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e-EVN detection of AGN activity in NGC 2617

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NGC 2617 is a Seyfert 1.8 spiral galaxy at $z=0.0142$ (~60 Mpc, 1 mas = 0.3 pc) that is currently in outburst. The central region of NGC 2617 has brightened by 1.3 magnitudes in April 2013, while there was a dramatic change (Seyfert type 1 now) in the optical spectrum as well, compared to archival 6dF observations taken 10 years earlier (Shappee et al. 2013, ATel #[5010](#)). There was increasing X-ray activity reported by *Swift*/BAT (Shappee et al. 2013, ATel #[5059](#)) and *INTEGRAL* (Tsygankov et al. 2013, ATel #[5103](#)).

We carried out European VLBI Network real-time e-VLBI observations at 1.6 GHz on 2013 June 7. Compact radio emission was detected with a flux density of 1.5 ± 0.3 mJy, positionally coincident with the nucleus of NGC 2617. These high resolution data constrain the source size to be less than 4 milliarcseconds, corresponding to a projected linear size less than 1.2 pc. The implied lower limit on the brightness temperature is $8.3E+7$ Kelvin, indicating a non-thermal origin for the radio emission. The high brightness temperature and radio luminosity ($4.8E+37$ erg/s) strongly indicate radio activity in the nucleus of NGC 2617. It is currently not known if the radio jet existed before the outburst, or if it was recently activated. Further observations are planned.

We thank the EVN PC for approving the 7-hour e-EVN ToO observations during the EVN session. The participating telescopes were Westerbork Synthesis Radio Telescope (Netherlands), Effelsberg (Germany), Torun (Poland), Onsala (Sweden), Jodrell Bank Lovell Telescope (UK), Medicina (Italy), Noto (Italy), and Hartebeesthoek (South Africa). e-VLBI research infrastructure in Europe is supported by the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement RI-261525 NEXPReS. The EVN is a joint facility of European, Chinese, South African and other radio astronomy institutes funded by their national research councils.

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