

ACS Quicklook PDF products

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ABSTRACT.

This report details the features of the ACS quicklook PDF products produced by the HST data pipeline. The requirements closely follow the design of paper products recommended by the Data Quality Committee, with appropriate changes required to fully support ACS.

1. Introduction

A routine part of the HST data is the post-calibration production of PDF products files, or ‘HST PDF products’ (also known as ‘quicklook products’), that summarize the data obtained. The general problem of producing these products was studied extensively by the Data Quality Committee and is described in their report (Sparks, et al. 1995). These products are used for both informing the GO and for data quality evaluation at the STScI. As such, the products must be general enough to support both sets of users. Previously these reports were produced as hard copies known as ‘Paper Products’. In 1999, printing of paper products was replaced with electronic distribution, and now PDF products are available on Web. This report describes in detail the requirements for the quicklook PDF products that summarize ACS data.

2. Description of ACS Quicklook PDF products

ACS PDF products are designed to summarize a set of exposures. Typically, the set of exposures will constitute one visit in an observing proposal. The individual pages in the PDF products product either describe the details of a single exposure or, for the purpose of easy comparison, summarize the ensemble of exposures. A given page in the PDF products falls into one of two categories: visit-level page or exposure-level page. Below we list the individual pages—the pages are described in detail in Section 3, “Page Generation and Layouts,” on page 4. In the PDF file, each of these pages will be indexed, so the observer can use the bookmarks feature in the Acrobat Reader to jump to any part of the quicklook product.

Visit-level Pages

- Cover Page
A cover page containing the proposal ID, the visit number, the PI's name, and the proposal title.
- Explanatory Notes
A set of notes explaining the PDF products and the information they contain.
- Target List
A table listing the targets in the set of observations being summarized.
- Observation Summary
A table recapping the proposal information for each exposure for the set of observations being summarized including three processing and data quality flags.
- Optional Parameters
A table listing the optional parameters for the set of observations being summarized.
- Observing Pattern Strategy
A table listing the observing pattern for each exposure for the set of observations being summarized.

Exposure-level Pages

- Exposure Plots
A graphical representation of the data contained in each exposure, including the final calibrated science image, a part of that image showing the details of the field centered at the target position (only for WFC), and, in case of associations, all individual images in a stamp format.
- Data Quality Summary
A comprehensive summary of the spacecraft performance, pipeline processing status, and calibration data quality for each exposure.
- Calibration Reference File Summary
A summary of the calibration processing switches and reference files used to process each exposure.

Table 1: ACS PDF. Pages–Selection Criteria

Summary Level	Page Type	Production Criteria	Filename Extension(s) Indicating Source of Keywords and Data ^a
Visit	Title Page	All	_raw and _spt
	Target List	All	_raw and _spt
	Observation Summary	All	_raw and _jih and _trl
	Optional Parameters Summary	All	_raw
	Observing Pattern Strategy	All	_raw and _spt
Exposure	Coronagraph Acq. Images	OBSMODE equal to ACQ	_flt
	Final Science Image	All	_flt and _crj and _sfl
	Summary Page	All	_trl and _jih
	Calibration Files Page	All	_flt and _crj and _sfl

- a. For the _flt files, PDF products are generated only if there are no _crj or _sfl files.

3. Page Generation and Layouts

Table 1 summarizes the criteria for producing ACS PDF products pages. The table lists the individual page types followed by the criteria that trigger the creation of a given page. For those pages that are always produced, the criterion is stated as “All”. Additionally, the table lists the data files from which to extract the keyword and plot information. If no file can be found satisfying the selection criteria, a warning message is produced by the PDF products task.

Title Page

The Title Page consists of a Header, and four (4) keyword/value pairs. See Table 2 for a description of the keyword-value pairs to be included on the Title Page. The visit and title keywords are found in the `_spt` file. The proposal and PI name keywords are found in the primary header of the `_raw` file. The keyword/value pairs are written in 20 point size. See page 16 for an example of the title page.

Table 2: Title Page Keyword/Value Pairs

Label	Found in Header Keyword(s)	Print Format
Proposal	PROPOSID	i4
Visit	OBSET_ID	i2
PI	PR_INV_L PR_INV_F	c18 c18
Title	PROPTTL1 PROPTTL2	c68 c68

Explanatory Notes

The Explanatory Notes page is an instruction sheet for using and understanding the collection of ACS PDF products pages. As this information describes the PDF products themselves, as opposed to the observations, this page does not change from visit to visit. The section headers are written in bold font style. The headers in each section are written in 12 point Narrow Helvetica Bold. The text in each section is written in 12 point Times. See page 17 for an example of the explanatory notes.

Target List

The Target List is a table containing target names, positions, and target descriptions. The target name and description are derived from the proposal information. The positions are the calculated positions based on processing of the proposal by the ground system.

Keywords for the target name and coordinates are found in the primary header of the `_raw` file. The keyword for the description is found in the `_spt` file. See Table 3 for a description of the keyword/value pairs to be included. See page 18 for an example of the target list table.

Table 3: Target List Keyword/Value Pairs

Column Name	Found in Header Keyword	Print Format
Target Name	TARGNAME	c30
RA (J2000)	RA_TARG	hh:mm:ss.ss
DEC (J2000)	DEC_TARG	ddd:mm:ss
Description	TARDESCR TARDESC2	c68 c68

Observation Summary

The Observation Summary consists of the instrument configuration as downlinked from the spacecraft in the science data stream. While the specification of the instrument configuration uses proposal instruction language, wherever possible, actual rather than predicted values are used. All keywords are found in the primary header of the `_raw` file. See Table 4 for a description of the keyword/value pairs to be included. The field **Frame** in Table 4 should be set to `FULL` if `SUBARRAY=F` and `SUBARRAY` if `SUBARRAY=T`. See page 18 for an example of the observing summary table.

