Invited Lecture

SUPERSOFT Be BINARIES IN THE MAGELLANIC CLOUDS

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Supersoft X-ray sources (SSSs) are well known since several decades. The vast majority of the well studied ones are associated with in-shell hydrogen burning white dwarfs. Nevertheless many SSSs are not yet well understood and some of them are likely to be close binary systems, where the primary is a hot giant star with an excretion disk (Be) and the secondary is a white dwarf, a neutron star or even a black hole. Because of their large intrinsic luminosity, spanning from $L_{SX} \sim 10^{40}$ erg s^{-1} for a very short period down to $\sim 10^{34}$ erg s^{-1} when the white dwarf is cooling, these sources can be observed also in external galaxies, like for example the Magellanic Clouds. Here we present recently published results about four supersoft Be binaries (Cracco et al. 2018), three of them detected in the SMC and one in the LMC: XMMU J010147.5-715550, SUZAKU J0105-72, MAXI J0158-744, and XMMU J052016.0-692505. They were spectroscopically observed at the Southern African Large Telescope (SALT) in low resolution mode (RSS spectrograph) and high resolution mode (HRS spectrograph). With the aim to derive some parameters of these binary systems from the variation of their double peaked emission line profiles, we decided to monitor with HRS two of the four sources (XMMU J01 and XMMU J05) that seemed more promising on the basis of the first observations. We present here the results of the preliminary analysis. The monitoring of the other two sources was recently proposed to SALT and we expect to receive new data since next summer when both the Magellanic Clouds become visible again.