XIII SERBIAN CONFERENCE ON SPECTRAL LINE SHAPES IN ASTROPHYSICS August 23-27, 2021, Belgrade, Serbia Book of Abstracts, Eds. A. Kovačević, L. Č. Popović and S. Simić Astronomical Observatory Belgrade, 2021

Progress Report

THE PHOTOMETRIC REVERBERATION MAPPING OF ACTIVE GALAXIES IN SAO RAS

E. Malygin, E. Shablovinskaya, R. Uklein and A. Grokhovskaya

Special Astrophysical Observatory of Russian Academy of Sciences (SAO RAS), Nizhnii Arkhyz, Karachai Cherkessian Republic, 369167, Russia

E-mail: male@sao.ru

The most popular method to estimate the supermassive black hole (SMBH) mass in active galactic nuclei (AGN) is reverberation mapping. This classical method is based on measuring the time delay between the continuum flux and the flux in the broad emission line. We apply the method of photometric reverberation mapping in medium-band filters, adapted for observations on the telescopes of SAO RAS, primarily 1-m Zeiss-1000. We present the results of ongoing long-term photometric monitoring of several AGN and give the estimates of their SMBH masses.

This work was supported by the Russian Science Foundation (grant no. 20-12-00030 "Investigation of geometry and kinematics of ionized gas in active galactic nuclei by polarimetry methods").