

## Benchmark and combined velocity-space tomography of fast-ion D-alpha spectroscopy and collective Thomson scattering measurements - DTU Orbit (08/11/2017)

### Benchmark and combined velocity-space tomography of fast-ion D-alpha spectroscopy and collective Thomson scattering measurements

We demonstrate the combination of fast-ion D-alpha spectroscopy (FIDA) and collective Thomson scattering (CTS) measurements to determine a common best estimate of the fast-ion velocity distribution function by velocity-space tomography. We further demonstrate a benchmark of FIDA tomography and CTS measurements without using a numerical simulation as common reference. Combined velocity-space tomographies from FIDA and CTS measurements confirm that sawtooth crashes reduce the fast-ion phase-space densities in the plasma center and affect ions with pitches close to one more strongly than those with pitches close to zero.

#### General information

State: Published

Organisations: Department of Physics, Plasma Physics and Fusion Energy, Max Planck Institute for Plasma Physics

Authors: Jacobsen, A. S. (Intern), Salewski, M. (Intern), Geiger, B. (Ekstern), Korsholm, S. B. (Intern), Leipold, F. (Intern), Nielsen, S. K. (Intern), Rasmussen, J. (Intern), Pedersen, M. S. (Intern), Weiland, M. (Ekstern)

Number of pages: 5

Publication date: 2016

Main Research Area: Technical/natural sciences

#### Publication information

Journal: Plasma Physics and Controlled Fusion

Volume: 58

Issue number: 4

Article number: 042002

ISSN (Print): 0741-3335

Ratings:

BFI (2017): BFI-level 1

Web of Science (2017): Indexed yes

BFI (2016): BFI-level 1

Scopus rating (2016): CiteScore 1 SJR 0.583 SNIP 0.617

Web of Science (2016): Indexed yes

BFI (2015): BFI-level 1

Scopus rating (2015): SJR 0.734 SNIP 0.864 CiteScore 1.1

Web of Science (2015): Indexed yes

BFI (2014): BFI-level 1

Scopus rating (2014): SJR 1.318 SNIP 1.235 CiteScore 1.61

Web of Science (2014): Indexed yes

BFI (2013): BFI-level 1

Scopus rating (2013): SJR 1.088 SNIP 1.227 CiteScore 1.54

ISI indexed (2013): ISI indexed yes

Web of Science (2013): Indexed yes

BFI (2012): BFI-level 1

Scopus rating (2012): SJR 1.391 SNIP 1.142 CiteScore 1.63

ISI indexed (2012): ISI indexed yes

Web of Science (2012): Indexed yes

BFI (2011): BFI-level 1

Scopus rating (2011): SJR 1.512 SNIP 1.592 CiteScore 2.69

ISI indexed (2011): ISI indexed yes

Web of Science (2011): Indexed yes

BFI (2010): BFI-level 1

Scopus rating (2010): SJR 1.477 SNIP 1.41

Web of Science (2010): Indexed yes

BFI (2009): BFI-level 1

Scopus rating (2009): SJR 1.589 SNIP 1.32

Web of Science (2009): Indexed yes

BFI (2008): BFI-level 1

Scopus rating (2008): SJR 1.872 SNIP 1.603

Web of Science (2008): Indexed yes

Scopus rating (2007): SJR 1.971 SNIP 1.389

Web of Science (2007): Indexed yes

Scopus rating (2006): SJR 1.833 SNIP 1.403

Web of Science (2006): Indexed yes

Scopus rating (2005): SJR 1.73 SNIP 1.55

Scopus rating (2004): SJR 2.232 SNIP 1.377

Scopus rating (2003): SJR 2.016 SNIP 1.247

Web of Science (2003): Indexed yes

Scopus rating (2002): SJR 1.667 SNIP 1.022

Web of Science (2002): Indexed yes

Scopus rating (2001): SJR 1.507 SNIP 1.23

Web of Science (2001): Indexed yes

Scopus rating (2000): SJR 1.388 SNIP 1.124

Scopus rating (1999): SJR 2.148 SNIP 1.515

Original language: English

Velocity-space tomography, Collective Thomson scattering, Fast-ion D-alpha spectroscopy, Sawtooth crash, Tokamak  
DOIs:

10.1088/0741-3335/58/4/042002

Source: FindIt

Source-ID: 2291842031

Publication: Research - peer-review › Journal article – Annual report year: 2016