Mw: 6.3). It was coordinated by the Italian Civil Protection Department for the future urbanistic planning.

We acquired about 250 seismic recordings with a 3-component seismometer featuring a 0.05 Hz to 40 Hz passband (Lennartz LE3D-5s) and the preliminary results show a strong variability of frequencies in the case study area with values ranging between 0.8 Hz and 11 Hz.

The goals of the study are to point out the efficiency of seismic noise technique in geologically complex site by comparing those data with other geophysical investigations (active seismic techniques, gravimetric survey) and geological data (more than 60 well logs and a detailed fine scale geological mapping), to fine-tune the subsoil model (ii) and to locate the geometry of seismic and geological bedrock (iii).

SW4/P14/ID280 **- VALIDATION OF THE LOWER TAGUS VALLEY (LTV, PORTUGAL) VELOCITY MODEL USING MICROTREMOR H/V SPECTRAL RATIO**

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Along his history the Lower Tagus Valley LTV area was shaken by several earthquakes. The largest reported had their origin in the southwestern part of Iberia. These earthquakes were destructive, and some of them were produced in large ruptures of offshore structures located southwest of the Portuguese coastline; other moderates earthquakes were produced by local sources such as the 1344, 1531 and the 1909 (Benavente). In the last years, due to 3D structural model improvement and development in numerical methods and computational capacities, several studies have successful obtained strong-ground motion synthesis for the Lower Tagus region using finite difference method [1]. To confirm the velocity model of the LTV sedimentary basin obtained by geophysical and geological data, we use broad-band microtremor measurements and application of the horizontal to vertical (H/V) spectral ratio method [2]. Some seismic data collected in a profile with azimuth perpendicular to the basin axis reveals a dependence between the thickness of sediments, the frequency and the amplitude of the low frequency peaks (0.15 -1 Hz) of the H/V curve. [1] Grandin R., Borges J.F., Bezzeghoud M., Caldeira B., Carrilho F., 2007. Simulations of strong ground motion in SW Iberia for the 1969 February 28 (MS = 8.0) and the 1755 November 1 (M ~ 8.5) earthquakes – II. Strong ground motion simulations, Geophys. J. Int., Vol. 171, 2, 807-822. [2] Nakamura, Y., 1989, A method for dynamic characteristics estimations of subsurface using microtremors on the ground surface, Quarterly Report, RTRI, Japan, v. 30, p. 25-33.

WEDNESDAY 8, THURSDAY 9

SH1 - GEOLOGICAL INPUT FOR SEISMIC HAZARD ASSESSMENT: A EUROPEAN PERSPECTIVE

SH1/P1/ID1 **- CONTEMPORARY SEISMICITY OF KOSOVO**

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In this work are presented basic characteristics of the seismicity of Kosovo, for the period 1901 to 2008 with emphasis on the most active regions. In terms of seismicity the territory of Kosova is very active, characterized with local seismic sources that has generated strong earthquakes throughout history (1456, Prizren with intensity I= IX MSK-64, 1662, Peja earthquake with intensity I= VIII MSK-64 scale, 1921, earthquake affected region of Gjilan-Viti- Ferizaj with I=IX MSK-64, 1980 earthquake, in Kopaonik I=VIII scale MSK-64, and in 24 April 2002 earthquake with epicenter intensity I=VII +½ MSK-64 heavily damaged area of the Gjilan. Kosovo's. territory is also affected by the earthquakes generated from seismic sources in the border regions of the neighboring countries. The effects of the local and regional seismic activity on territory of Kosovo result in complex seismicity pattern that was studied in detail for the first time in this work. Compilation and updating of earthquake data was made in order to define an earthquake catalog for territory of Kosova, which will provide a basis for determination of the main characteristics of the seismicity of Kosova. Results of the existing investigations were a basis for defining the regional geologic, seismologic, neotectonic and seismotectonic characteristics of the area as well as definition of seismogenic sources. Obtained results will be applied for assessing seismotectonic conditions, seismic macro and micro zonation, seismic risk estimation of territory of Kosovo as well as estimation of the effect of strong earthquakes on the built environment and defining a set of consistent measures for protection and mitigation of the consequences. Also these investigations have great significance from scientific and applied aspect and will provide reliable assessment of Kosovo seismicity. Results can be used as input for further investigations in the field of seismic hazard and risk assessment and engineering seismology as well for physical and urban land use planning and design in seismic prone areas.

