



MULTIPLE MIRROR TELESCOPE OBSERVATORY

Smithsonian Astrophysical Observatory and Steward Observatory, University of Arizona

Technical Memorandum 84-20

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Re: Observing Catalog Preparation Guide

This document is intended to serve as a "cookbook" for the observer who wishes to prepare a catalog of objects and their 1950.0 coordinates for use in the mount computer at the MMT. In what follows, we assume that the reader will be interacting with the Point 4 computer at the MMTO Tucson offices -- any catalog preparation on the mountain should be done by a telescope operator or other qualified MMTO personnel.

The software which is used to prepare the catalog is the mount control software itself. Obviously, this software will not work in its entirety on a computer not connected to the mount. However, the aspects of the code which are needed for catalog preparation have been thoroughly tested on the downtown computer. The catalog preparation software is fairly general; it allows the user to prepare catalogs of stellar, planetary, or geocentric satellite targets. In what follows, we assume that the user is preparing a catalog of "stellar" objects and that this catalog will be used as the so-called "large" catalog. If this is not satisfactory, a copy of the mount software documentation describing the preparation of other types of catalogs is available from Craig Foltz or Tony Poyner.

CATALOG PREPARATION COOKBOOK

PRELIMINARIES

1. Ensure that the diskette that you will be using is a single-sided, single-density, hard-sectored diskette.
2. Procure a copy of the mount software binary code from Karen McClure or Craig Foltz.

POWERING UP THE POINT 4 (This procedure is subject to change.)

1. Plug in the terminal strip located at the lower rear of the Point 4 rack, if it is not plugged in. The Point 4 is currently unplugged after each use -- please unplug it when you are through.
2. Turn on power to the diskette drive and Point 4 itself.
3. Turn on power to the terminal.

BOOTING THE POINT 4

1. Insert the diskette labelled MOUNT SOFTWARE-BINARY into drive 0 of the diskette drive.
2. Push the STOP button on the Point 4 control panel followed by the APL button. The CARRY LED should begin flashing.

3. Type: P33 <cr> (<cr>denotes carriage return).
4. After a brief delay, the computer will query for terminal type. Answer appropriately.
5. You will be informed when the mount software has been loaded. Do not remove the diskette from drive 0. The computer will instruct you to insert the Small Catalog plus Mount Constants diskette into drive 0; ignore this. The computer will also instruct you to type STRUT-YOUR-STUFF; ignore this also.
6. Inform the computer that you will be accessing the "large" catalog by typing:

SET-CATALOG <cr>

and respond to the subsequent prompt by typing a "B."

7. Put the diskette, which will contain the catalog, into drive 1.

INITIALIZING A NEW CATALOG

1. Skip this section if you are modifying an existing catalog.
2. With the diskette inserted in drive 1, type:

NEW-CATALOG <cr>

You will hear the drive initialize the diskette.

Reiterating: IF YOU TYPE NEW-CATALOG WHILE AN EXISTING CATALOG IS INSERTED IN DRIVE 1, YOU WILL DESTROY THE CONTENTS OF THAT CATALOG.

ADDING AN ENTRY TO THE CATALOG

1. To create an entry for a source at $23^{\text{h}} 45^{\text{m}} 12^{\text{s}}.12$, -33° , $21' 22.3''$ (1950.0), type:

23:45:12.12 -33:21:22.3 16 ENTER Object <cr>

- Notes:
- a) The epoch of these coordinates is assumed to be 1950.0.
 - b) The coordinates must be typed in the exact format given above, i.e., R.A. must be entered to hundredths of a second of time and Dec. to tenths of an arcsecond.
 - c) In the example above, the entry will be number 16. Entries can be made in any order and there can be gaps in the catalog.
 - d) The identifier field, which is typed after ENTER, can be eight characters or fewer and may contain embedded blanks and lower and upper case characters.
2. To add proper motion information (optional) to the current entry, type:

-0.25 0.3 MUU <cr>

where the first number is the proper motion in R.A. in seconds of time per century and the second number is the proper motion in Dec. in arcseconds per century.

3. To add up to ten characters of additional information (optional), type:

MAG 21.0 z=2.2 <cr>

The word MAG takes the next ten characters and puts them into the catalog.

CORRECTING AN ENTRY

1. To correct the positional information, simply retype the appropriate entry as in the discussions of ENTER above.
2. To correct or add proper motion information or to correct or add information with the MAG word, first set the catalog pointer to the appropriate entry by typing:

nn SHOW <cr>

where nn is the entry number. Then (re)enter the information with the MUU and/or MAG words.

3. To delete an entry at position nn, type:

nn DELETE <cr>

LISTING THE CATALOG

1. To view the entry at position nn, type:

nn SHOW <cr>

2. To view the entire catalog, type:

ALL <cr>

The output will be sorted by entry number.

3. To obtain a hard copy of the catalog, type:

F PRINT ALL <cr>

Note that there is, at present, no printer on the Point 4 at the Tucson MMT0 office. A copy of the catalog can be produced by the telescope operator on the mount computer.

FINISHING UP

1. To ensure that all catalog entries are written on the disk, type:

UPDATE FLUSH

2. Remove the diskettes from the drives and return the mount software disk to C. Foltz or K. McClure.
3. Power off the terminal, disk drive and Point 4.
4. Unplug the computer rack.

On the first night of your run, give your catalog diskette to the telescope operator and inform him/her that it is set up for use as a "large" catalog.