

# THE CROSS-IDENTIFICATION, VISUALIZATION AND COMPARATIVE ANALYSIS OF ASTRONOMICAL CATALOGS IN A COMMON DATABASE RADC

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**ABSTRACT.** The Pushchino Observatory of ASC LPI have been developing in some last years database of some astronomical catalogs (Radio Astronomy Data Center – RADC, look on <http://astro.prao.ru/db/> and <http://observations.prao.ru/>). In the database have the most commonly used by radio astronomers data: survey catalogs of radio sources at different radio frequencies (as well as in other spectral bands), catalogs of the major sky objects studied in astronomy etc.

**Key words:** radio survey, astronomy catalogues, database

The Pushchino Observatory of ASC LPI has database of some astronomical catalogs and observatory observations (Radio Astronomy Data Center – RADC, look on <http://astro.prao.ru/db/> and <http://observations.prao.ru/>).

Since 2011 the database of astronomical catalogs actively equipped visualization of data and compare catalogs between them. These funds will provide the basis for statistical analysis and cross-sectional analysis of various astronomical catalogs.

For this task we have developed the Graphical data representing from several catalogs within the chosen area on the sky, the map data and the statistical analysis of the main parameters as for each catalog as a whole, also as statistics cross-identifications of the user's favorite catalogs. At the moment the database will be improved by advanced visualization of individual radio sources as a result of identification in the elected by user catalogs (flux distribution over the frequencies, the distribution of spectral indexes, etc.).

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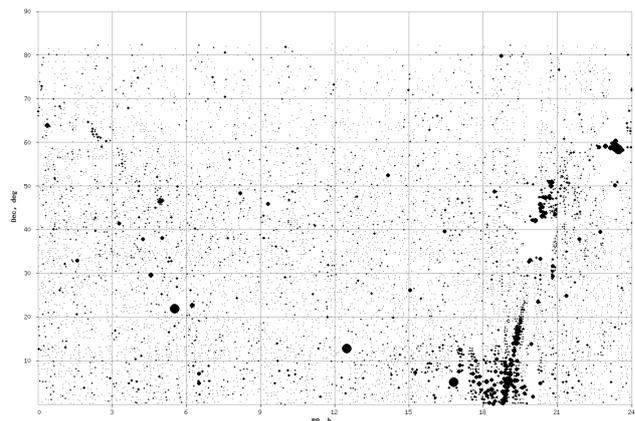


Figure 1: The example NSS102 radio catalog map. It is represented all sources of Pushchino catalog at 102 MHz with declination more than 0 degrees.

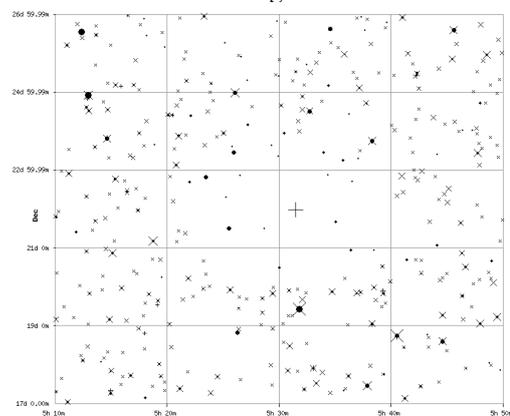


Figure 2: The example of a comparing of the data sky fields for three catalogues: 4C (178 MHz, by direct cross) 1400 MHz (circles) and GB6 (4850 MHz, oblique crosses). There are zone of avoidance near strong source that showed only in 4C catalog.