Table 4: Observation Summary Keyword/Value Pairs

Column Name	Found in Header Keyword(s)	Print Format
Visit-Exp #	PEP_EXPO	c15
Rootname	ROOTNAME	c9
Target Name	TARGNAME	c30
Observation Type	IMAGETYP	c30
Detector Used	DETECTOR	c3
Frame	SUBARRAY	c8
Operating Mode	OBSMODE	c10
Spectral Element 1	FILTER1	c7
Spectral Element 2	FILTER2	c7

Column Name	Found in Header Keyword(s)	Print Format
Aperture	APERTURE	c16
Exposure Time	EXPTIME	f8.3
OBS ¹	See “Procedural Quality Flags” on page 6.	c1
PROC ¹	See “Procedural Quality Flags” on page 6.	c1
CAL ¹	See “Procedural Quality Flags” on page 6.	c1

¹These three columns should be straddled by the column label: “Procedural Quality Flags”.

Procedural Quality Flags

OBS

The OBS quality flag summarizes as good or bad the spacecraft performance during the execution of the observations as described by the OMS data. All information used in determining the value of this flag comes from the `_jih` header file.

The flag should be set to UNKNOWN (represented by a blank) when the `_jih` does not exist.

The flag should be set to BAD (represented by a filled circle) if any one of the following conditions is true

- `TNRECENT > 0`
- `TNLOSSES > 0`
- `MV2_P2P > 0.06`
- `MV3_P2P > 0.06`
- Any of the following keywords appears in the `_jih` header: `T_ACQ2FL`, `T_GSF`AIL, `T_TAPDRP`, `T_SLEWNG`, `T_TDFDWN`, `T_SISAFE`, `NO_SAM`, `NO_SLEW`, `SD_LOST`, `FW_ERROR`, `SISUSPND`.

The flag should be set to GOOD (represented by an open circle) otherwise.

PROC

The PROC quality flag summarizes as good or bad the pipeline processing status for all of the individual processes that comprise the pipeline (e.g., data capture, data partitioning, generic conversion, science calibration, and data archiving). Problems during any phase of pipeline processing results in messages being written to the `_trl` file. Thus, the `_trl` file is dredged to look for messages to determine the status of the processing.

The flag should be set to UNKNOWN (represented by a blank) when the _trl file does not exist.

The flag should be set to BAD (represented by a filled circle) if the string “ERROR” is found in the _trl file. Errors of this type are written by CALACS, and represent conditions that could result in the interruption of science calibration.

The flag should be set to GOOD (represented by an open circle) otherwise.

CAL

The CAL quality flag summarizes the quality of the calibration reference data used in calibrating the observations. Problems with the calibrations are written to the _trl file by CALACS.

The flag should be set to UNKNOWN (represented by a blank) when the _trl file does not exist.

The flag should be set to bad (represented by a filled circle) if any of the following conditions is true:

1. The string “DUMMY” appears in the _trl file

In the case of all calibration switches being set to “OMITTED”, the flag should be set with the value of “NOT APPLICABLE” (represented by “N/A”).

The flag should be set to good (represented by an open circle) otherwise.

Optional Parameters Summary

The Optional Parameters summary consists of additional instrument configuration items which are specified in the proposal as optional parameters. As with the Observation Summary, the telemetry values are used rather than the predicted ones. If an optional parameter was not set explicitly, the default value appears in the summary. See Table 5 for a description of the keyword-value pairs to be included. All keywords are found in the primary header of the _raw file.

Table 5: Optional Parameter Keyword/Value Pairs

Column Name	Found in Header Keyword(s)	Print Format
Visit-Exp #	PEP_EXPO	c15
Rootname	ROOTNAME	c9

Column Name	Found in Header Keyword(s)	Print Format
Target Name	TARGNAME	c30
Detector Used	DETECTOR	i1
Operating Mode	OBSMODE	c10
Optional Parameters	See Table 6	

The optional parameters are written as strings with the format: KEYWORD=VALUE. Since there can be multiple optional parameters for a given configuration/mode, multiple KEYWORD=VALUE strings are concatenated and separated with a comma. Table 6 gives the rules for constructing the optional parameter value that appears in the Optional Parameter Summary. The set of optional parameters to use is determined from the values of the DETECTOR and OBSMODE keywords and are found in the primary header of the _flt or _sfl file.

Table 6: Optional Parameter Keyword/Value Pairs

DETECTOR	OBSMODE	Optional Parameter Header Keyword	Label	Print Format
WFC, HRC	ACCUM	GAIN	GAIN	i2
		SIZEAXIS2	SIZEAXIS2	i4
		PAREXP	PAREXP	c8

Observing Pattern Strategy

The Observing Pattern Strategy summary consists of additional instrument configuration items which are specified in the proposal as optional parameters and give information on the selected dither/mosaic strategy. See Table 7 for a description of the keyword-value pairs to be included. All the keywords are found in the primary header of the _flt or _sfl files. If PATTERN=NONE, the rest of pattern related parameters should appear as “NON APPLICABLE”, i.e. indicated by zeroes in the table. See page 19 for example of the Summary Page.

