Science with the Sardinia Radio Telescope

Bologna, May 10-11, 2005

Scientific Organizing Committee

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Sponsorship

INAF–Istituto di Radioastronomia,
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FOREWORD

The workshop "Science with the Sardinia Radio Telescope" was held in Bologna (Italy) on May 10-11, 2005. During those two days the 107 participants could listen to 43 talks which covered a wide range of technical and scientific aspects of the Sardinia Radio Telescope (SRT), presently under construction near the community of San Basilio, 35 km north of Cagliari.

The purpose of this Workshop was to raise the awareness of the Italian astronomical community of the fact that in a few years from now a large (64-m) state-of-the-art radio telescope will come into operation. This is an opportune moment to think about its potential use in ways that can advance astronomical and geodetical research both on a national and international level. The direct aim of the Workshop was for the astronomers to show the science that can be done with the SRT, and to specify the instrumentation needed to successfully carry out the various projects, and for the engineers to outline the technical possibilities both present and future. In this respect, the Workshop was a logical next step in the process that has been initiated by the publication in January 2005 of the report "The Sardinia Radio Telescope (SRT). Science and technical requirements" (IRA Internal Report 371/05; see http://www.ca.astro.it/srt/srt_report_all_v2.ps), prepared by a Working Group consisting of the members of the Scientific Organizing Committee of this Workshop, under the direction of Marcello Felli.

The Workshop's audience consisted of both scientists and technicians, while to our delight an appreciable number of graduate and under-graduate students - the future users of the SRT - were also in attendance. The organizers are grateful to the speakers for their interesting contributions, and to all participants for the inspired discussions of the ideas presented during the Workshop.

The Workshop was rounded off with the presentation of the Report of the Working Group, followed by a panel discussion, chaired by Gianni Tofani. The panel-members Piero Benvenuti, Nichi D'Amico, Marcello Felli, Leonardo Testi, and Giampaolo Vettolani touched upon various technical, organisational, and financial aspects of the SRT-project. The lively discussion with the audience that followed, formed a worthy ending to an interesting Workshop.

In these Proceedings we have collected the oral contributions; we hope that they, together with the Report of the Working Group, may stimulate further initiatives on the future use of what promises to be a wonderful new instrument.

The organisers are grateful to the Istituto di Radioastronomia (IRA) and the Istituto Nazionale di Astrofisica (INAF) for financial support. Special thanks go to Barbara Neri (IRA) for taking care of much of the administrative side of the organisation in her usual efficient way.

Jan Brand, Karl-Heinz Mack, and Isabella Prandoni