

Report of the Radio Astronomy Visiting Committee of INAF

31 January 2015

Executive Summary

A Radio Astronomy Visiting Committee was appointed by INAF in 2014 to advise on possible actions aimed at improving the impact of Italian radio-astronomical research. Committee members are Profs. P.J. Diamond (SKAO), A. Ferrara (SNS PISA), M.A. Garrett (ASTRON), and J.A. Zensus (MPIfR). The panel conducted a series of meetings with the INAF President and his team at the Headquarters in Rome, with the leadership and staff at the Institute of Radio Astronomy in Bologna and at Medicina, at the Astronomical Observatory in Cagliari. Staff at Florence, Catania and Noto were also interviewed.

The RVC recommends that the two major structures, IRA (incl. Medicina and Noto) and OAC (incl. SRT), should be merged and organized into one united INAF Level-2 structure, under a single General Director. The General Director should implement an optimised management structure, especially addressing a coordinated assignment of resources and management for the national facilities such as the SRT and for the national projects such as VLBI, ALMA and SKA. INAF personnel working in radio astronomy in Arcetri and Catania should be invited to join the new structure.

The institutional head office of the new structure, at least initially, should not be co-located with one of the existing structures. A logical choice could be to install this within the INAF headquarters in Rome. The General Director should be present frequently at the sites and should maintain local offices there. This will help to minimise the friction generated by the reorganisation. A standing visiting committee should be formed to advise INAF and the General Director. The two top priorities for the General Director should be to complete the SRT and to bring it into full international VLBI and single-dish operation as soon as possible, and to ensure that Italy is fully engaged in the SKA project.

Recommendations of the RVC

The Italian radio astronomy effort is currently distributed across various institutes and facilities. This is a strength, but it has also led to some inefficiency and to considerable friction, especially in terms of the coherence and coordination of the overall programme. While a good collaborative partnership is observed between staff at the various institutes (especially in the area of joint technical developments), the same level of cooperation does not appear to be present at management level. This reduces the impact of Italian radio astronomy in general, and it has, to a degree, led to institutes pursuing primarily their own specific interests. The need for integrated management and control of INAF resources at the various sites is key. In particular, central control of resources and expertise is required in order to rapidly and efficiently bring the SRT into full and reliable operation for VLBI and for single dish observing modes. Only such an integrated approach will result in full scientific exploitation of the SRT by the user community. Therefore, the fusion of the two major institutes (IRA and OAC) under the leadership of a single director is a key recommendation of the panel. The new unified radio astronomy institute under a strong leadership will be well positioned to address these challenges and to implement an effective organizational coordination while maintaining and building on the existing strong local radio astronomy activities at the existing structures.

The RVC recommends the following:

1. The two major structures, IRA (incl. Medicina and Noto) and OAC (incl. SRT), should be merged and organized into one united INAF Level-2 structure, under a single General

Director.

2. The General Director should implement an optimised management structure incorporating the existing structures, especially addressing a coordinated assignment of resources and management for the national facilities such as the SRT and for the national projects such as VLBI, ALMA and SKA. One model that the General Director might consider is the appointment of a Head of Operations and a Head of R&D.
3. INAF personnel working in radio astronomy in Arcetri and Catania should be invited to join the new structure.
4. The mission of the united structure should include
 - a. to develop and to execute a comprehensive programme for facilities, research, development, and training in radio astronomy;
 - b. to provide access to top-grade national and international radio astronomical facilities for Italy;
 - c. to formulate, lead and manage a coordinated technical R&D programme in radio astronomy and to foster interaction with relevant industries;
 - d. to coordinate radio telescope facility operations and development within a coherent operational programme for all Italian radio astronomy facilities;
 - e. to ensure coherent and efficient Italian participation in international projects, in particular VLBI, ALMA the SKA.
5. The institutional or formal head office of the new structure, at least initially, should not be co-located with one of the existing structures, in order to minimise the friction generated by the reorganisation. A logical choice could be to install this within the INAF headquarters in Rome. The General Director, however, should be expected to maintain continuous contact with the radio astronomers, to be present frequently at the sites, and to maintain local offices there.
6. A standing visiting committee should be formed to advise INAF and the General Director.
7. SRT is a major facility investment. It must remain a top priority to complete the instrument and to bring it into full international VLBI and single-dish operation as soon as possible.
8. INAF participation in the SKA should be considered a top national priority as a future radio astronomical facility for Italian astronomers and should be forcefully pursued.



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