Contribution ID: **42** Type: **Talk**

Very high energy observations of Low-Mass X-ray binary 4U 2129+47

4U2129+47 is classified as a Low-Mass X-ray Binary containing a neutron star. It is actively studied in the optical and X-ray. It was found that exhibit both outburst and quiescent states. The spectroscopic investigations of optical counterpart of neutron star in this binary system shown that the 4U 2129+47 is a hierarchical triple system. X-ray observations shown the evidence for a spatially extended Accretion Disk Corona. This type of object is considered as a possible sources of high energy emission generated due to the interaction between the wind of the neutron star pulsar and accretion disk. Observations of 4U 2129+47 system with SHALON telescope were performed at the period 1999 to 2011 yy. Weak gamma-ray emission from this object was detected with significance of 10⊠. An integral flux above > 0.8 GeV of was measured. The modulation of detected gamma-ray emission with the orbital period of 5.24 hours is found. The hard spectrum with photon index of -.2 has been determined. Detected modulation of TeV gamma-ray flux with orbit together with the hard tail of soft X-rays detected with Chandra can be evidence of active accretion and also may point to the generation of emission through the interaction of the wind and accretion stream.

Authors: Prof. SINITSYNA, Vera G. (P.N. Lebedev Physical Institute, Russian Academy of Science); Prof. SINITSYNA, Vera Y. (P.N. Lebedev Physical Institute, Russian Academy of Science)

Presenters: Prof. SINITSYNA, Vera G. (P.N. Lebedev Physical Institute, Russian Academy of Science); Prof. SINITSYNA, Vera Y. (P.N. Lebedev Physical Institute, Russian Academy of Science)