

A particular stellar-mass black hole GRS 1915+105: 15 years of X-ray and radio monitoring

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GRS 1915+105 is a particular stellar-mass black hole in a binary system. This source has been active since its discovery in 1992, and shows complex timing and spectral properties that are quite different from other black hole binaries. We collected 15 years of data from RXTE (X-ray) and Ryle (radio) telescope to reveal a strong correlation between (i) the radio flux that comes from the jet and the flux of the iron emission line that comes from the disk and (ii) the temperature of the hard X-ray corona and the amplitude of a high-frequency variability component that comes from the innermost part of the accretion flow. Our findings show that the energy that powers this black hole system can be directed in different proportions either mainly to the X-ray corona or to the jet. These facts, plus our modelling of the variability in this source, suggest that in GRS 1915+105 the X-ray corona turns into the jet.

Topic

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