

ACor: Automated Observation Scheduling and Data Management

Content

The Automatic Correlation System (ACor) is a web-based platform designed to enhance observation planning, data storage, and processing. It automates scheduling for both single-dish and interferometric modes using the VIRAC radiotelescope complex in Irbene, Latvia, which includes the RT-32, RT-16, and LOFAR radiotelescopes. Key requirements for ACor include open access, web-based functionality, and organizing observation schedules involving researchers, radiotelescope operators, and data processing specialists. This system integrates observational data into a structured database, streamlining data management and analysis workflows. If observation results are unsuccessful, the system automatically plans for rescheduling to optimize data collection efforts. By automating various tasks, ACor significantly boosts efficiency for researchers, radiotelescope operators, and data processing specialists in their daily work.

The ACor system has been developed by the “A single-baseline radio interferometer in a new age of transient astrophysics” (No.lzp-2022/1-0083), with a particular emphasis on advancing automated data processing technologies. The comprehensive functionality of the ACor system, including its capabilities in observation planning, data storage, and analysis, will be thoroughly described in the upcoming presentation. This presentation will cover how the system integrates with the Irbene radiotelescope complex, automates observation scheduling, and enhances data management, ensuring an optimized and efficient approach to observational data collection and processing.

Primary author(s) : Mrs. SKIRMANTE, Karina (Ventspils International Radio Astronomy Center)

Co-author(s) : Mr. ŠTEINBERGS, Jānis (Ventspils International Radio Astronomy Center); ABERFELDS, Artis (Latvia Republic); Mr. BEZRUKOVs, Vladislavs (Ventspils International Radioastronomy centre); Mr. ORBIDANS, Arturs (Ventspils International Radio Astronomy Center); Dr. BURNS, Ross (RIKEN)

Presenter(s) : Mrs. SKIRMANTE, Karina (Ventspils International Radio Astronomy Center)

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