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A comparison of crustal models resulted from deep seismic refraction, receiver function and surface wave dispersion data for some broad band stations of Romania

V. RAILEANU, B. GRECU, D. TATARU, and C. IONESCU

NATIONAL INSTITUTE FOR EARTH PHYSICS, Bucharest-Magurele, Romania (raivic@infp.infp.ro, 40 21 493.00.52)

The deep structure of Romania is better known in and around Vrancea zone due to the its seismicity. Besides some near vertical deep seismic reflection profiles recorded in the 1990s two deep seismic refraction lines investigated the crustal structure in 1999 and 2001. Crustal models resulted from these surveys have brought new illumination of seismic velocity structure in the Vrancea region and its surroundings. Although these investigations provided detailed crustal information along their path large areas of country are still lacked of local crustal information.
Romanian seismology monitoring network had a large extention in the last decade by increasing the number of Broad Band (BB) instruments from a few pieces in the 2001 year to as much as 35 at present. This fact has opened a new opportunity in getting of local crustal models using seismic data recorded at BB stations.
In a first stage a comparison of crustal models derived from teleseismic data at some BB stations located on or in vicinity of the large angle seismic lines will be compared with crustal models of seismic lines in order to calibrate the two data types. In a second and later stage the crustal models of the other available BB stations will cover areas without local crustal information.
BB seismic data are processed using two of the used methods: Receiver Functions and Surface Wave Dispersion.
In this stage 5-6 BB stations located in North Dobrogea, Moesian Platform, Focsani Basin, Carpathian Orogen and Transylvania Depression are used.
By comparison of the three model types in terms of depths and seismic velocities both common items and differences between models are revealed.