# Optical studies of neutron stars and their surroundings with the 6-meter telescope of SAO RAS

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The results of the on-going program to study optical counterparts of pulsars and candidates to isolated neutron stars (NSs) and to search for pulsar wind nebulae (PWNe) in the H$\alpha$ line at the 6-meter telescope of SAO RAS are presented. Broad band and narrow band observations have been carried out with the prime focus photometer and the focal reducer SCORPIO (`http://www.sao.ru/hq/moisav/scorpio/scorpio.html`) in the image mode. There are close and/or highly energetic (high velocity) NSs and pulsars, such as RX J0007+7302, AXP 4U0142+61, PSR B0823+26, PSR B1951+32, RBS 1774, PSR B2334+61, in a target list. Upper limits on the level of detection and flux estimates of the selected objects have been obtained.