SIRTF Science Center

Downlink Segment

MIPS-24 S11.0 Test Plan

26 July 2004

California Institute of Technology
SIRTF Science Center

National Aeronautics and Space Administration
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## Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Initial draft by F. Masci</td>
<td>26 July 2004</td>
</tr>
</tbody>
</table>
1. MIPS-24 Set-up and Test Plan

1.1. Preliminary

All environment variables specified below are defined in the generic “operator.csh” environment file located in ${SOS_ROOT}/config/${SOS_REL}/downlink

1.2. Calibration Data

1. All calibration files will be treated as “fallback” data. All the latest fallback calibration data is under: /ssc/pipe/fmasci/MIPS_pipeline/offline_pl/DEV/mips24/calibration_data/

2. The fallback SODB loading script and supporting files are contained under: /ssc/pipe/fmasci/MIPS_pipeline/offline_pl/DEV/mips24/calibration_data/FallBackDB Loading/. Instructions are in the header of the loadfallback.csh* script.

3. On deploying the calibration files, ensure you copy all files to the directory specified by the ${OUTPUT_LOCATION} environment variable as specified in the header of the loadfallback.csh* script in (2). Also ensure that all calibration flats under /ssc/pipe/fmasci/MIPS_pipeline/offline_pl/DEV/mips24/calibration_data/mirror_dep_flats/ are copied to the directory specified by ${OUTPUT_LOCATION}

1.3. Control Data Files (Namelist or CDFs)

1. All the latest namelist files are contained under: /ssc/pipe/fmasci/MIPS_pipeline/offline_pl/DEV/mips24/namelists/

2. It is the responsibility of the IST to check these into the operations TFS under the “MIPS1INT” Point of View (POV).

1.4. Input Test Data and Associated Pipeline Threads

1.4.1. MIPS-24 SUR-Mode Science Photometry Mode

- Job Manifest FID (= AORKEY or IERKEY): 6772224
- Threads in this manifest: 1021:1030:1035:1040:1048
• Number of DCEs: 120
• Input MIPL DCE FITS files (located in operations “sos-archive”):
  
  /sos/archive/raw/campaign/MIPS001000/0006772224/dces/MIPS.1.*
• Input Boresight Pointing History File (BPHF):
  
  /sos/archive/raw/timeperiod/2003.09/pointingHistory/BPHF.0749304000.04.pntg

1.4.2. MIPS-24 SUR-Mode Science Slow-Scan Mode

• Job Manifest FID (= AORKEY or IERKEY): 6503168
• Threads in this manifest: 1020:1030:1035:1040:1048
• Number of DCEs: 596
• Input MIPL DCE FITS files (located in operations “sos-archive”):
  
  /sos/archive/raw/campaign/MIPS002600/0006503168/dces/MIPS.1.*
• Input Boresight Pointing History File (BPHF):
  
  /sos/archive/raw/timeperiod/2003.12/pointingHistory/BPHF.0757209600.04.pntg

1.4.3. MIPS-24 SUR-Mode Science Medium-Scan Mode

• Job Manifest FID (= AORKEY or IERKEY): 3866624
• Threads in this manifest: 1020:1030:1035:1040:1048
• Number of DCEs: 1000
• Input MIPL DCE FITS files (located in operations “sos-archive”):
  
  /sos/archive/raw/campaign/MIPS002500/0003866624/dces/MIPS.1.*
• Input Boresight Pointing History File (BPHF):
  
  /sos/archive/raw/timeperiod/2003.12/pointingHistory/BPHF.0755438400.05.pntg
1.4.4. MIPS-24 SUR-Mode Science Fast-Scan Mode

- Job Manifest FID (= AORKEY or IERKEY): 7143168
- Threads in this manifest: 1020:1030:1035:1040:1048
- Number of DCEs: 200
- Input MIPL DCE FITS files (located in operations “sos-archive”):
  /sos/archive/raw/campaign/MIPS001300/0007143168/dces/MIPS.1.*
- Input Boresight Pointing History File (BPHF):
  /sos/archive/raw/timeperiod/2003.10/pointingHistory/BPHF.0750556800.06.pntg

1.4.5. MIPS-24 RAW-Mode Science Photometry

- Job Manifest FID (= AORKEY or IERKEY): 7120384
- Threads in this manifest: 1028:5001:1030
- Number of DCEs: 20
- Input MIPL DCE FITS files (located in operations “sos-archive”):
  /sos/archive/raw/campaign/MIPS001100/0007120384/dces/MIPS.1.*
- Input Boresight Pointing History File (BPHF):
  /sos/archive/raw/timeperiod/2003.10/pointingHistory/BPHF.0749952000.04.pntg

1.4.6. MIPS-24 RAW-Mode Science Total Power Mode

- Job Manifest FID (= AORKEY or IERKEY): 9353216
- Threads in this manifest: 1029:5001:1030
- Number of DCEs: 12
- Input MIPL DCE FITS files (located in operations “sos-archive”):
  /sos/archive/raw/campaign/MIPS002900/0009353216/dces/MIPS.1.*
• Input Boresight Pointing History File (BPHF):
  /sos/archive/raw/timeperiod/2004.03/pointingHistory/BPHF.0764208000.03.pntg

1.4.7. MIPS-24 Flatfield Calibration with Pointing Transfer

• Job Manifest FID (= AORKEY or IERKEY): 7141888
• Threads in this manifest: 1031:1032:1030
• Number of DCEs: 64
• Input MIPL DCE FITS files (located in operations “sos-archive”):
  /sos/archive/raw/campaign/MIPS001300/0007141888/dces/MIPS.1.*
• Input Boresight Pointing History File (BPHF):
  /sos/archive/raw/timeperiod/2003.10/pointingHistory/BPHF.0750556800.06.pntg