Table 7: Observing Pattern Strategy Keyword/Value Pairs

Column Name	Found in Header Keyword(s)	Print Format
Visit-Exp #	PEP_EXPO	c15
Rootname	ROOTNAME	c9
Target Name	TARGNAME	c30
Detector Used	DETECTOR	c3
Operating Mode	OBSMODE	c10
Pattern Name	PATTERN1	c16
Pattern Orient	P1_ORINT	f5.2
Number of Points	P1_NPTS	i2

Exposure Plots

Exposure Plot pages present two kinds of information: 1) descriptive information taken from header keywords and 2) graphical representations of the data. Auto-parallel exposures are displayed the same way as primary exposures.

Exposure Plot Keywords

There are common sets of keywords used to describe different exposures as well as keywords that are specific to a given instrument configuration and observing mode. We have grouped keywords into sets to assist in the production of the ACS PDF products. Three sets of keywords are common to all exposure plots: the OBS set describes the observations, the TARGET set describes the target, and the IMAGING set describes the exposure and is determined by the detector in use and the observing mode and type. See previous section “Observing Pattern Strategy” for details on the values of the pattern related optional parameters. Tables 8, 9 and 10 list all the sets of keywords. The values for the plate scale will be 0.05”, 0.025 x 0.028”, and 0.030 x 0.034” for WFC, HRC, and SBC, respectively.

On the ACS Exposure Plot pages the groups of keywords appear in a vertical column on the right-hand side of the page. Within the column, groups are separated by a single blank line.

Table 8: OBS Keyword/Value Pairs

Label	Header Keyword(s)	Print Format
Rootname	ROOTNAME	c9
Obs. Date	DATE-OBS	c8
Obs. Time	TIME-OBS	c8
Obs. Type	IMAGETYP	C30

Table 9: TARGET Keyword/Value Pairs

Label	Header Keyword(s)	Print Format
Target Name	TARGNAME	c30
RA (J2000)	RA_TARG	hh:mm:ss.ss
DEC (J2000)	DEC_TARG	ddd:mm:ss

Table 10: IMAGING Keyword/Value Pair

Label	Header Keyword(s)	Print Format
Detector	DETECTOR	c3
Aperture	APERTURE	c10
Observation Mode	OBSMODE	c10
Filter 1	FILTER1	c7
Filter 2	FILTER2	c7
Exp Time	EXPTIME	f8.3
Frame	SUBARRAY	l1
Image Orientation	ORIENTAT	f5.2
Pattern Name	PATTERN1	c16
Pattern Orient	P1_ORIENT	f5.2
Number of Positions	P1_NPTS	i2
Current Position Number	PATTSTEP	i2

Exposure Plot Graphics

For operating modes other than ACQ, the end product of each exposure, i.e. calibrated on-target image, will be presented on a grey scale linear plot in an RA, DEC scale. To convert from (x,y) coordinates into RA, DEC, the detector plate scale will be used. These parameters are found in the extension headers of the `_raw` file. The position of the target, as specified by the `RA_TARG` and `DEC_TARG` keywords, will also be indicated (see page 20 for an example). For this purpose, the world coordinate system parameters `CRPIX1`, `CRPIX2`, `CRVAL1`, `CRVAL2`, `CD1_1`, `CD1_2`, `CD2_1`, and `CD2_2` will be used. For WFC exposures, a smaller field, 25 x 25 arcsec in size, centered at the target position, will be presented on a separate page right after the page with the full image.

Additional information consists of: (1) a compass indicating the directions of North and East; and (2) a rectangular bar showing the greyscale used to display image in count rate.

For images with CR-SPLIT other than NO and for images with the number of iteration more than 1, there will be additional pages displaying each individual exposure in a stamp size format (2.5 by 2.5 cm), with a maximum of 50 plots per page.

For the ACQ operating mode, the combined calibrated acquisition image (200 x 200 pix) will be presented.

Summary Page

The Summary Page gives the detailed data quality summary of the observation using information extracted from the OMS products (`_jih` file), the trailer file (`_trl`) and keywords from the science header. This information formed the basis for the setting of the data quality flags in the Observation Summary table. The page consists of four “areas” of information which are described below. See page 18 for an example of the Summary Page.

The default value for the data quality “areas” of the Summary page is “File not available” whenever the `_jih` or `_trl` do not exist. If the status is good, the message written is “No anomalies”. Error messages are described in detail in the following three sections.

HST Spacecraft Performance Summary

OMS keywords are used to provide the HST Performance Summary. The keyword/value pairs are listed in Table 11. The presence of special OMS keywords in the `_jih` header file result in information messages being written below the keyword/value pairs. The special keywords are only written to OMS headers under unusual spacecraft performance. If special keywords exist, the messages listed in Table 12 should be included. All keywords in Table 12 starting with a “T” are found in the primary header of the `_jih` file whereas the rest are found in the extensions of the `_jih` file.

