

Towards a determination of H_0 in JVAS B1030+074: a detection of the VLBI jet in both images

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We have recently measured the time delay between the two images of the gravitational lens system JVAS B1030+074 using archival VLA monitoring data. Impressive polarization variability gives a value of 146 ± 6 days for this long sought-after parameter. In principle, it is now possible to determine H_0 with this lens and focus must turn to improving the lens model. VLBI can potentially provide modelling constraints if the lensed source contains a radio jet, but although a prominent example is seen in the brighter image, its counterpart in the fainter (and therefore smaller) image has never been convincingly detected. We have performed our own analysis of the existing VLBI 1.7-GHz data and demonstrate that in fact the jet in image B is observable and see similar structures in multiple epochs. We also discuss prospects for detecting the third image in this system.