

# Delivering WFPC2 Weekly Dark Reference Files to the Archive

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## ABSTRACT

*This TIR describes the process for delivering WFPC2 weekly dark reference files to OPUS for incorporation into the HST archive. This procedure was used until May 2005 when the CDBS group ([cdbs@stsci.edu](mailto:cdbs@stsci.edu)) began delivering files for all instruments using a new procedure (c.f. TIR CDBS 2005-01).*

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## Introduction

As part of the WFPC2 calibration program a weekly dark reference file is created from the previous year's superdark and five dark images taken with the WFPC2 detectors. These dark files are used in the HST calibration pipeline and are also made available to users who want to recalibrate WFPC2 data on their own. The procedure for delivering these reference files to the archive and to the `cdbs/uref` directory (for direct retrieval) is described below.

## Procedure

The Sunfire system *smalls* is the current staging directory for OPUS deliveries. You can get the password for the `acsref` account, or a personal account in order to make the deliveries as described below.

### 1) Login to SunFire/smalls<sup>1</sup>:

```
ssh acsref@smalls
```

```
acsref@smalls's password: ?????
```

```
# Move to your delivery staging directory, creating a new directory if needed (only the data you are delivering at this time should be in the directory):
```

```
cd /calib/wfpc2/delivery/drk_2004_09_13
```

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### 2) Check the data files

```
# ftp dark images and load files to smalls
```

```
# You should have four sets of geis format images (.b3d, .b3h, .r3d, .r3h) and load (.lod) files here, as produced by the weekly dark creation program dodark.cl
```

```
/data/cdbs1/tools/bin/certify *h
```

```
/data/cdbs1/tools/bin/certify *lod
```

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### 3) Run the check\_delivery script

This looks for single quotes and tabs in the FITS headers and changes the tabs to 4 spaces to comply with FITS standard form. You will need to add path to .setenv for first time use (and source .setenv if using it right away):

```
set path = ( $path /calib/wfpc2/scripts/brammer)
```

```
setenv PATH ${PATH}:
```

```
exec check_delivery
```

```
# reverify data
```

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1. Herein *italics* indicate commands to be typed. The symbol “#” indicates non-command lines or comments.

*certify \*h*  
*certify \*lod*

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**4) Verify the information in the load files.**

# This is what .lod files look like coming out of dodark.cl

```
FILE_NAME = oap1125mu.r3h
INSTRUMENT = wfpc2
REFERENCE_FILE_TYPE = drk
USEAFTER_DATE = Sep 13 2004 01:47:16
COMPARISON_FILE = o991459eu.r3h
OPUS_FLAG = Y
COMMENT =
This is a WEEKLY PIPELINE DARK created from an average of 120 input darks....
```

```
ENDHEADER
CHANGE_LEVEL = SEVERE
PEDIGREE = INFLIGHT
OBSERVATION_BEGIN_DATE = Sep 13 2004
OBSERVATION_END_DATE = Sep 13 2004
ATODGAIN = 15.0
MODE = FULL
SERIALS = ON
COMMENT =
ENDROW
```

ENDFILE

# All fields are filled in by *dodeliver.cl*, which is called by *dodark.cl*. Universal changes can be made here. Original HISTORY which is read into COMMENT is read in *doheader.cl*, also called by *dodark.cl* and is located in a text file called *hist\_year*, and *hist\_add\** (i.e. *hist\_2003*).

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**5) Reserve a time slot for your delivery by adding a line with WFPC2, your name, the date, and your delivery time:**

```
cd /calib/work  
nedit delivery_log.txt &
```

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### **6) Deliver the files**

# with your fits and .lod files in a single directory with no subdirectories type

```
sendit
```

# Read messages that return. In the case of a failed delivery, contact OPUS or CDBS. The following command may be used to remove the delivery from the OPUS processing in some cases.

```
delete_delivery
```

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### **7) Open up the file protections so OPUS can copy the files:**

```
chmod 755 directory_name  
chmod 775 directory_name/*
```

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### **8) FTP the FITS files to the local uref directory, where data can be retrieved without going through the archive:**

```
ftp -i [your computer name]  
cd /data/cdb8/uref  
mput *fits *h *r?d *b?d
```

---

### **9) Record the delivery number as given by the sendit command:**

```
cd /calib/work  
nedit delivery_log.txt &
```

**10) Create an e-mail for notification, including a listing of files:**

Email distribution for this notice:

`cdb_s_datamng,mrichard,biretta,marel,gillil`

Subject: Delivery #####

Date: mth dd year

By: Name

Instrument: WFPC2

File\_type(s): FITS images, type

Data Directory: /calib/wfpc2/delivery/drk\_year\_mm\_dd

Data description or reason for delivery: Weekly Dark for mm/dd/yr

Opus ingest date:

Opus signoff:

`ls -l *fits`, and insert file names here

These files can also be downloaded directly via:

`ftp://ftp.stsci.edu/cdb_s/cdb_s8/uref`

# These files have been delivered, and will typically be ingested into the HST archive and installed in the calibration pipeline within one working day.

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**11) Create a delivery report and update web.**

# After OPUS actually installs the files, they will reply to your message with "Opus ingest date" and "Opus signoff" filled in. Now you can you generate the "installation report" with the `cdb_s_report` command:

`cd /calib/wfpc2/reports`

`cdb_s_report ##### > cdb_s_report_#####.cat`

# In the case of weekly darks, the creator of the darks will update the web.

## **Conclusions**

The procedure described is for weekly dark reference files for WFPC2. The procedure is specific to dark files because some of the delivery steps, such as creation of load files and a unique archive name, are performed within the `dodark.cl` script. The procedure for other reference files that will need to be delivered, such as IDC tables, offset tables, superbias, and superdarks, require a different procedure. As of May 2005 all delivery formatting is done by a different method described by the TIR CDBS 2005-01.

## **Acknowledgements**

Previous work by Max Mutchler and other Data Analysts was used in writing this TIR.

## **References**

“Assessment and Delivery of Reference Files,” R. Diaz-Miller, 2005;  
<http://www.stsci.edu/hst/observatory/cdb/document/TIR-CDBS-2005-01.pdf>