

of Father Eustach Tonassini at the end of 18th century. The examination of these chalices took place in the Laboratory for research in conservation at the Centre of collections of the Swiss national museum using only non-destructive methods. More precisely, binocular microscope on a modified stand was used to observe the internal features of the stones, long- and short-wave ultraviolet lamp to see their luminescence, x-ray fluorescence (XRF) for chemical and Raman spectrometer associated with a microscope for spectroscopic/vibration analysis.

After the examination, it is found that all studied gems are natural; neither imitations nor synthetics were identified. It seems also, after studying pearls' chemistry, that all are of saltwater origin. Moreover, comparing our results with those observed by Father Tonassini, it appears that what he had correctly all the rubies, except of some which are dark coloured almandines. He had correctly identified all diamonds too, amethysts (except of two which were dark coloured almandines), sapphires (except of one which is olivine) and emeralds (except for the big stones which are olivines). All the stones that he called "chrysolith" are olivines (the gems quality is a.k.a. peridot), these called "Hyakinths" grossulars and those called "Topaz" are either citrine or grossulars. Finally, Father Tonassini in his manuscript mentioned that the gems are "orientalisch", *i.e.* from oriental countries. Studies of gems inclusions did not exclude this possibility. However, more research is needed in order to study better the possible geographical origin of these stones.

Shear-wave Q determination for the Upper Crust of Western and Central Slovenia

Kastelic V.¹, Kiratzi A.², Benetatos C.², Živčić M.³ and Bajc J.⁴

¹Department of Geology, University of Ljubljana, 1000 Ljubljana, Slovenia

* now at Istituto Nazionale di Geofisica e Vulcanologia, 00143 Roma, Italy, vanja.kastelic@ingv.it

²Department of Geophysics, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece, kiratzi@geo.auth.gr

³Environmental and Spatial Planning Agency of the Republic of Slovenia, Seismology and Geology Office, Dunajska 47/VII, 1000 Ljubljana, Slovenia, mladen.zivcic@gov.si

⁴Faculty of Education, University of Ljubljana, Kardeljeva ploščad 16, 1000 Ljubljana, Slovenia, Jure.Bajc@pef.uni-lj.si

We have estimated the quality factor, Q_{β} for shear-waves for western and central Slovenia for five frequency bands centred at 0.8 Hz, 1.5 Hz, 3.0 Hz, 6.0 Hz and 12.0 Hz. We used 150 high quality broadband waveforms, from 15 shallow (depth ≤ 8 km) aftershocks of the 2004 (M_w 5.2) krn mountain earthquake sequence in NW Slovenia. Magnitudes (M_L) range from 2.5 to 3.5 and epicentral distances from 16 to 138 km. Our results show that Q_{β} varies with frequency f according to the power law $Q_{\beta}=83f^{0.80}$ or $Q_{\beta}^{-1}=0.012f^{0.80}$. Comparing our results to those previously obtained for the region of Friuli-Venezia-Giulia in the Southern Alps, both show high values of seismic wave attenuation that is typical of seismogenic active regions and among all sets of data we can observe a good agreement.

Polygenetic history of the Chasanbali opicalcite breccias in Thessaly, Greece

Kati M.¹, Magganas A.¹, Melfos V.² and Voudouris P.¹

¹Department of Mineralogy & Petrology, Faculty of Geology & Geoenvironment, National & Kapodistrian University of Athens, Panepistimioupolis 15784, Athens, Greece, kati@geol.uoa.gr, amagganas@geol.uoa.gr, voudouris@geol.uoa.gr

²Department of Mineralogy-Petrology-Economic Geology, School of Geology, Aristotle University of Thessaloniki, 54124, Thessaloniki, Greece, melfosv@geo.auth.gr

The "opicalcite" of the Chasanbali area in Thessaly, central Greece is a characteristic element of the Eastern Thessaly ophiolite complex, which is mainly regarded as constituting a segment of the Mesozoic Vardar Ocean overthrust onto the Pelagonian continent during the Eohellenic orogenic phase of the Hellenides. It is located in stratigraphic contact with the