1.4.8. MIPS-24 Non-Linearity Calibration with Pointing Transfer

• Job Manifest FID (= AORKEY or IERKEY): 6763264
• Threads in this manifest: 1010:1011:5001:1030
• Number of DCEs: 60
• Input MIPL DCE FITS files (located in operations “sos-archive”):
  /sos/archive/raw/campaign/MIPS000900/0006763264/dces/MIPS.1.*
• Input Boresight Pointing History File (BPHF):
  /sos/archive/raw/timeperiod/2003.09/pointingHistory/BPHF.0749174400.04.pntg

1.4.9. MIPS-24 SUR-Mode Dark Calibration with Pointing Transfer

• Job Manifest FID (= AORKEY or IERKEY): 7161600
• Threads in this manifest: 1000:1001:1030
• Number of DCEs: 50

• Input MIPL DCE FITS files (located in operations “sos-archive”):
  /sos/archive/raw/campaign/MIPS001400/0007161600/dces/MIPS.1.*

• Input Boresight Pointing History File (BPHF):
  /sos/archive/raw/timeperiod/2003.10/pointingHistory/BPHF.0750902400.08.pntg

1.5. **Threads which Cannot be Tested**

• RAW-Mode dark calibration thread (PipeNum 408; PlscriptID 1006). Data intended for this purpose has not yet been acquired by *Spitzer*, nor will any be expected in the foreseeable future.

• Pointing refinement (Post-BCD) thread (PipeNum 132; PlscriptID 1042). This thread has been terminated in operations and a new version will be included in the S12.0 delivery.

1.6. **Output Intermediate File Locations (Local Drone Directories)**

• Pre-processed science and intermediate calibration BCDs (e.g., above plscriptIDs: 5001, 1000, 1010, 1020, 1021, 1028, 1029, 1031):

  ${SOS_LOCAL}/<campaign>/bcd/<pao>/<reqkey>/<channum>/<expid>/<dcenum>/<plscriptid>/<fos_ver>/<sos_ver>

• Pointing, latent, calibration and post-BCD ensemble threads (e.g., above plscriptIDs: 1001, 1011, 1030, 1032, 1035, 1040, 1048):

  ${SOS_LOCAL}/nonbcd/<pmid>/<plscriptid>/<representative_dceid>

• Note, details of processing are contained in a log file named “out.pline” under the “sosexec/..” subdirectory in each of the above directories.

1.7. **Output Sandboxed Data Products**

1.7.1. **Science (and pre-processed/intermediate calibration) BCDs**

  ${SOS_ARCHIVE}/proc/full/<campaign>/bcd/<pao>/<reqkey>/<channum>/<expid>/<dcenum>/<plscriptid>/<fos_ver>/<sos_ver>/
• Sandbox contents SUR-science threads only (pipeNum 405):

bcd_fp.fits
bcd_mask_fp.fits
bcd_uncert_fp.fits
bmask_diff_fp.fits
bmask_slope_fp.fits
cdf_list_fileId.txt
diff_fp.fits
diff_uncert_fp.fits
ptg/
qa/
raw_tranhead_fp.fits
rmask.fits
slope_fp.fits
slope_uncert_fp.fits
sosexec/

• Sandbox contents for RAW-science threads only (pipeNum 406):

bcd_fp.fits
bcd_mask_fp.fits
bcd_uncert_fp.fits
cdf_list_fileId.txt
dmask_fp.fits
ptg/
qa/
raw_tranhead_fp.fits
sosexec/

1.7.2. Calibration Ensemble Products

• Flats (plscriptIds 1016 or 1032 or 1034):

${SOS_ARCHIVE}/proc/full/<campaign>/cal/auto/<pao>/<reqkey>/flat/<channum>/
<ensid>/<sos_ver>/
cal/
cdf/
ensemble_info.txt
flatfield.fits
flatfield_cmask.fits
inputlist_dmask_flatfield
inputlist_flatfield
qa/
sosexec/

• Darks (plscriptId 1001):

${SOS_ARCHIVE}/proc/full/<campaign>/cal/auto/<pao>/<reqkey>/darksur/<channum>
<ensid>/<sos_ver>/
cal/
cdf/
darkest_sur1.fits
darkest_sur1_cmask.fits
darkest_sur1_uncert.fits
ensemble_info.txt
inputlist_darkest
inputlist_dmask_darkest
inputlist_noise_darkest
qa/
sosexec/

- Non-linearity (plscriptId 1011)

$({SOS_ARCHIVE})/proc/full/<campaign>/cal/auto/<pao>/<reqkey>/linr/<channum>/<ensid>/<sos_ver>/
cal/
cdf/
ensemble_info.txt
inputlist_dmask_lincal
inputlist_lincal
inputlist_noise_lincal
lincal.fits
lincal_cmask.fits
qa/
sosexec/

1.7.3. Post-BCD Products

- Mosaic and ancillary files (plscriptId 1048):

$({SOS_ARCHIVE})/proc/full/<campaign>/bqd/auto/<pao>/<reqkey>/coad/<channum>/<ensid>/<sos_ver>/
Rmask/
cal/
cdf/
cdf_list_fileId.txt
ensemble_info.txt
extract.tbl
extract_raw.tbl
mosaic.fits
mosaic_cov.fits
mosaic_detect.tbl
mosaic_unc.fits
qa/
sosexec/

- Fiducial Image Frame (plscriptId 1040):
${SOS_ARCHIVE}/proc/full/<campaign>/bqd/auto/<pao>/<reqkey>/reffrm/<ensid>/
<sos_ver>/
FIF.tbl
cdf_list_fileId.txt
ensemble_info.txt
sosexec/