GSPC-II: A CATALOG OF PHOTOMETRIC CALIBRATORS FOR THE SECOND GENERATION GUIDE STAR CATALOG.

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1. Introduction

The Guide Star photometric Catalog (GSPC–I; Lasker *et al.* 1988) is an all-sky set of photoelectrically determined BV sequences created to provide photometric calibrators for the Guide Star Catalog (Paper-I: Lasker *et al.* 1990, Paper-II: Russell *et al.* 1990, Paper-III: Jenkner *et al.* 1990). Although the GSPC–I has been the basis of preliminary photometric calibrations for the Digitized Sky Survey (DSS; Doggett *et al.* 1995), its relatively bright cutoff at about 15th magnitude limits its capability to support calibration of sky surveys, e.g., the new GSC–II (McLean *et al.* 1996, this volume).

2. The GSPC–II Project

The goal of the GSPC-II project is to provide CCD stellar sequences with 5% photometric accuracy in the Johnson-Kron-Cousin B, V, and R passbands down to 18 to 20 mag, near the centers of all Schmidt survey plates for the calibration of the digitized scan data as part of the GSC–II project. Positional precision of the observations (*i.e.*, for object identification) should be consistent with GSC–I, typically 0.5″. For the north, there are 584 northern ($\delta \geq 6°$) sequences, centered on the 6°-grid of the original National Geographic Society – Palomar Observatory Sky Survey. For the south, there are 894 ($\delta \leq 0°$) sequences, centered on the 5°-grid of the UK SERC Southern Sky Survey and its equatorial extension. The SES and SERC-EJ plate centers to be used in the southern GSC–II are unchanged from GSC–I. The POSS-II plate centers, however, follow the convention used for the southern surveys and are centered on a 5°-grid. The locations of the GSPC–I sequences and their GSPC–II extensions are adequate for calibrating most of the POSS-II plates; supplemental observations are planned for the rest.

3. Program Status and Database Construction

Supported by a continuing collaborative international effort, the GSPC–II is nearing completion. The northern survey has benefited from the cooperation of several observatories – Mont Megantic, Wise, KPNO, Lowell, McDonald, Mt. Hopkins and Mt. Laguna – and it is, at present, over 90 percent complete. In the southern hemisphere the program has been carried on thanks to long term observing status at CTIO and ESO observatories. To date about 70 percent of the southern sequences have been obtained. At the present rate of four observing runs per year, it is expected that the observations will be completed at the beginning of 1998. An intermediate catalog of reduced data, containing multiple object photometry, has been compiled. Inter-observatory comparisons as well as monitoring of common and calibration fields allow one to check the photometric quality of GSPC–II sequences, at the same time ensuring all-sky data homogeneity.

The Distributed Information Retrieval from Astronomical files (DIRA) database has been selected for storing and accessing GSPC–II photometry. OATo staff are maintaining the system for this purpose and are currently populating the database with all usable observations acquired by both ST ScI and OATo staff. Error analysis and status reporting for the entire project will be supported with appropriate database utilities.

References

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