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Astro Space Center
RadioAstron Newsletter
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100 revolutions around Earth!

We would like to thank Russian and international RadioAstron partners, scientists and engineers for their hard work on the occasion of Spektr-R completing 100 revolutions around the Earth since the launch of the space telescope! The spacecraft continues the key science program which started in mid-2013. Most of the teams have already performed the first experiments within their accepted proposals. In particular, for the first time space VLBI fringes were detected at 92 cm from an active galactic nucleus (AGN). See the Figure for details. This opens new opportunities in both studying synchrotron self-absorption in jet regions in AGNs and using AGNs at long radio wave lengths for reconstructing parameters of interstellar medium in our galaxy.

The Green Bank Earth station started active operations in September 2013. As a result, the overall accessible RadioAstron observing time has increased substantially, and the accuracy of the RadioAstron orbit reconstruction has improved very significantly. Both tracking stations, in Pushchino and Green Bank, continue to operate very reliably.

AO-2 plans

The Announcement of Opportunity 2 for RadioAstron observations in the period July 2014 – June 2015 is expected to be released in early December 2013. The AO-2 proposal deadline will be 27 January 2014. Proposals will be invited for both key science programs and general observing time.

One more software correlator becomes RadioAstron-friendly

The EVN Data processor at JIVE, also known as the JIVE SFXC correlator, has successfully received fringes in a number of RadioAstron data sets at 1.6, 5 and 22 GHz, including spectral line fringes at the latter frequency. For additional details see EVN Newsletter 36

<http://www3.mpifr-bonn.mpg.de/div/vlbi/newsletter/36/>

It is expected that a part of the upcoming RadioAstron-EVN observations within the AO-1 and AO-2 cycles will be correlated at JIVE.

The COSPAR 40th science assembly

The COSPAR 40th science assembly will be held in Moscow in early August 2014. One of the science events, E1.10, will be devoted to present and discuss RadioAstron results. Details of the meeting will be available soon from the conference web site. Everyone is invited.

<https://www.cospar-assembly.org/> & <http://cospar2014moscow.com/>

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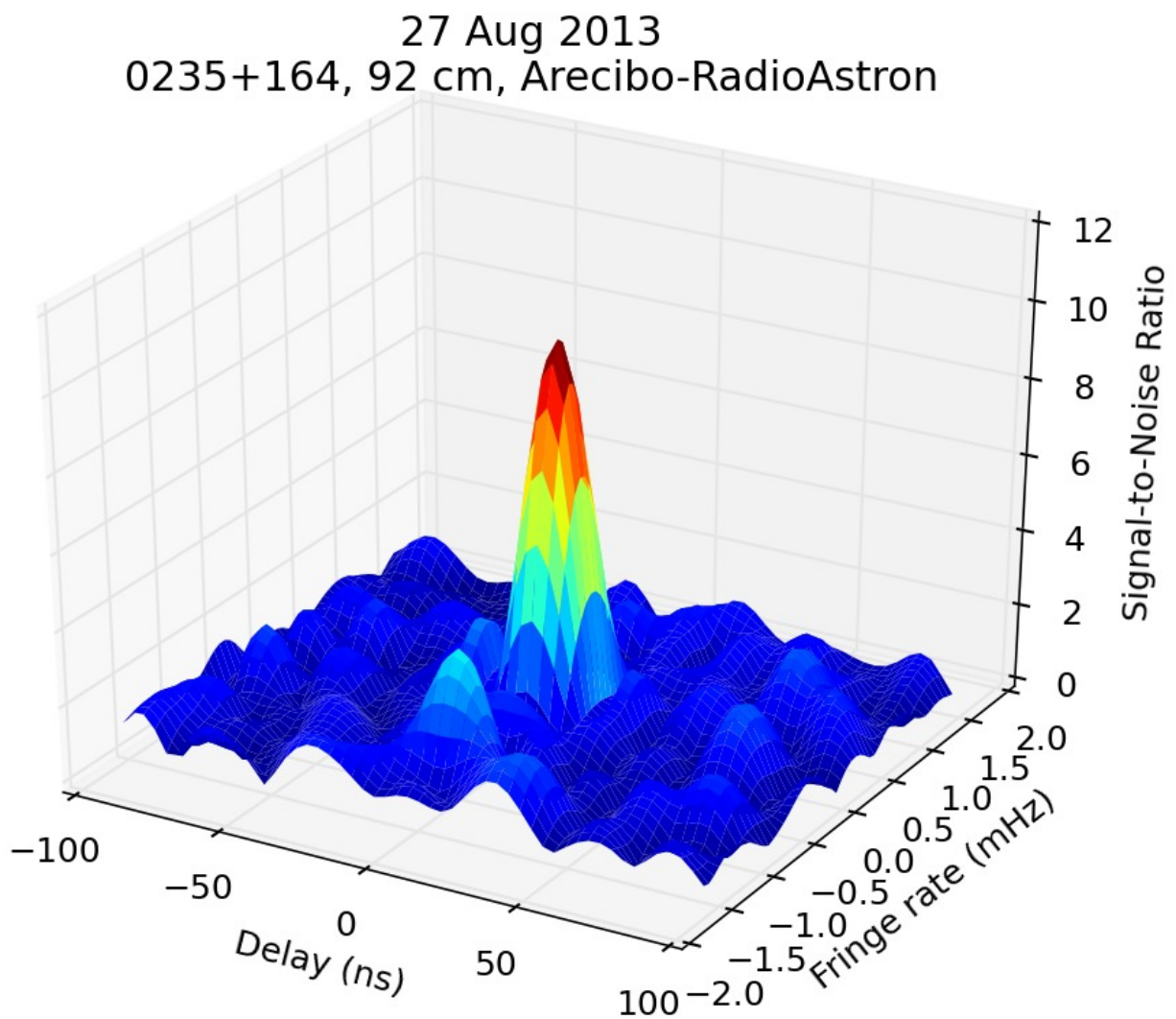


Figure 1: First successful detection of SVLBI fringes from an active galaxy at 92 cm. RadioAstron observations of the BL Lacertae object 0235+164 were performed at the projected baseline Space Radio Telescope – Arecibo of about 2.3 Earth diameters. Integration time 9.5 min, signal-to-noise ratio about 12.