466	0.24423	0.13404	0.26981	0.096694	-0.15856	0.33501
46 - O	0.24382	0.1347	0.29762	0.065751	0.079481	0.63054	-0.082526	0.61746	-0.015125	0.92719
47 - O	0.0098463	0.95256	0.12942	0.4323	0.14313	0.38472	0.0016241	0.99217	0.10161	0.53822
48 - O	0.1618	0.32507	0.19916	0.22418	0.0019286	0.9907	0.034411	0.83525	-0.17074	0.29871
49 - C	0.058164	0.72505	0.28991	0.073417	0.10811	0.51242	-0.21976	0.17886	0.068822	0.67719
50 - C	-0.11125	0.50014	0.11633	0.48067	0.03502	0.83238	-0.081714	0.62093	0.17804	0.27818
51 - T	0.30371	0.060157	0.31498	0.05081	0.35538	0.026407	0.020911	0.89945	-0.11744	0.47644
52 - F	-0.022332	0.89266	0.0202	0.90285	-0.14556	0.3766	0.083845	0.61182	-0.43598	0.0055304

Table C16: PPC and C2 correlation coefficients (Rho) and P-values, for preterms in QS. Green: significant after post-hoc correction. Yellow: P-value less than 0.05, but was excluded by post-hoc correction.

	4 Hz		5.7 Hz		8 Hz		11.3 Hz		16 Hz	
Node #	Rho	P	Rho	P	Rho	P	Rho	P	Rho	P
1 - C	-0.011359	0.94757	0.13141	0.44491	0.15451	0.36824	-0.036143	0.83423	-0.1305	0.44807
2 -C	0.01549	0.92855	-0.16484	0.33669	-0.2246	0.18785	0.026075	0.88001	0.022977	0.89418
3 - T	0.094489	0.58359	0.19156	0.26306	0.12031	0.48461	-0.013037	0.93984	0.028656	0.86823
4 -F	0.19375	0.25752	0.17078	0.31933	-0.14031	0.41438	-0.1851	0.27978	0.35988	0.031091
5 - O	0.097845	0.57023	0.13876	0.4196	0.091907	0.59396	0.24061	0.15749	-0.033562	0.84593
6 - T	0.18717	0.27436	0.40442	0.01443	0.27804	0.1006	-0.028656	0.86823	0.19853	0.24575
7 - O	-0.16768	0.32832	-0.16794	0.32756	-0.041177	0.81154	0.18059	0.29189	0.10533	0.54094
8 - C	0.055635	0.74724	0.11747	0.49506	-0.035627	0.83657	0.11682	0.49745	0.12495	0.46777
9 - F	0.42288	0.010184	0.26126	0.12377	-0.043243	0.80227	0.026075	0.88001	0.060411	0.72634
10 - F	0.20279	0.23556	0.20395	0.23283	-0.058733	0.73367	0.29405	0.081726	0.19053	0.26569
11 - O	0.10662	0.53597	0.0087776	0.95948	-0.15425	0.36905	0.25016	0.14115	-0.030076	0.86176
12 - F	0.067898	0.69398	0.1367	0.42662	0.01833	0.9155	-0.039112	0.82083	0.097458	0.57176
13 - C	0.024397	0.88768	0.12676	0.46131	0.11527	0.50321	0.19195	0.26208	-0.16639	0.33211
14 - F	0.025687	0.88178	-0.12314	0.47429	-0.14341	0.40404	0.083775	0.62713	-0.0007745	0.99642
15 - F	0.2885	0.087932	0.15451	0.36824	-0.032529	0.85061	0.084678	0.62341	0.17917	0.29577
16 - O	0.013554	0.93747	-0.17568	0.30542	-0.37679	0.023502	0.2623	0.12224	-0.07887	0.64751
17 - C	-0.043372	0.80169	0.10482	0.54294	-0.08158	0.63622	-0.064929	0.70675	-0.0577	0.73818
18 - F	0.24255	0.15407	0.24345	0.15249	0.1953	0.25367	0.34555	0.038996	-0.065832	0.70286
19 - O	-0.28915	0.087193	-0.23015	0.17689	-0.14509	0.39851	-0.36879	0.026876	0.2104	0.21805
20 - O	0.0032271	0.9851	0.11398	0.50803	0.15012	0.38216	-0.45579	0.005212	-0.095909	0.57792
21 - O	-0.019621	0.90957	0.01975	0.90898	0.0095521	0.95591	-0.064025	0.71066	0.09294	0.5898