Table 11: OMS Keywords used to Populate HST Performance Status

Description	Header Keyword(s)	Print Format
# Recenterings	TNRECENT	i3
# Losses of Lock	TNLOSSES	i3
V2 Jitter (RMS)	TV2_RMS	f5.2
V2 Jitter (P2P)	MV2_P2P	f5.2
V3 Jitter (RMS)	TV3_RMS	f5.2
V3 Jitter (P2P)	MV3_P2P	f5.2

Table 12: OMS Special Keywords

Description	Header Keywords & Selection Criteria	Print Format
Target acquisition failure	T_ACQ2FL=T	c50
Guide star acquisition failure	T_GSFAIL=T	c50
Possible loss of science data	T_TAPDRP	c50
Slewing occurred during this observation	T_SLEWNG=T	c50
Take data flag not on throughout observation	T_TDFDWN=F	c50
Obs. affected when science instrument safed	T_SISAFE=T	c50
Requested small angle maneuver rejected	NO_SAM=T	c50
Requested slew maneuver not executed	NO_SLEW=T	c50
Science data may be lost due to instrument error	SD_LOST=T	c50
Error occurred with filter wheel	FW_ERROR=T	c50
Instrument suspended during observation	SISUSPND=T	c50

Pipeline Processing Summary

Errors that occur during pipeline processing are written to the trailer file (`_trl`). As described in “Data Quality Flags”, error messages are searched for in the trailer file:

- The string “ERROR” is found in the `_trl` file. Errors of this type are written by CALACS, and represent conditions that could result in the interruption of science calibration.

If any error messages are found, then the line containing the search string is written to the Pipeline Processing “area” of the Summary Page.

Calibration Data Quality Summary

This section of the Summary Page is used to alert observers to the use of dummy or fill-value calibration reference files in the pipeline calibration. If the string “DUMMY” is dredged from the trailer file, then the line containing “DUMMY” is written to the Calibration Data Quality “area” of the Summary Page.

Keyword/Value Pairs

A set of keyword/value pairs identical to the ones included in the Exposure Plots pages (see Tables 8, 9 and 10) is written to the right of the page in a column.

Calibration Status Summary

The Calibration Status Summary is a detailed description of calibration switches and associated calibration reference files. Included in the description of the files is the pedigree information. The switch value, reference file and pedigree information is filled from the science header keywords as shown in the table below. The pedigree information must be associated with the appropriate switches. Only those switch keywords that are present in the header should be written to the Calibration Status Summary. Table 13 lists the calibrations switches, the text string that describes the switches and the applicable reference files for each switch. The Calibration Status Summary includes all switches and files found in the primary header of the `_flt` or `_sfl` files. See page 24 for an example of the calibration status summary.

Table 13: Calibration Switches and Reference File Keywords

Calibration Switch	Calibration Value	Description	Calibration Reference File	Calibration Reference File Pedigree
DQICORR	DQIDONE	Mask bad pixels	BPIXTAB	BPIXPDGR
BIASCORR	BIASDONE	Bias subtraction	BIASFILE	BIASPDGR
GLINCORR	GLINDONE	Global nonlinearity correction	GLINTAB	GLINPDGR
DARKCORR	DARKDONE	Dark subtraction	DARKFILE	DARKPDGR
FLATCORR	FLATDONE	Flat field correction	FLATFILE	FLATPDGR
ATODCORR	ATODDONE	A to D conversion correction	ATODTAB	ATODPDGR
BLEVCORR	BLEVDONE	Subtract overscan bias	OSCNTAB	OSCNPDGR

Calibration Switch	Calibration Value	Description	Calibration Reference File	Calibration Reference File Pedigree
SHADCORR	SHADDONE	Shutter shading correction	SHADFILE	SHADPDGR
PHOTCORR	PHOTDONE	Photometric caliibration	PHOTTAG	PHOTPDGR
CRCORR	CRDONE	Reject cosmic rays	N/A	N/A
STATCORR	STATDONE	Photometric keywords	N/A	N/A

Additional Layout Notes

- All pages for the ACS PDF products are in landscape orientation.
- The font used is Helvetica Narrow.
- The character size used is 9 points for keyword-value pairs and 12 point for informational text or messages.
- Margins will be 1.25 cm on all sides.
- Keyword names used as labels are right justified and aligned and separated from the left justified and aligned values by a colon. For example:

KEYWORD1: VALUE1

KEYWORD2: VALUE2

- Table columns are left justified.
- Information messages written to the Summary Page are left justified.
- Numbers should be right justified.
- Table rows are separated by a thin horizontal line.
- The table header is separated from the table rows by a double set of thin horizontal lines.
- Column headers and table titles are in bold type—other text is in plain type.
- Each page has a Header which consists of a rectangular box of dimensions 1.25 cm by 25.4 cm and is filled at (approximately) 30% grey. The text string “ACS” is right justified within the box printed in 36 point Bold-Oblique font.
- Headers for visit pages have the proposal id centered in the rectangular header box. The format is “Proposal: 9999” and is written in 18 point font.
- Headers for visit pages have the string “Visit: 01” left-justified in the header box and written in 18 point font. The value for Visit is the value of the OBSET_ID keyword in the science header file.
- Headers for the exposure pages have the string “Visit-Exp#: 01-10” left-justified in the header box and written in 18 point font. The value for Visit-Exp# is the value of the PEP_EXPO keyword in the science header file.

- Headers for exposure pages have the type of observation followed by the string “Observation:”, exposure rootname, and proposal id centered in the rectangular header box. The format is “Prime Observation: A1234501 Proposal: 9999” and is written in 18 point font. The observation type is the value of the IMAGETYP keyword.
- If data from more than one visit or proposal is found in the input data, do not write the visit or proposal number in the summary pages headers.

Future enhancements to be defined as we gain on orbit experience.

Acknowledgements

Steve Hulbert and Luis Colina provided us with the FrameMaker version of the STIS and NICMOS paper products instrument science reports, respectively.

