important influence on the paleoenvironment of the East Slovakian Basin. Definition of main tectonic events is based on structural and sedimentological observations. The eustatic oscillations are reflected in the coastal onlaps and changes in shallow water environment. The sea level rise or fall were defined by paleoecological study of foraminiferal associations in the offshore environment. The correlation of constructed curves for the environment paleodepth and coastal onlap with global reference curves shows some discrepancies, caused mainly by tectonic events during the basinal development.

In contradiction to the Early Miocene global sea level rise the, Eggenburgian paleoenvironment of the East Slovakian Basin changed from the deep water high-energy to the shallow water high-energy due to collisional tectonics, followed by an uplift and hiatus during the Ottangian. The Karpbian transgression can be correlated with global coastal onlap, but the intra Karpbian sea level oscillations were tectonically controlled in contradiction to the Badenian ones, and were caused by the global sea level rise in the Lower Badenian and by a global sea level fall at the end of the Middle Badenian. The Upper Badenian transgression and coastal onlap are the last well observed global events in the sedimentary record of the East Slovakian Basin. The Sarmatian gradual shallowing, or local sea level fall was mainly controlled by synsedimentary tectonics during the basin development.

Nappe tectonics and source areas of the Magura Flysch

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The Magura Flysch area is situated at the contact of the Bohemian Massif and the West Carpathians. The data from this area include results from a number of deep boreholes (up more 6 km deep) and an extensive complex of geophysical measurements. The analysis of frequency characteristics of seismic and gravity data will bring the data about composition of density balanced cross-sections of the upper layer of the crust along selected seismic profiles and tracing of tectonic elements. The impact of the thrusting of the Alpine nappe on the deformation of the crystalline complexes and their sedimentary cover will be studied. Geochemical investigation of rocks is focused on those compounds which give the best evidence of the sedimentary environments and postdepositional alterations under increased temperature and pressure. Organic matter and clay minerals are the most sensitive indicators of these factors. The sedimentological research will include taxonomic detailed research of selected leading and index species and testing their stratigraphic range using planktonic foraminifers and nannofossils. Thanathocenosis of the foraminifers will especially be used for the dating of the paleoceanographic events and for the correlation of the sedimentary areas of the Flysch Belt units. Conglomerate layers of the Magura Flysch contain locally abundant granitoid pebbles. The ages of three granite pebbles were roughly constrained using chemical monazite dating. The ages fit to the Devonian–Carboniferous boundary. The age and geochemistry of the granite pebbles from the Magura Flysch are similar to the Variscan I/S transitional granites of the Western Carpathians. Several hundreds of microprobe analyses of detrital garnets were evaluated. Generally, great similarity among detrital garnet assemblages of the Upper Viséan graywackes (Moravo–Silesian Culm) and of the Paleogene sandstones was observed. A synthesis of new data in a geodynamic model of evolution of the Magura nappe will include the mechanism of basin opening and filling, orogenesis and formation of nappe structures.

Evolution of the Pieniny Klippen Belt Basin — some evidence from subsidence analysis

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The Pieniny Klippen Belt (PKB) is developed as a narrow zone and separates two major structural parts of the Carpathian range: the Inner and Outer Carpathians. It corresponds structurally to one of the main discontinuity lines within the Earth’s crust in the Carpathians, along which the Moho surface suddenly dips northwards. PKB is composed of strongly deformed Mesozoic and Palaeogene rocks. The Mesozoic rocks include various types of limestones, radiolarites, shales and siliciclastic turbidites, deposited in a separate (Alpine–Carpathian) branch of the Northern Tethys. The Pieniny Klippen Belt Basin (PKBB) is characterised in the palinspastic reconstruction by latitu-