The 6C Survey of Radio Sources - V. The Zones 6C-Va ($48° < \mathrm{Dec} < 68°$, $01^h34^m < \mathrm{RA} < 06^h14^m$) and 6C-Vb ($48° < \mathrm{Dec} < 68°$, $17^h16^m < \mathrm{RA} < 20^h24^m$)

Hales, Masson, Warner, Baldwin, and Green (1993)

Documentation for the Computer-Readable Version

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Abstract

This catalog contains the fifth section of the 6C Cambridge survey of radio sources at 151 MHz (6CV). This part of the survey covers two regions: 48°< Dec < 68°, 01^h34^m < RA < 06^h14^m [6CVa] and 48°< Dec < 68°, 17^h16^m < RA <20^h24^m [6CVb]. The limiting flux density is generally 170 mJy. The catalog data include the source positions (B1950), peak flux density, integrated flux density, contour map panel number, contour map field names, and integrated flux flag. The two regions together list a total of 3458 sources (2229 in 6CVa and 1229 sources in 6CVb). The 6CV catalog consists of two files: one file contains the 6CVa and the second file contains the 6CVb.

1 Introduction

A copy of this document should be distributed with every copy of the machine-readable catalog.

1.1 Description

The 6C Survey of Radio Sources - V. The Zones 6C-Va (48° < Dec < 68°, 01^h34^m < RA < 06^h14^m) and 6C-Vb (48°< Dec < 68°, 17^h16^m < RA < 20^h24^m)(6CV) contains a compilation of radio source observations made with the use of an (non-tracking) Earth-rotation aperture synthesis telescope comprising many small aerial arrays on an east-west baseline operating at 151 MHz. This paper is the fifth in a series of papers giving radio source observations at 151 MHz. See the discussion in 6CI (Baldwin et al. 1985) for details on the design and operation of the telescope and the initial generation of the survey. Other papers in this series include 6CII (Hales et al. 1988), 6CIII (Hales et al. 1990), 6CIV (Hales et al. 1991), and 6CVI (Hales et al. 1993b).

The 6CV catalog contains a total listing of 3458 radio sources ordered by increasing right ascension. The survey is centered on a declination of 58° to facilitate calibration using Cassiopeia A. The 6CVa covers the region 48°< *Dec* < 68°, 01^h34^m < *RA* < 06^h14^m, and the 6CVb covers 48°< *Dec* < 68°, 17^h16^m < *RA* < 20^h24^m. Both of the 6CV regions have some overlap in right ascension with the 6CIII catalog so that 396 sources have alternative entries in both catalogs. In addition, there is some overlap with the 6CIV paper in this series.

Positional calibration was effected as for 6CIII (Hales et al. 1990) and give corrections of similar magnitude.

Flux densities are on the scale of Roger et al. (1973). Provisional flux densities were corrected for the measured receiver gain at a declination of 58° as a function of right ascension. The final flux densities were adjusted to be consistent with published radio source lists and were adjusted for consistency with overlapping regions in the 6CIII, 6CIV, and the 6CVI catalogs. See 6CV for additional flux calibration details.

Note that these two sections of the 6CV submitted to the ADC contain only the listing of radio

sources and not the radio maps. The radio source lists are intended to be used with the radio maps originally published on microfiche in Hales, Masson, Warner, Baldwin, and Green (1993).

1.2 Reference

Hales, S. E. G., Masson, C. R., Warner, P. J., Baldwin, J. E., and Green, D. A. 1993, MNRAS, 262, 1057

2 Structure

2.1 The File as a Whole

The 6C Survey of Radio Sources - V. The Zones 6C-Va ($48° < Dec < 68°$, $01^h34^m < RA < 06^h14^m$) and 6C-Vb ($48° < Dec < 68°$, $17^h16^m < RA < 20^h24^m$) consists of two fixed-block files. The 6CVa consists of 2229 52-byte records, and the 6CVb consists of 1229 52-byte records. Descriptions of some of the fields in the file are given in the following section. The record format is the same for the 6CVa and 6CVb.

2.2 Catalog File

Bytes	Units	Suggested Format	Item
1- 2	h	I2	Right ascension (B1950)
4- 5	min	I2	Right ascension (B1950)
7-10	s	F4.1	Right ascension (B1950)
12-14	°	I3	Declination (B1950)
16-17	′	I2	Declination (B1950)
19-20	″	I2	Declination (B1950)
23-27	Jy	F5.2	Flux density (peak)
30-34	Jy	F5.2	Flux density (integrated)
37-39		I3	Contour map panel number
42-48		A7	Contour map field name
51		A1	Integrated flux flag

Table 1: Catalog Record Format

Flux density (peak): Source peak flux density at 151 MHz.

Flux density (integrated): Source integrated flux density at 151 MHz.

Contour map panel number: This column contains the name of the map panel in which the source appears. The panel number and map field name tell the user where to look up the source of interest in the published contour map. Typically, each map is divided into 32 panels, although the 0300+58 map contains panel numbers up to 36, presumably from an adjoining region (see Figure 4 in 6CV). A panel number listed with a negative sign indicates that the data are accommodated at the location but come from another map or area of sky.

Contour map field names: This column contains the name of the field in which the source appears. Three fields have been included in this survey: 0300+58, 0500+58 for 6CVa and 1900+58 for 6CVb. The panel number and map field name tell the user where to look up the source of interest in the published contour map.

Integrated flux flag: A dash (-) indicates that the peak flux was not strong enough to calculate the integrated flux. An asterisk (*) indicates that the peak flux was strong enough to qualify for integration, but it has been integrated into a brighter adjoining peak.

3 History

3.1 Remarks and Modification

The 6C Survey of Radio Sources - V. The Zones 6C-Va ($48^\circ < Dec < 68^\circ$, $01^h34^m < RA < 06^h14^m$) and 6C-Vb ($48^\circ < Dec < 68^\circ$, $17^h16^m < RA < 20^h24^m$) was received by the Astronomical Data Center (ADC), NASA Goddard Space Flight Center, from Dr. Heinz Andernach. The catalog was originally submitted by Dr. Sally Hales.

The integrated flux flag column was generated by the ADC by editing the original integrated flux field and moving the character flags to a separate column. This was done to avoid the mixing of characters and numbers in a single field.

4 Reference to the Documentation

Baldwin, J. E., Boysen, R. C., Hales, S. E. G., Jennings, J. E., Waggett, P. C., Warner, P. J., and Wilson, D. M. A. 1985, MNRAS, 217, 717

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Roger, R. S., Bridle, A. H., and Costain, C. H. 1973, AJ, 78, 1030

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