4. References

W.B. Sparks, D. Swade, S. Baum, S. Casertano, C. Cox, S. Hulbert, R. Jedrzejewski, A. Koratkar, S. Parsons, M.A. Rose, K. Tittle. *HST PDF: A Report by the Data Quality Project*. STScI, 1995.

Proposal: 9999

Visit: 01

PI: Smith, R.

Title: Search for Primeval Galaxies in the Early Universe

Description of Visit Summaries

Target List

The Target List contains the target name, the coordinates for the target as calculated by the ground system based on the target information taken from the proposal, and the text description of the target given in the proposal. Note that the coordinates listed represent the predicted position of the target in the sky and do not give the pointing of HST at the time of the observation.

Observation Summary with Data Quality Flags

The Observation Summary contains information that uniquely identifies individual exposures as specified in the observing proposal. Additionally, the status of the spacecraft and ground-system performance during the execution of the observation are summarized by the Procedural Quality Flags:

- OBS Status of the performance of HST
- PROC Status of the pipeline processing of the observations.
- CAL Status of the reference data used in calibration.

The symbols used to indicate the status of the Procedural Quality are:

- OK.
- Not OK—Refer to the Data Quality Summary for details.
- Blank Status unknown.

Optional Parameters Summary

The Optional Parameters Summary contains additional instrument configuration information. Entries in the table reflect the values of the Optional Parameters, other than pattern related, specified in the observing proposal.

Description of Exposure Summaries

Plots for Each Exposure

Plots are created for each exposure. Grey-scale plots are produced as appropriate for the instrument configuration and observing mode for each exposure. Exposure information taken from the headers of the data files is also provided.

Data Quality Summary for Each Exposure

The Data Quality Summary contains details of problems flagged by the Data Quality flags. Exposure information taken from the headers of the data files is also provided.

Calibration Status Summary for Each Exposure

The calibration summary gives detailed information about the calibration of the observations. Individual calibration steps are listed with completion status. Reference files used are listed by name and information about the pedigree of the calibration data is provided

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help@stsci.edu

Targets List

Target Name	RA	DEC	Equinox	Description
HD000000	12h 00m 00.00s	+10° 0' 00.0"	J2000	

Observation Summary

Visit-Exp #	Rootname	Target Name	Observation Type	Detector	Frame	Operating Mode	Spectral Element 1	Spectral Element 2	Aperture	Exposure Time (sec)	Procedural Quality Flags		
											OBS	PROC	CAL
01-10	A1234501	HD000000	PRIMARY	WFC	FULL	ACCUM	F814W	CLEAR	WFC1-FIX	420	●	○	○
01-10	A1234502	HD000000	AUTOPARALLEL	HRC	FULL	ACCUM	F250W	CLEAR	HRC	160	○	○	○
01-30	A1234503	HD000000	PRIME	SBC	FULL	ACCUM	F115LP	CLEAR	SBC	160	●		●

○ = OK; ● = Not OK; blank = Unknown

Optional Parameters Summary

Visit-Exp #	Rootname	Target Name	Detector	Operating Mode	Optional Parameters
01-10	A1234501	HD000000	WFC	ACCUM	GAIN=2
01-30	A1234502	HD000000	HRC	ACCUM	GAIN=2
01-50	A1234503	HD000000	SBC	ACCUM	

Observing Pattern Strategy

Visit-Exp #	Rootname	Target Name	Detector	Operating Mode	Pattern Name	Pattern Orient	Number of points
01-10	A1234501	HD000000	WFC	ACCUM	ACS-DITHER-BOX	45.50	4
01-30	A1234502	HD000000	HRC	ACCUM	ACS-DITHER-BOX	45.20	4
01-50	A1234503	HD000000	SBC	ACCUM	NONE	0.0	0

