



X-RAY ASTRONOMY 2019

Current Challenges and New Frontiers in the Next Decade

8-13 September 2019
CNR/INAF Research Area, Bologna, Italy

Contribution ID: 9

Type: **Poster**

Comparison of spectral models for disc truncation in the hard state of GX 339-4

Friday, 13 September 2019 14:50 (2 minutes)

We probe models of disc truncation in the hard spectral state of an outburst of the X-ray transient GX 339-4. We test a large number of different models of disc reflection and its relativistic broadening, using two independent sets of codes. We apply it to a Rossi X-ray Timing Explorer spectrum in the rising part of the hard state. Our statistically best model has a physical thermal Comptonization primary continuum, requires the disc to be truncated at a radius larger than or equal to about two ISCO radii for the maximum dimensionless spin, and predicts a disc inclination in agreement with that of the binary. A paper presenting our results has been published in MNRAS (arXiv:1811.09145).

Topic

Affiliation

Nicolaus Copernicus Astronomical Center PAS

Primary author: Ms DZIEŁAK, Marta (Nicolaus Copernicus Astronomical Center PAS)

Co-authors: Prof. ZDZIARSKI, Andrzej (Nicolaus Copernicus Astronomical Center PAS); Dr SZANECKI, Michał (Nicolaus Copernicus Astronomical Center PAS); Dr DE MARCO, Barbara (Nicolaus Copernicus Astronomical Center PAS); NIEDŹWIECKI, Andrzej (Łódź University); MARKOWITZ, Alex (Nicolaus Copernicus Astronomical Center PAS, University of California)

Presenter: Ms DZIEŁAK, Marta (Nicolaus Copernicus Astronomical Center PAS)

Session Classification: POSTER SESSION