FRETRG

This process is a time poller that runs in the OTFR science pipeline and will attempt to resubmit POD files for science processing that were kept out due to a name collision. A POD file that suffered a name collision will be renamed with file-extension **.pod_duplicate** or **.pod_hold**. If any such files are found in the POD input directory (DUDDCT), they will be renamed to **.pod**.

PSHWF2

This process is an OSF poller that runs in the OTFR science pipeline and will trigger on WFPC-2 datasets stuck in the 'm' state in the Data Partitioning pipeline stage. These datasets are signalling that they expect to be MERGED, but there are some cases where no more WFPC-2 datasets are to be expected. To make this decision, the process does a look-up in the ***DSQUERY::OPUS_DB:podnames*** relation and if only a single POD entry is found for this exposure, then it is assumed that no more datasets are expected, and the dataset is pushed on to the next pipeline stage. If multiple POD entries are found in the look-up, then the OSF is marked for error.

OCALxx

The OTFR science pipeline calibration script will make an extra check to see if calibration should be attempted for an exposure, before calling the calibration routine. This new check is made against the ***ARCH_SERVER::ARCH_DB:otfr_special_processing*** database relation, and if the ***osp_processing_steps*** field contains "BYPASS_CAL", then calibration is skipped for this exposure. This new check is in addition to the already existing check of the CALIBRAT header keyword, which can cause calibration to be skipped when its value is "N" or "F". The OTFR science pipeline calibration for WF2 will also convert the input FITS files from Generic Conversion to GEIS before calibrating.

The following processes can run in both the OTFR science pipeline and the pre-archive science pipeline. They are either new with the introduction of OTFR, or have different behavior now that OTFR is being implemented:

FNDMRG

This process is a time poller that will periodically look for "Q/S split" datasets stuck in the Data Partitioning pipeline stage. A search is made of all OSFs in the science pipeline that are PROCESSING in the DP stage (DP_STAGE, DP_SEARCH_VALUE), and if that list contains datasets with the same IPPPSSOO but differing last characters, they are considered potential Q/S split candidates. A database look-up is made to ***ARCH_SERVER::ARCH_DB:otfr_special_processing***, and if an entry for this IPPPSSOO exists with ***osp_processing_steps*** containing "MERGE_REQD", then this is an identified Q/S split. In this case the OSF with the higher DCF number will be triggered for automatic merging (DP_MERGE_VALUE).

MRGxxx

These processes are OSF pollers that automatically merge Q/S split datasets. There is one resource file for each instrument that can have splits (currently STIS and NICMOS). The Q/S split exposures are located by performing an OSF search, using DATASET for 8 characters and a wild-card. If any more or less than 2 OSFs are found, this is an error and the triggering OSF is marked for error. The **catfiles** tool is used to merge the .PKX and .ULX files from the two exposures (SIS_DIR) in a temporary area (OPUS_TEMP_DIR). The .PKI and .ULI files are combined and the stored indicies are adjusted to account for the order of the split. The .ERX files should be identical, so one is chosen to use for the merged dataset. The .TRX files are combined. The merged files are then moved from the temporary area (OPUS_TEMP_DIR) back into the pipeline area (SIS_DIR), overwriting the files of the split dataset *with the corresponding higher OSF DCF number*. This OSF is then pushed on to the next pipeline stage (RESOURCE_FILE, RESOURCE_ITEM).

GC_xxx

The Generic Conversion science pipeline processes have been changed to check for and apply keyword repairs to FITS header keywords, after all keywords have been loaded from their sources. Keyword repairs are specified in the ***ARCH_SERVER::ARCH_DB:otfr_keyword_repair*** database table, and are meant to be used to fix telemetry errors, *not software or database errors*. An example of such a repair exists for WFPC-2, where the wrong shutter indicator appears in the telemetry, but the correct shutter was actually used for the exposure. Such keyword repair cases should be quite rare, however the Generic Conversion code for all active instruments has been changed to check for any repairs that should be applied to an exposure.