Visit-Exp#: 01-10

Primary Observation: A1234501 Proposal: 9999

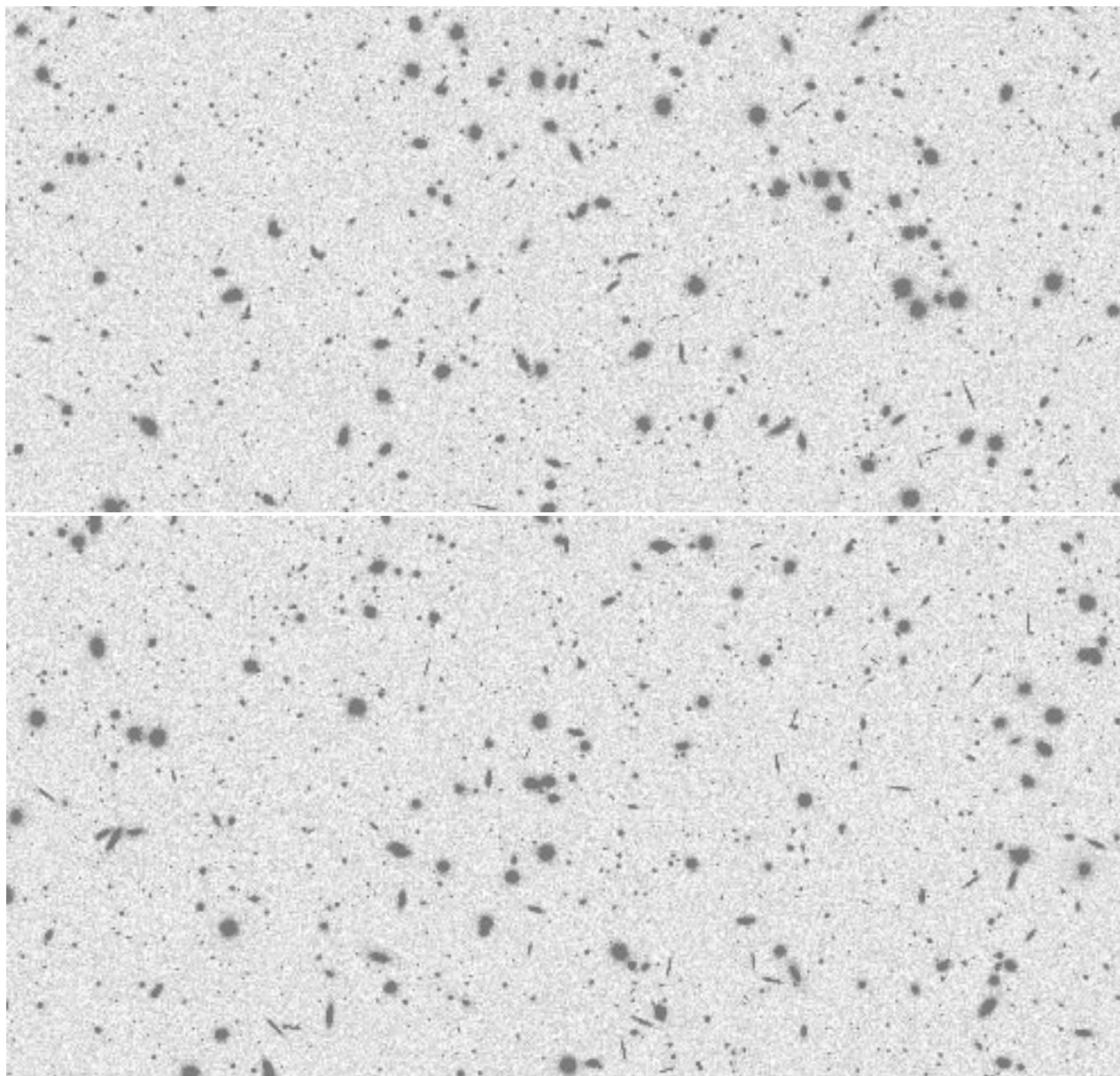
ACS

HD00000: CALIBRATED WFC IMAGE

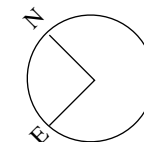
Rootname: A1234501
Obs. Date: 02 Feb 02
Obs. Time: 12:00:00
Observation Type: PRIMARY

Target: HD00000
RA (J2000): 12h 00m 00.00s
DEC (J2000): +10D 00' 00.0"

Detector: WFC
Aperture: WFC1--FIX
Observation Mode: ACCUM
Filter 1: F814W
Filter 2: CLEAR
Exp. Time: 420 s
Frame: FULL
Image orientation: 330 degrees
Pattern Name: ACS-DITHER-BOX
Pattern Orient: 45.50 degrees
Number of Positions: 4
Current Position Number: 1



20



0 4 8 12 Count rate (gain=2)



Visit-Exp#: 01-10

Primary Observation: A1234501 Proposal: 9999

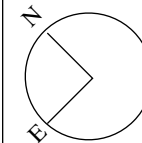
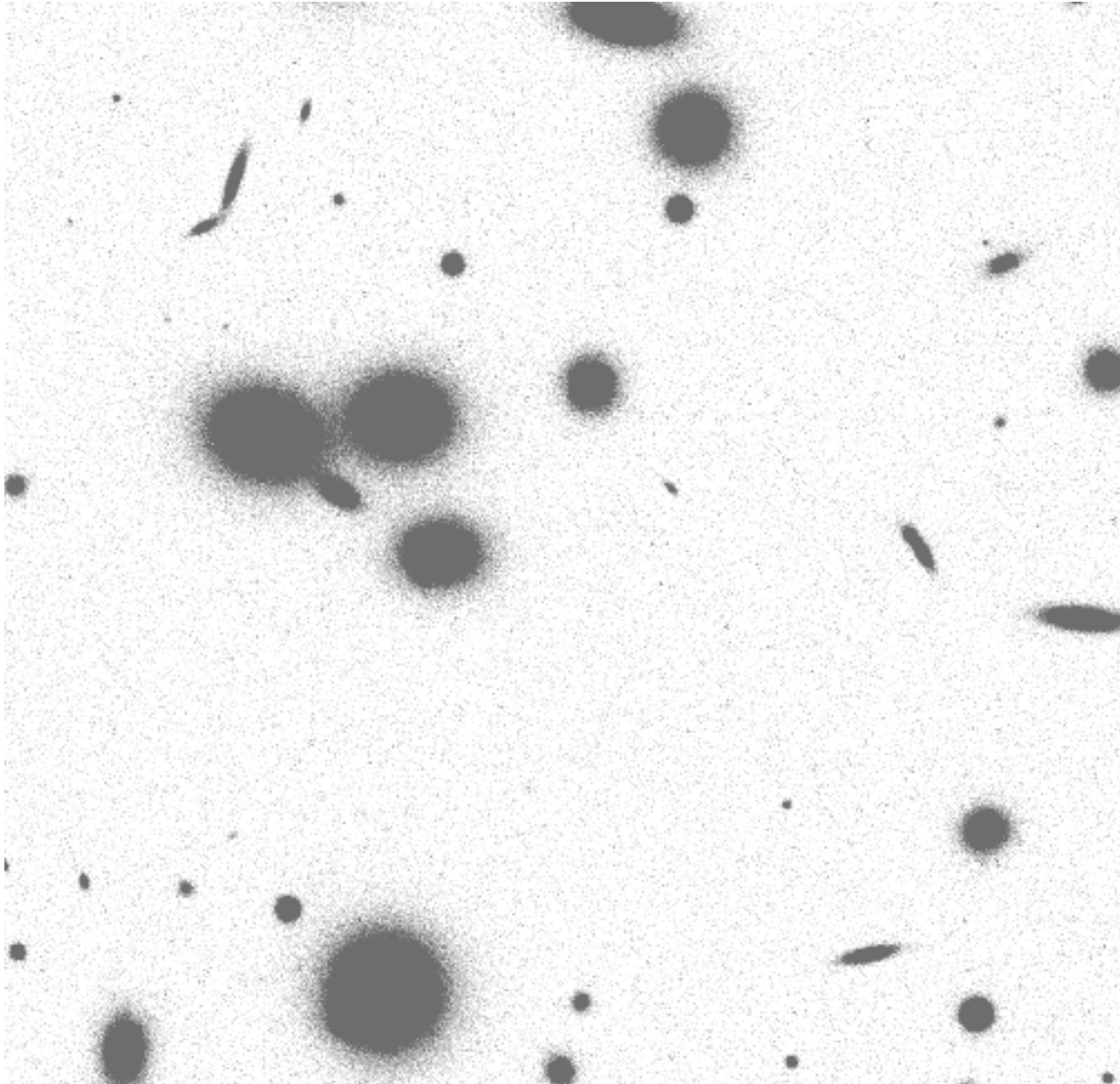
ACS