22 - F	0.098619	0.56717	-0.11256	0.51336	0.054473	0.75235	0.12056	0.48367	-0.22022	0.19685
23 - C	0.1771	0.30146	0.1376	0.42354	0.18433	0.28184	0.12095	0.48226	0.05073	0.76889
24 - C	0.082613	0.63194	0.0059378	0.97258	-0.0034852	0.98391	0.096554	0.57535	0.0028398	0.98689
25 - T	-0.023751	0.89064	-0.09423	0.58462	0.014974	0.93093	-0.18046	0.29224	0.12276	0.47569
26 - F	0.056151	0.74497	0.18549	0.27876	0.10753	0.5325	0.015748	0.92737	-0.16419	0.33861
27 - C	-0.11166	0.51677	0.072415	0.6747	0.11992	0.48603	-0.11901	0.48935	0.096941	0.57381
28 - C	0.038983	0.82141	-0.035627	0.83657	-0.061702	0.72073	0.072028	0.67634	-0.011617	0.94639
29 - T	-0.089067	0.60546	0.023622	0.89123	-0.024526	0.88709	-0.40377	0.014602	-0.15232	0.37516
30 - F	0.049181	0.77577	-0.064412	0.70898	-0.054602	0.75179	0.2459	0.14827	-0.029689	0.86353
31 - O	0.0025817	0.98808	0.096038	0.5774	-0.0007745	0.99642	-0.19285	0.25979	-0.12405	0.47102
32 - T	-0.088293	0.60861	0.072028	0.67634	-0.22835	0.18041	-0.23145	0.1744	0.049826	0.7729
33 - O	0.24319	0.15294	0.26333	0.12072	0.044146	0.79822	-0.14625	0.3947	-0.050342	0.77061
34 - C	-0.063638	0.71233	-0.15103	0.37927	-0.1935	0.25817	0.13347	0.43772	0.035498	0.83715
35 - C	-0.045695	0.79129	0.052408	0.76147	-0.027236	0.87471	0.15425	0.36905	0.19285	0.25979
36 - F	0.0038725	0.98212	-0.042339	0.80632	0.19556	0.25303	-0.18162	0.2891	0.031883	0.85355
37 - F	0.19492	0.25463	0.15296	0.37312	-0.063638	0.71233	0.1274	0.45901	-0.038983	0.82141
38 - O	-0.042985	0.80342	-0.093327	0.58824	-0.14483	0.39935	-0.18601	0.2774	0.18743	0.27368
39 - F	-0.27921	0.099128	-0.1722	0.31526	-0.061443	0.72185	0.20808	0.2233	-0.16845	0.32606
40 - C	0.24048	0.15772	0.26862	0.11317	0.36776	0.027339	-0.14509	0.39851	-0.12379	0.47195
41 - F	0.080677	0.63997	-0.0648	0.70731	0.1216	0.4799	0.16277	0.34287	0.048148	0.78036
42 - F	0.14638	0.39428	0.032142	0.85237	-0.11605	0.50032	0.046212	0.78899	-0.095263	0.58049
43 - O	0.4798	0.0030646	0.25713	0.13004	0.1003	0.56056	-0.075772	0.6605	0.16665	0.33135
44 - C	-0.12637	0.46269	0.034465	0.84183	0.19104	0.26437	-0.2885	0.087932	0.15696	0.36059
45 - F	0.088809	0.60651	0.079128	0.64643	-0.08442	0.62447	0.23416	0.16927	-0.22873	0.17965
46 - O	0.19169	0.26273	0.33781	0.043905	0.19646	0.2508	0.21002	0.21892	0.053182	0.75804
47 - O	0.017555	0.91906	0.13205	0.44265	0.11153	0.51726	-0.039112	0.82083	0.049955	0.77233
48 - O	0.096683	0.57484	0.21686	0.20394	0.025042	0.88473	-0.088164	0.60913	-0.017039	0.92143
49 - C	0.22344	0.1902	0.17788	0.29932	0.19466	0.25527	-0.18782	0.27268	-0.13024	0.44898
50 - C	0.11592	0.5008	0.11075	0.52019	0.095263	0.58049	0.096425	0.57586	-0.20963	0.21979
51 - T	0.24732	0.14587	0.41152	0.012648	0.1527	0.37394	-0.10094	0.55802	0.14341	0.40404
52 - F	0.060282	0.72691	0.21105	0.21661	0.13179	0.44355	-0.0089067	0.95888	-0.16677	0.33097