

# SYNCHRONOUS SEASONAL CHANGES IN HYDROLOGICAL REGIME AND WEAK EARTHQUAKE ACTIVITY IN GARM REGION

A.Ya. Sidorin

Schmidt Institute of Physics of the Earth, Russian Academy of Sciences, Moscow, Russia

**Abstract.** The distinctive annual periodicity in weak earthquake activity in Garm region and its possible origin were described in the author's previous papers. In this paper we make an attempt to relate the annual earthquake periodicity to such a phenomenon as hydroseismicity. Within the frameworks of this study we compare the seasonal variations in seismicity, snow height and Surkhob River water level. As a result, we revealed very good coincidence of the form of spring changes in snow height and seismicity. It is important that according to averaged data seismicity follows snow height changes with some lag. However, we found a couple of cases in some years, when the number of earthquakes began decreasing simultaneously or even a little before snow melting. We also discovered that annual changes in the river water level and seismicity occur in the opposite phase. Possible approaches to interpretation of the results are discussed.

*Keywords:* seismicity, annual periodicity, seasonal changes, Garm region, hydroseismicity.