

MEMORANDUM

To: Chris Blades
 From: Lisa E. Walter
 Date: 1 Feb 90
 Subject: Testing of the HSP RSDP Algorithms in December 1989
 CC:

This memo describes the results of the testing of PODPS v.24.0 for the HSP in December 1989. CALHSP worked as expected, and is in compliance with SE-06 and ICD's relating to SE-06. No OPR's were filed because there were no problems encountered.

The following is a list of the files chosen for testing. The data type and mode are listed beside the name. The mode acronym is defined within the paragraph following the table.

| Name | Data Type | Mode |
|-----------|---------------------|------------|
| v00y5501r | digital | SSP |
| v00yk105r | digital & analog | SCP SCP |
| v00yk10ar | digital & analog | SSP SSP |
| v00yk110r | area scan | ARS |
| v00yk111r | area scan | ARS |
| v00yk112r | area scan | ARS |
| v00yk113r | area scan | ARS |
| v00yk114r | area scan | ARS |

The v00yk110r, 111r, 112r, and 114r files were chosen because they are the area scan (ARS) files which were previously reported in an OPR as having problems with the updating of the TIMEBIAS keyword. The other files were chosen at random to provide a selection of analog and digital data with both single color (SCP) and star-sky (SSP) photometry modes being represented.

The v00y5501r dataset was found to contain bad data which caused the calibration to fail; since v00yk10ar contains data of a similar mode, the bad dataset was ignored. The v00yk105r dataset was copied several times to allow the same analog or digital data to be arranged in different configurations with regards to the calibration switches. The RSDP and SDAS algorithms were tested by 'hand', validating the results that would be obtained from the calibration of each configuration

of the two files. All of the data calibrated as expected.

Problems encountered in previous testing (August 1989) were not encountered in the current testing. The value of the APERTURE keyword is NOT missing out of these data headers and the VHIVOLT values in the unique data log files did not have to be changed. The TIMEBIAS keyword was correctly updated in ALL of the files and the SAMPTIME was calculated correctly. Thus it appears that the problems in the three HSP OPR's have been fixed.

For the nine HSP calibration parameters, the following reference tables were used:

9CB14255V.CV0
9CB14257V.CV1
9CB14258V.CV2
9CB1425AV.CV3
9CB1425BV.CV4
9CB1425DV.CV5
9CB1425EV.CV7
9CB1425GV.CV8
9CB1425HV.CV9

The values of the coefficients contained in these tables are for testing purposes only. The HSP IDT will be delivering reference tables to be used at launch.

In summary, all of the data calibrated as expected. All of the problems encountered in the algorithms used for the August 1989 testing have been fixed. It would also appear that the problems reported in the three outstanding HSP OPR's have been repaired.