ORIGINAL ARTICLE

Building a VO-compliant Radio Astronomical DAta Model for Single-dish radio telescopes (RADAMS)

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Abstract The Virtual Observatory (VO) is becoming the de-facto standard for astronomical data publication. However, the number of radio astronomical archives is still low in general, and even lower is the number of radio astronomical data available through the VO. In order to facilitate the building of new radio astronomical archives, easing at the same time their interoperability with VO framework, we have developed a VO-compliant data model which provides interoperable data semantics for radio data. That model, which we call the Radio Astronomical DAta Model for Single-dish (RADAMS) has been built using standards of (and recommendations from) the International Virtual Observatory Alliance (IVOA). This article describes the RADAMS and its components, including archived entities and their relationships to VO metadata. We show that by using IVOA principles and concepts, the effort needed for both the development of the archives and their VO compatibility has been lowered, and the joint development of two radio astronomical archives have been possible. We plan to adapt RADAMS to be able to deal with interferometry data in the future.

Keywords Astronomical databases: miscellaneous · Virtual observatory tools

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