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Coordinated integral and optical observations of SS433

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Abstract

Results of simultaneous INTEGRAL and optical observations of galactic microquasar SS433 in May 2003 are presented. The analysis of the X-ray and optical eclipse duration and hard X-ray spectra obtained by INTEGRAL together with optical spectroscopy obtained on the 6-m telescope allows us to construct a model of SS433 as a massive X-ray binary. X-ray eclipse in hard X-rays has a depth of ~ 80% and extended wings. The optical spectroscopy allows us to identify the optical companion as a A5-A7 supergiant and to measure its radial velocity semiamplitude Kv = 132 km/s. A strong heating effect in the optical star atmosphere is discovered spectroscopically. The observed broadband X-ray spectrum 2-100 keV can be described by emission from optically thin thermal plasma with kT ~ 15 - 20keV.

Keywords

INTEGRAL, Optical spectroscopy, SS433, X-rays