

Short time scale pulse stability of the Crab pulsar in the optical band.

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The stability of the optical pulse of the Crab pulsar is analysed based on the 1 μ s resolution observations with the Russian 6-meter and William Herschel telescopes equipped with the APD avalanche photon counter and PSD position-sensitive detector. The search for the variations of the pulse shape along with its arrival time stability is performed. Upper limits on the possible short time scale free precession of the pulsar and the stochastic variable optical emission component are placed. The fine structure of the main pulse is studied.