

observations are stored as FITS image, as are the raw data and the calibrated imaging data. The units of the data in the extracted two dimensional spectra are $\text{ergs sec}^{-1} \text{ cm}^{-2} \text{ A}^{-1} \text{ arcsec}^{-2} \text{ pixel}^{-1}$. “Working with Two Dimensional Extracted Spectra” on page 23-3 describes how to work with these data to derive flux information and wavelengths.

Imaging Data

The final calibrated output product for CCD imaging data is the *rootname_crj.fits* file, and the final calibrated product for MAMA data is either the *rootname_flt.fits* or *rootname_sfl.fits* files. The units of the data in these files is in counts per pixel, just as in WFPC2 data, and in general these data can be manipulated just like WFPC2 data. See “Converting Counts to Flux or Magnitude” on page 3-15.

Storage of Acquisition and Acquisition/Peakup Images

Almost all STIS spectroscopic science exposures will have been preceded by an acquisition and possibly an acquisition/peakup exposure to place the target in the slit. Keywords in the header of spectroscopic data identify the dataset name of the acquisition (in the ACQNAME keyword) and ACQ/PEAK images (in the PEAKNAM1 and PEAKNAM2 keywords).

An acquisition exposure produces a raw data file (*rootname_raw.fits*) containing three science image extensions corresponding to the three stages of the acquisition procedure:

- [SCI,1] is a subarray image (100 x 100 for point source acquisitions; larger for diffuse acquisitions) of the sky obtained after the initial blind pointing.
- [SCI,2] is an image of the same subarray after the coarse locate phase of the acquisition.
- [SCI,3] is an image of the 32 x 32 subarray taken during the slit-illumination phase of the target acquisition.

An acquisition/peakup exposure will produce a single raw data file for a spiral search and one for each linear one-dimensional search (that is, if you have performed a peakup which requires LINEAR-AXIS1 and LINEAR-AXIS2 scans, then two data sets will be produced—one for each scan). The *rootname_raw* data file produced for an acq/peak exposure contains one science image extension:

- [SCI,1] is the confirmation image, taken at the end of the peakup, after the final move which places the target in the slit.
- To examine the flux values of the individual steps in the ACQ/PEAK, list the pixels (using the **listpix** task) of the fourth extension, i.e., *rootname_raw.fits[4]*.