HD00000: CALIBRATED WFC IMAGE: 25 X 25 ARCSEC FIELD CENTERED AT THE TARGET POSITION

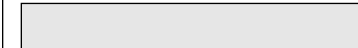
Rootname: A1234501
Obs. Date: 02 Feb 02
Obs. Time: 12:00:00
Observation Type: PRIMARY

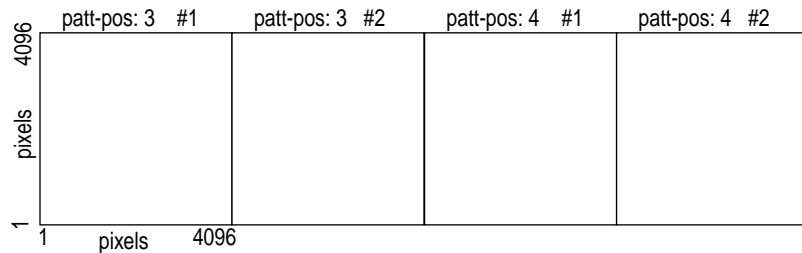
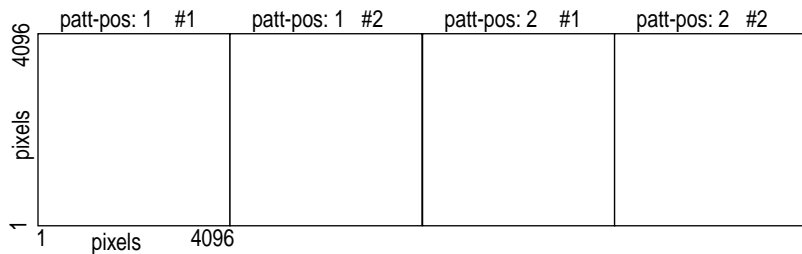
Target: HD00000
RA (J2000): 12h 00m 00.00s
DEC (J2000): +10D 00' 00.0"

Detector: WFC
Aperture: WFC1--FIX
Observation Mode: ACCUM
Filter 1: F814W
Filter 2: CLEAR
Exp. Time: 420 s
Frame: FULL
Image orientation: 330 degrees
Pattern Name: ACS-DITHER-BOX
Pattern Orient: 45.50 degrees
Number of Positions: 4
Current Position Number: 1



0 4 8 12 Count rate (gain=2)





HST Spacecraft Performance Summary

V2 Jitter (RMS): 2.0 mas
V3 Jitter (RMS): 1.0 mas
V2 Jitter (PP): 2.0 mas
V3 Jitter (PP): 1.0 mas

Rootname: o1234501
Obs. Date: 02 Feb 96
Obs. Time: 12:00:00
Observation Type: PRIMARY

Target: HD00000
RA (J2000): 12h 00m 00.00s
DEC (J2000): +10D 00' 00.0"

Detector: WFC 2
Aperture: WFC1--FIX
Observation Mode: ACCUM
Filter 1: F606W
Filter 2: CLEAR
Exp. Time: 420 s
Frame: FULL
Image orientation: 330 degrees
Pattern Name: ACS-DITHER-BOX
Pattern Orient: 45.50 degrees
Number of Positions: 4
Current Position Number: 1

