During the main-late and neo tectonic phases, progressive westward advance of the orogenic front was coupled with a westwards shift of the foredeep basin axis to its present location at the margin of Adriatic Sea. The External Albanides evolved out of the Ionian Mesozoic shelf sedimentary prism and the superimposed foredeep wedge. The Albanides are underlain by autochtonous continental basement was little deformed during their evolution.

The ophiolites of the Mirdita nape give rise to major gravity and magnetic anomalies, indicating that its thickness ranges between 2 and 14 km. Reflection seismic and gravity surveys carried out in the External Albanides and the Adriatic Sea define distinct structural belts which are related to different tectono-stratigraphic units.

Structuration of the Ionian and Sazani zones occurred during the late and neo-tectonic phases The carbonate dominated Late Triassic to Late Cretaceous series of the Ionian, Kruja and Krasta-Cukali zones contain several rich to very source rock intervals. In the Ionian zone Late Cretaceous, Paleocene and Eocene carbonates, Oligocene flysch type sandstone. The Tortonian Pliocene Molasse type clastics of the Periadriatic Depression.

Seismotectonic comparison of alpine collision structures: examples of recent extrusion in the Eastern Alps and in Turkey

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Introduction. The well known comparison of the movement of India towards the Himalyas with the deformation of an indenter against a plate, has allready been made by TAPONIER & MOLNAR twenty years ago. The fault pattern is similar in different parts of the Alpine chain. Two examples of „extrusion" are given:

(1) The movement of Arabia agaist Anatolia and Iran (we focus on the border zone of Arabia near the East Anatolian Fault and the extrusion of Anatolia).

(2) The movement of the African promonetory (Italy) against the Alps (In this part we focus on the interpretation of earthquake data in Austria and the Pannonian Basin).

As a consequence, an extrusion of crustal parts can be observed more or less normal to the maximum pressure axis. This movement continues until now.

The following features are discussed: (1) Earthquake data and length of seismic catalogues. (2) Faults from geologic investigation and from satellite images. Can the activity be checked properly? (3) Measurement of the velocity of plates. Magnitudes of velocity can be given by GPS and SLR measurement which indicate that Italy moves relative to Europe with 0.7 cm/year and that Arabia moves relative to Anatolia with 3-4 cm/year. (4) Fault plane solutions. Examples of fault plane solutions are given to characterize the kind of motion. The two types of earthquakes can be distinguished due to fault plane solution: strike slip movement and thrust-type movement.A tectonic interpretation is given.

The common inversion of the seismological and DSS data - New traveltime tomography method and results for Europe

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A new method of Taylor approximation of non-linearity of 3-D problems of seismics based on the wave equation and eikonal equation solution has been worked. It is shown that Taylor approximation of 3-D inverse traveltime problems has the following advantages over the linearization method. (1) It ensures a considerable gain as to the non-linearity approach accuracy. (2) It is valid with fewer constraints imposed on the velocity. (3) It is not need by the choice of reference velocity approach. (4) It does result in a problem correct by Tikhonov, instead of an essential incorrect one. (5) It involves significant reduction in the dimension of the problem for numerical inversion. (6) It is equally valid for the solution in Cartesian and spherical coordinates. The method is easily applied to interpret 3-D data of seismology and 2-D DSS data as well profile and spatial CMP data of seismic reflection and refraction wave exploration.

We describe processing and inversion of the observed seismic data by new method. The principled detailing of P-velocity model of the mantle obtained from the Bulletins of the ISC is only possible when using following additional data for every region: (a) the arrival and second times of the P-wave observed on long-range and DSS profiles, (b) data (absent in the Bulletins of the ISC) on the arrival and second times of the P-wave from a weak near earthquakes observed by seismic stations of the regional networks, (c) the second times of the P-wave in the range of epicentral distances of 12-25 degree determinate from records of major earthquakes, (d) the arrival times of the P-wave