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The accretion-ejection connection in the Galactic black hole candidate X-ray binary MAXI J1836-194

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There is a universal connection between the accretion and ejection phenomena that are observed in black holes across the mass scale. Quantifying this relationship is the first step in understanding how jets are launched, accelerated and collimated. X-ray binaries are ideal systems to study this relationship, as they evolve on human timescales. In outburst, their luminosities increase by several orders of magnitude, with the X-ray emission from the accretion disk and the radio emission from the relativistic jets undergoing dramatic, coupled changes. I will present the results of a multiwavelength radio through to X-ray observing campaign of the Galactic black hole candidate X-ray binary MAXI J1836-194 during its 2011 outburst. Our simultaneous observations provide an unprecedented insight into the processes occurring around a black hole during outburst, allowing us to track the evolution of the launching region of the jet as the accretion flow changes. This will help to understand the launching of accretion-powered jets on all scales, from X-ray binaries to their larger-scale analogues, AGN.

Primary author: Dr RUSSELL, Thomas (ICRAR/Curtin University)

Co-authors: Prof. RUSSELL, Dave (New York University Abu Dhabi); Dr ALTAMIRANO, Diego (University of Southampton); Dr MILLER-JONES, James (ICRAR/Curtin University); Dr CURRAN, Peter (ICRAR/Curtin); Dr SORIA, Roberto (ICRAR-Curtin University); MARKOFF, Sera (University of Amsterdam)

Presenter: Dr RUSSELL, Thomas (ICRAR/Curtin University)

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