Summary

RadioAstron International Scientific Council Meeting RISC-2013

June 20-21, 2013, Moscow, Russia

The RISC wishes to express their thanks and congratulations to Roscosmos, Lavochkin, and the Astro Space Center for their continued outstanding implementation of the RadioAstron program and the delivery of high quality data which has already produced exciting astrophysical results.

- The early science program has been very successful with about 600 separate segments observed of which about 92% were successful. Among the early science results are:
  - Imaging of 0716+714 at 6 cm
  - Determination of AGN brightness temperatures up to 10^{14} K and more
  - Resolution as good as 27 microarcsec on 3C 273 at 22 GHz
  - Surprisingly strong pulsar fringes at 92 cm on 0950+08 on a 222,000km baseline suggesting that the ionized structure of the ISM differs from the material structure.
  - Water masers were detected on baselines of 70,000 km and more
  - The Cep A water maser was determined to be smaller than the size of the Sun.
  - Polarization observations were made during the Early Science Program in preparation for the Key Science Program stage.

- Phase referencing has not yet been tested.

- Many early problems with spacecraft, correlation, and data transfer have been resolved.

- The spacecraft is operating within specifications except for the loss of the second C band receiver and reduced antenna efficiency, but only one communication/control system remains operational following the failure of the two other redundant systems.

- In response to AO-1, thirteen Key Science proposals were received from ~200 authors for 1800 hours and were evaluated by the RPEC. Seven programs were approved with different grades.
  - The GRTs mostly agreed to support the programs recommended by the RPEC
  - Approximately 1000 hours observing hours are planned in response to AO-1
  - Data will be correlated in Moscow, Bonn, JIVE, and possibly Curtin as appropriate

- The RadioAstron Open Skies policy is unique for Russian space science
  - All KSP publications should contain a standard acknowledgement to RadioAstron which is currently being drafted.

- Russian instrumentation for the GB tracking station is prepared and ready to be shipped to Green Bank. Discussions between the ASC and South Africa to establish a southern hemisphere tracking station in South Africa are continuing.

- The RISC offered no consensus view on how treat the data relevant to measuring the gravitational red shift.

- The RISC was pleased to receive a list of the dates and places of each of the 31 RadioAstron meetings.

- The RISC strongly urged that the results of the ESP and AO-1 need to be made available (published in refereed journals) as soon as possible which will give credibility to AO-2 proposals.

- The RISC suggested a special publication or reprint of the RadioAstron COSPAR proceedings. – Popov

- The RISC suggested developing talking points for outreach. - XC & WG

- The RISC agreed that AO-2 will include both KSP and GOT proposals and will provide guidelines for defining the classification. The RISC anticipates that GOT proposals will not involve more than 30% of available observing time. The RPEC will make recommendations to the RPL for the classification of each proposal. In order to give more time for the GRTs to consider AO-2 proposals, the schedule for the AO-2 including proposal deadlines, expectations from the technical evaluations and RPEC report will be advanced by at least one week over AO-1. Porcas, Kovalev

- The RISC suggested that the ASC provide more feedback from correlator to GRTs – Likachev.

- The Executive Committee should convene regularly.

- The RISC suggests that RISC-2014 f2f meeting be held just before or after COSPAR and that the SOC of the RadioAstron session of COSPAR request that the RadioAstron sessions be held at the beginning or end of COSPAR. The RISC further suggests that the KSP teams consider a small workshop in conjunction with RISC-2014 to exchange results and experiences. Subsequent investigation led to a possible conflict with the URSI international General Assembly scheduled for August 16-23, so that if possible, the COSPAR RadioAstron session should be requested to be at the end of the COSPAR meeting.

- The RISC approved the new membership of the RISC, RISC XC, RISC co-Chairs, and RPEC memberships. Effective July 1, 2013, the RISC Co-Chairs will be Yuri Kovalev and Phil Edwards; members of the Executive Committee Yuri Kovalev, Phil Edwards, Carl Gwinn, Andrei Lobanov, Rene Vermeulen, and Ken Kellermann; the RPEC Dave Jauncey, Tim Pearson, Misha Popov, Richard Porcas (Chair), Mark Reid, and Elaine Sadler.

- On June 22, a subset of RISC were shown the ASC DiFX correlator facility by Petr Voitsik supplemented by post-correlation analysis in PIMA and were impressed by the ease and speed in which the data are correlated, fringe fit, calibrated, imaged, and displayed.