SH1/P2/ID2 **- THE MOST ACTIVE SEISMOGENIC ZONES IN ALBANIA DURING 2009**

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Abstract

The Albanian orogen, as the most southwestern part of the Euro-Asiatic plate, in convergence with the Adria microplate, is divided in two areas with different tectonic regimes: the external area with compressive regime, representing its offshore part and the internal area with expanding regime, representing the continental area. Albania is a country of high seismic activity. The earthquake foci during 2009 year are concentrated mostly along the active faults. On Albania and its surrounding territory, 610 earthquakes with magnitude ML >2.0 were located and 37 of them were felt by population of Albania. The epicentral distribution of earthquakes shows that: Elbasani-Dibra, Lezha-Ulqini, Durres-Kepirodonit, Borsh-Kardhiq fault zones are most active. The activity of Elbasani-Dibra transversal zone was culminated with the Earthquake of September 6, 2009, magnitude (ML = 5.4) in Gjorica village, followed from 250 localised aftershocks. This earthquake of intensity of VII degree at the epicentre caused more heavily damage in Gjorica, Qerenec villages and Shupenza municipality in Dibra district. The focal mechanism solutions show that this earthquake has been triggered from the activation of a normal fault with NE-SW direction, in conditions of an extensional tectonic regime, in the northeastern segment of Elbasani-Dibra. The earthquake of August 21, 2009, magnitude (ML = 5.0), occurred in Adriatic Sea express the increased seismic activity of the Lezha-Ulqini seismogenetic zone during 2009 year. From the focal mechanism solution results that the earthquake was triggered from pure thrust fault with an NE-SW compression stress direction. In some cases where seismic energy flux failed to discharge through these lines, the process is accompanied by reverse faults, as is that of Lezha-Ulqini area. Some increasing of seismic activity was registered at the Durresi-Kepirodonit region during 2009 where the strongest earthquake occurred on the 7th of March at 17:51 (UTC), magnitude (ML = 4.5). It is necessary to underline that Durresi-Kepirodonit fault zone is located near the Albanian Orogen front, in convergence with Adria micro plate, and for this reason compress movements here are strongest ones. On the southwestern part of Albania, in the Borshi-Kardhiq fault zone a small increase of seismic activity was presented during 2009. The strongest earthquake occurred on the 25th of March at 11:23 (UTC), magnitude (ML = 4.5).

SH1/P3/ID3 **- SEISMOTECTONIC AND SEISMIC HAZARD OF YEMEN YEMEN IS LOCATED ON THE SOUTH WESTERN CORNER, OF THE ARABIAN PLATE, NAMELY ON THE EASTERN MARGIN OF THE RED SEA AND ON THE NORTHERN MARGIN OF THE GULF OF ADEN, APPOSITE AFAR DEPRESSION . THIS CONTRIBUTION PRESENTS THE EARTHQUAKE HAZARD CALCULATIONS THAT HAVE BEEN REALIZED FOR TERRITORY OF YEMEN AND ADJACENT AREA WHICH BELONG TO AN AREA OF RELATIVELY HIGH SEISMICITY THAT EFFECTED FROM TIME TO TIME BY MODERATE EVENTS IN THE LAND ,AND WITH THE MODERATE TO STRONG EVENTS IN THE SURROUNDING SEISMOGENIC ZONES(THE RED SEA AND THE GULF OF ADEN). THE EARTHQUAKE CATALOGUE FOR YEMEN INCLUDES THREE KINDS OF OBSERVATION METHOD, BASED ON THE PERIOD OF OCCURRENCE, FROM THE HISTORICAL TO RECENT SEISMIC ACTIVITY IN BEHALF THAT WITH THE TECTONIC REGIMES, WE MIGHT DELINEATED SOME SEISMIC AREA ZONES DEPEND ON THE STATISTICAL ANALYZING FOR EACH ZONE IN BEHALF THE RECURRENCE RELATIONSHIP REGRESSION,**