

2011 Fall

Meeting

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buorn and sc=seismology

HR: 1340h

AN: **S53A-2264 Poster**TI: **The ALERT-ES Project for earthquakes in Cape San Vicente region, SW Spain**AU: **Buorn, E**EM: *ebuornp@fis.ucm.es*AF: *Dept Geofisica, Univ Complutense, Madrid, Spain*AU: ***Mattesini, M**EM: *mmattesi@fis.ucm.es*AF: *Dept Geofisica, Univ Complutense, Madrid, Spain*AU: **Martin Davila, J**EM: *mdavola@roa.es*AF: *Real Instiuto y Observatorio de la Armada, San Fernando, Cadiz, Spain*AU: **Goula, X**EM: *xgoula@igc.cat*AF: *Institut Geologic de Catalunya, Barcelona, Spain*AU: **Colom, Y**EM: *ycolom@geoteca.cat*AF: *Institut Geologic de Catalunya, Barcelona, Spain*AU: **Zollo, A**EM: *aldo.zollo@unina.it*AF: *Univ.degli Studi di Napoli Federico II, Napoli, Italy*AU: **Udias, A**EM: *audiasva@fis.ucm.es*AF: *Dept Geofisica, Univ Complutense, Madrid, Spain*AU: **Pazos, A**EM: *pazos@roa.es*AF: *Real Instiuto y Observatorio de la Armada, San Fernando, Cadiz, Spain*AU: **Roca, A M**EM: *aroca@igc.cat*AF: *Institut Geologic de Catalunya, Barcelona, Spain*AU: **Lozano, L**EM: *llopezdemedrano@fomento.es*AF: *Instituto Geografico Nacional, Madrid, Spain*AU: **Carrilho, F**EM: *fernando.carrilho@meteo.pt*AF: *Sismologia e Geofisica, Instituto de Meteorologia, Lisboa, Portugal*AU: **Hanka, W**EM: *hanka@gfz-potsdam.de*AF: *GFZ German Reseach Centre for Geosciences, Potsdam, Germany*AU: **Madariaga, R I**EM: *madariag@geologie.ens.fr*AF: *Lab. Sismologie, Ecole Normale Superieure, Paris, France*AU: **Bezzeghoud, M**

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AB: The main goal of the ALERT-ES project ("Sistema de Alerta Sismica Temprana: Aplicacion al Sur de España") is to study the feasibility of an Earthquake Early Warning System (EEWS) for the potentially damaging earthquakes that occur in the zone Cape S. Vicente–Gulf of Cadiz (S. Spain). This area is characterized by the occurrence of large and damaging earthquakes such as the 1755 Lisbon ($I_{max}=X$) or 1969 S. Vicente Cape ($M_s=8,1$) events. Most earthquakes in this area have their epicenters offshore at epicentral distances between 150 and 250 kms off the coast line, so a feasibility study is needed before an EEWS system implementation. The project has two different parts: the development of algorithms for the rapid estimation of the magnitude for South Spain earthquakes from the very beginning of P-waves and the development of the corresponding new software modules and their implementation in the EarthWorm and SeisComP systems. A pilot experience will be carried out during the project, using observations from coastal stations and OBS. Broadband records from a selection of 19 earthquakes ($M \geq 4.0$) occurred in the period 2006 to 2010 in Cape S. Vicente and Gulf of Cadiz have been used for an off line testing of PRESTO methodology developed at Naples University (Italy). Preliminary results show that for a Mw 6.1 shock with epicenter 200 km SW of Cape of S. Vicente the blind area has a radius of 227 km, providing with a lead-time of 28s in Huelva, 36s in Cadiz and 47s in Seville.

DE: [4341] NATURAL HAZARDS / Early warning systems

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