

**Abstracts of Acta Montana, ser. A, No. 12 (107), Prague 1998**

Avramova-Tacheva, E., Košťák, B., Dobrev, N.	PRESENT DYNAMICS OF A LANDSLIDE PROCESS IN THE BLACK SEA COAST REGION N OF VARNA (BULGARIA)	5
---	---	---

**Abstract**

Complex extensometric monitoring in the main scarp of a Black Sea coast block-type slope deformation has shown creep movements in the underlying clayey-marly beds of Sarmatian limestone blocks and also block deflections influenced by earthquakes. Prognosis of a mechanism relevant to the local geological conditions of the deformation is given. Necessary measures including monitoring are recommended to be accepted regarding the reality of extensive landslides that occurred recently here, and resulted into vast damage to this densely populated tourist.

Miloš VENCOVSKÝ	POSITION ANALYSIS OF ROCK BURSTS IN THE AREA OF THE MAYRAU MINE SHAFT PILLAR	17
--------------------	---	----

**Abstract**

In the area of the Mayrau Mine shaft pillar (Kladno Coal-Mining Area) foci of rock bursts, generated as a result of mining operations being carried out inside the pillar, have been monitored and localized since 1994. These foci can be localized due to the local seismic network, established in the area over recent years, and consisting originally of 9 seismic stations (Fischer, 1992), located on the surface (4 stations), as well as below the surface (5 stations). The rock bursts were monitored in an effort to discover the geometric relations between the mining operations and the occurrence of these bursts. The principal purpose of this research was to acquire knowledge which would enable the prediction of burst zones with regard to planned exploitation, and thus to contribute to the safety of mining operations in this mine.

Číž R., RUDAJEV V., ŽIVOR R.	Mining Tremor Activity in the Area of the Mine Kladno II- Mayrau after Ending of Mining	5
---------------------------------	--	---

### **Abstract**

The mining in the shaft pillar of Kladno II - Mayrau has been terminated on June 30, 1997 and the mine cavities were gradually flooded. The drifting of mine openings, which is the main initiator of the occurrence of mining tremors, has been practically ended already by March 31, 1997. Acoustic and convergence measurements were carried out, at the given location, till the end of extraction. Seismic monitoring from the surface stations is still in due course till the present time. Basing upon these measurements, the decrease of rock-bursting activities and changes in the spatial distribution of foci has been proved and the periodicity of the occurrence of rock bursts in time has been evaluated. The courses of convergence and of seismoacoustics emissions were observed from the viewpoint of a possible prediction of the occurrence of mine tremors.

Roman ŽIVOR	CONVERGENCE MEASUREMENT ON THE MINE MAYRAU	65
-------------	--	----

### **Abstract**

The submitted article contains measurement results of the convergence of mine openings on the mine Mayrau (Kladno coal district), carried out in connection with the research of induced seismic phenomena. Potentiometric distance sensors were used for the measurements and the measured data were recorded on a surface PC. Two measurement sites were used to check the convergence rate and value and namely their affecting by induced seismic events, recorded by the local seismic network. A very pronounced effect of significant seismic phenomena, on the course of convergence, could be established. However, the convergence measurement results did not have any prognostic character, because they were affected always simultaneously with the occurrence of a seismic event. However, these measurements enable the correctness of the determination of location of induced seismic event foci to be confirmed or, eventually, they may draw the attention to eventual errors in their location.

Karel HOLUB	Some Man-Made Sources of the Seismic Noise	83
-------------	--	----

### **Abstract**

Short-period seismic noise was observed during various seismic field experiments performed on the territory of the Czech Republic. Analogue as well as digital data were processed with the aim to receive the amplitude-period relationship and the frequency content of seismic oscillations. Regardless of the essential purpose of the above seismic experiments performed in the past and nowadays as well, there are summarized in the present paper. The results of the experiments concerning seismic noise generated by man-made sources only. Traffic and industry were identified in the course of experiments as predominant sources of disturbances having periods and/or frequencies and amplitudes of oscillations closely linked with the character of the respective source, source-receiver distance and basement properties.

Karel HOLUB	A PRELIMINARY PROPOSAL OF A LAYOUT OF SEISMIC STATIONS IN THE ČSM MINE, CZECH REPUBLIC	99
----------------	---	----

### Abstract

While a local network of seismic stations was established gradually in the western part of the Karvin part of the Ostrava-Karviná Coal Basin, its eastern part has not been monitored reliably at all. Therefore, it was planned to build a local microarray in the mine ČSM with the aim of reaching better conditions to detect and record even weak seismic events induced by mining operation in this mine field. An optimum layout of the sites of observation chosen in advance is searched. The first step to this problem was based on an analysis of the influence of inaccuracy in arrival time of P-wave determination. To estimate qualitatively resulting inaccuracies in localizing approach applied, error figures for two different accuracies in arrival times determination and coincidence criteria were computed.

Jaromír JANSKÝ	Computation of Ray Amplitudes in Radially Inhomogeneous Media with Sloping Earth Surface	115
-------------------	---	-----

### Abstract

A program for computation of three-component ray synthetic seismograms in radially inhomogeneous media was modified to account for sloping Earth surface. The amplitude record can be significantly different in this case as compared to the case of spherical surface. The dominant part of this difference is due to the free surface conversion coefficient. The 3-D influence of the free surface slope in relation to the azimuth and angle of the incidence of the P wave to the recorded vertical and horizontal components of displacement is demonstrated in this paper.

Josef HANZLÍK	Mineral Water Springs and the Seismic Activity within the Western Bohemian Area	125
------------------	--	-----

### Abstract

Springs of natural mineral waters within the Western Bohemia area represent the meaning natural phenomenon as regard their varied composition and wide occurrence. The regimen of these waters has been influenced both a man-made activity and seismic activity that is known for long time. In this paper possibilities and conditions are appraised concerning a correlation of seismic phenomena with changes of several parameters of mineral water springs. The most suitable indicators for an observation of changes, induced by natural processes, are radon and carbon dioxide in the gaseous phase of the mineral water outflow. The radon is sensitive on shocks with the low energy.

**Abstract**

The Blatná-type monzogranites and granodiorites are a part of a composite magmatic complex of Variscan age emplaced in a ductile shear zone on the boundary of the Bohemicum and the Moldanubian terranes. In their mineral and chemical composition they are closest to the hybrid granites (H-granites). Their origin is associated with the processes of mixing of the differentiated, high-potassium, mantle-derived magmas with metavolcanics and metasediments of the upper crust and with subsequent extensive homogenization of the granitic melt.