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Pipeline Processing Summary

No anomalies

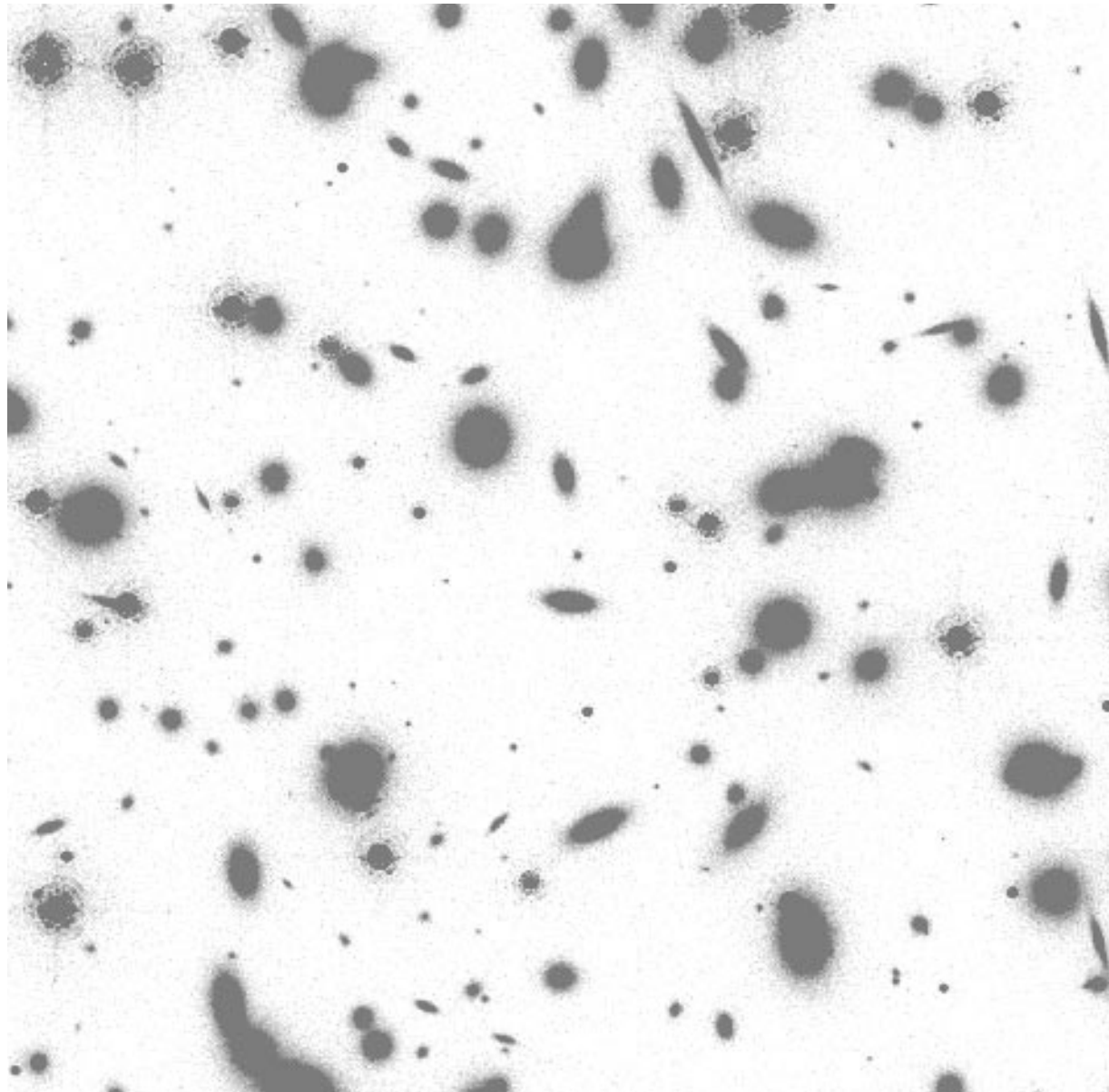
Calibration Data Quality Summary

No anomalies.

Calibration Status Summary

Switches and Flags			Reference Files and Tables			
Keyword	Value	Calibration Step	Keyword	Value	Pedigree	
DQICORR	PERFORMED	Mask bad pixels	BPIXTAB	f0000006o	GROUND	DEC02
ATODCORR	PERFORMED	Correct for A to D conversion	ATODTAB	f0000002o	GROUND	DEC02
BLEVCORR	PERFORMED	Subtract overscan bias	OSCNTAB	f0000002o	GROUND	DEC02
BIASCORR	PERFORMED	Subtract bias image	BIASFILE	f0000003o	GROUND	DEC02
CRCORR	PERFORMED	Reject cosmic rays	N/A			
GLINCORR	PERFORMED	Correct for global nonlinearity	MLINTAB	f0000006o	GROUND	DEC02
DARKCORR	PERFORMED	Dark subtraction	DARKFILE	f0000004o	GROUND	DEC02
FLATCORR	PERFORMED	Flat field correction	FLATFILE	f0000005o	GROUND	DEC02
SHADCORR	PERFORMED	Shutter shadow correction	SHADFILE	f0000005o	GROUND	DEC02
PHOTCORR	PERFORMED	Photometric calibration	PHOTTAB	f0000006o	GROUND	DEC02
STATCORR	PERFORMED	Compute statistics	N/A			

HD00000: CALIBRATED HRC IMAGE



Rootname: A1234502
Obs. Date: 02 Feb 02
Obs. Time: 12:00:00

Target: HD00000
RA (J2000): 12h 00m 00.00s
DEC (J2000): +10D 00' 00.0"
Observation Type: AUTOPARALLEL

Detector: HRC
Aperture: HRC--FIX
Observation Mode: ACCUM
Filter 1: F250W
Filter 2: CLEAR
Exp. Time: 160 s
Frame: FULL
Image orientation: 330 degrees
Pattern Name: ACS-DITHER-BOX
Pattern Orient: 45.50 degrees
Number of Positions: 4
Current Position Number: 1

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