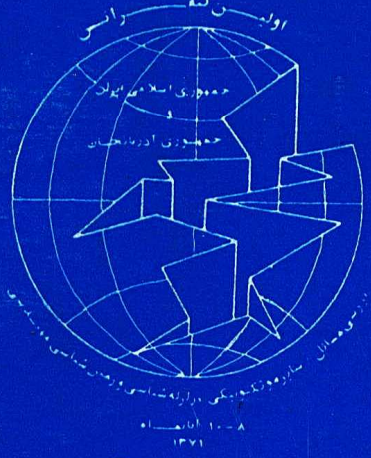

اولین کنفرانس بررسی مسائل

سایرمونکتونیکی - زلزله‌شناسی و زمین شناسی مهندسی

جمهوری اسلامی ایران و جمهوری آذربایجان

دانشگاه تبریز

۸-۱۰ آبانماه ۱۳۷۱

The first conference or
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Tabriz University

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چکیده مقاله‌ها :

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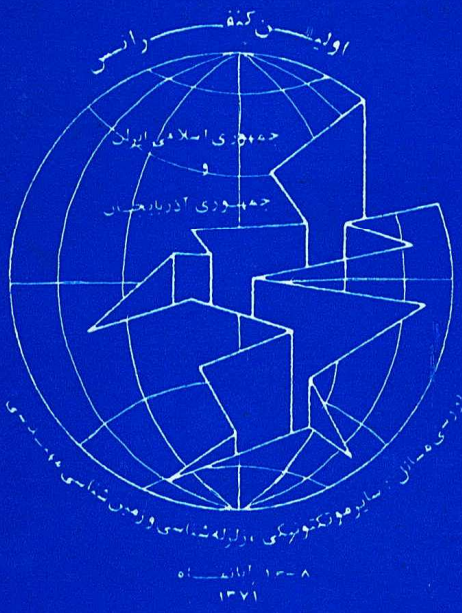

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دانشگاه تبریز - گروه زمین شناسی

MODERN PROBLEMS OF SEISMOLOGY

Kerimov I.G.

Republic of Azerbaijan

Wide range of problems, investigated during last 12-15 years by Deep Sesimic Investigations Labora-ory and connected with new ideas of earthquake's source regions physics, earthquake energy estimation, the possibility of main shock occurence prediction, geophysical wavefields interrelationship, possibility of remote monitoring of medium's strained state is considered in present paper.

Seismic events interrelationship investigations in regional and local ranges based on new ideas of natural, "owned" and "not-owned" earthquakes have allowed us to establish their high correlation and develop the representation of seismic process.

Seismic events magnitude distribution study have allowed us to suggest that the main factor of seismic energy accumulation nearly for all depths is represented by layered medium. In other words in most cases the sizes of seismic blocks is limited by the average layer's thickness about 8-12 Km and tectonic faults planes.

NONLINEAR MANIFESTATION IN SEISMOLOGY: THEORY AND EXPERIMENT

Abbasov V.J., Kerimov I.G., Ramazanov T.K.

Republic of Azerbaijan

Mathematical models constucting for nonlinear wave processes in inhomogenuious media description by using dispersion and dissipation phenomena is one of the most actual problems of contemporary wave theory. Its necessity is connected with unability of linear theory to explain deep physical sense of phenomena taking place during waves migration. All-purpose models creation taking into account all physical factors is hardly possible. However, experimental methods alowes to emphasy main parameters and to omitless essentual ones.

The effects stimulating solitary waves creation (solitones), existence conditions of its common and "dark" packages are investigated in paper. Theoretical and exrepimental sides of problem are considered.

For the first time in geophysical dedium, on the basis of digital and analogue forms of registration, solitones packages has been detected, analysed their bahavior before and after seismic events and theoretical basis of complicated impulses description has been formed.

INDUCED SEISMISITY

Ahmedov N.A., Kerimov I.G.

Republic of Azerbaijan

The problem of induced seismicity is excludingly important in seismological investigations and for the first time in world practice, that problem is considered and investigated on a new physical basis.

The investigations carried out in our Laboratory have shown that all of the former estimations of seismicity and seismic hazard considered and took into account just idealized model of medium in it stable state. But real medium is subjected to considerable dynamic changes induced as by nutural factors and as a result of human activity such as weak and powerfull explosions, large industrial objects building, oil and gas extraction or water pumping. New physical understandings of the problem have appeared as a result of investigations, that allow us to estimate with better precision all possible ecological destructions induced by human activity.

Since 1978 has been detected a number of 'strange' earthquakes which energy emission surpass its original assesment done by geological and geophysical factors consideration. Results received has allowed us to come to conclusion that the possible mechanism of a lot of earthquakes occured on the territory of Caucausus, Middle Asia and Iran is increased and even induced by nuclear explosions.