

# Parkes 2010 IVS Report

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## Abstract

This report describes the 2010 activities and future plans of the IVS Network Station at Parkes, Australia.

### 1. New Status

In February 2010 the Parkes Observatory officially became a network station of IVS, having participated actively for many years as an “ex officio” member.

### 2. 2010 Observing

In 2010 Parkes participated in just two IVS sessions (R1416 and CRF61). Planned participation in several more sessions fell through due to cancellations coming from the delays in commissioning of the AUSTRAL network. It is hoped the level of participation in 2011 will resume to its typical levels of six to eight sessions per year.

In addition to these two IVS sessions, Parkes during 2010 also participated in several hybrid astronomy/geodesy observations in a program led by Leonid Petrov of ADNET Systems/GSFC. This program has the dual aims of identifying additional calibrator sources in the Southern Hemisphere and refining the locations of several southern hemisphere radio astronomy stations that are equipped neither with dual S/X receiving systems nor IVS-compatible recording systems.

### 3. Maintenance

The Parkes station is equipped with a Mark 5B+ recorder and Mark 5 D/A rack, which replaced the long-serving Mark IIIA recorder in late 2007. (The rack code is MARPOINT, for those interested in such history). In mid-2010 the Observatory purchased 14 new disk modules with 8TB capacity for use with both IVS and other sessions. Use of these SATA modules required an upgrade to the Mark 5B+ to Debian Etch and SDK 8, thereby exposing an unusual fault with the Streamstor card, which was unable to read back SATA modules. The board was returned to Conduant who promptly replaced two termination resistors, the values of which had been optimized since the manufacture of the board. No further problems were experienced.

### 4. Future Plans

The dual S/X receiver at Parkes currently has limited bandwidth that precludes the use of the IF3 module. An upgrade to the receiver is planned in 2011 to allow wider bandwidths to be recorded using an IF3 module or equivalent.

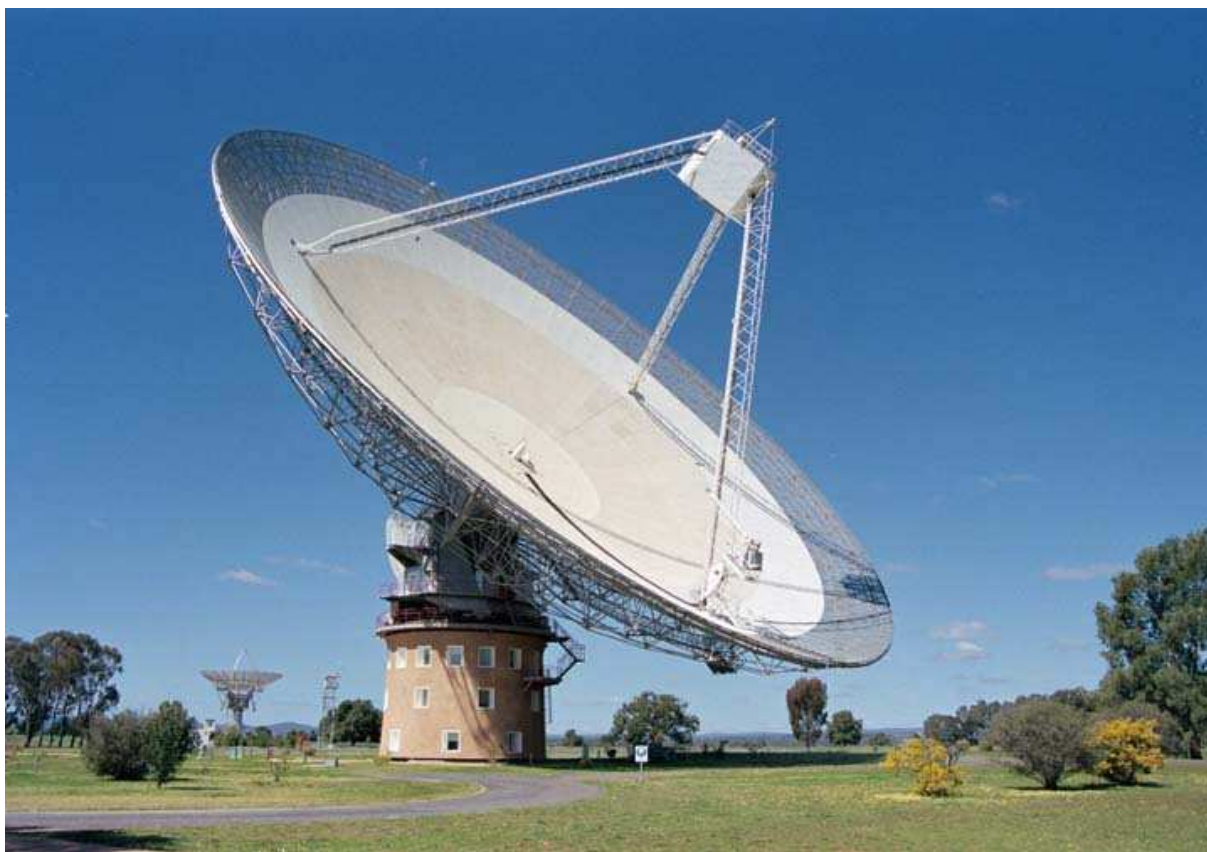


Figure 1. Parkes 64-meter antenna, with the movable 60-foot antenna (now decommissioned) in the distance. (Credit: John Sarkissian, CSIRO.)



Figure 2. Parkes antenna, with geodetic monument and dual-frequency GPS antenna in the foreground. (Credit: John Sarkissian, CSIRO.)





Figure 3. Parkes antenna at night. (Credit: John Sarkissian, CSIRO.)