Error Flushing (_f)

This process will check the age of the OTFR response file in the dataset directory against the process resource value ERROR_FLUSH_INTERVAL. If the response file is old enough, the dataset will be flushed by setting the OSF status columns as directed by the OSF_FLUSH entries in the process resource file. If a dataset hits an error in a pipeline stage that cannot be flushed (e.g. RETxxx, the stage that copies files back to DADS), the error will remain in the OTFR pipeline until it is attended to by the operator. These are considered cases in which the flush operation itself cannot be performed because of some problem (we can't "flush the flusher"). If the OTFR response file is not old enough, the dataset is pushed back to the Error Triggering process by setting the OSF column to '3', and the OTFR response will be checked again at a later time.

So the progression is

- error detection; OSF goes from 'e' to '2'
- error notification; OSF toggles between '2' and '1' until the notification timer (the age of the response file) expires and the OSF goes to '4'
- error flushing; OSF toggles between '4' and '3' until the flushing timer (the age of the response file) expires and the OSF goes to 'f'

When the OSF goes to 'f', the dataset has been flushed.

The names of these error-handling processes follow this naming convention.

- `col_e - Error Timer process`
- `col_n - Error Notification process`
- `col_t - Error Triggering process`
- `col_f - Error Flushing process`

Note that the first three (3) characters reflect the name of the process for that stage. The underscore and letter indicate the particular error handling process. The error Timer (_e), Notification (_n), Triggering (_t), and Flushing (_f) processes are generic enough that they can be used for any instrument.

Note that the timer intervals (ERROR_NOTIFY_INTERVAL, ERROR_FLUSH_INTERVAL) in the process resource files are entered in *different units*. The ERROR_NOTIFY_INTERVAL is in units of HOURS, while the ERROR_FLUSH_INTERVAL is in units of DAYS. These seemed to be the most likely timescales on which these intervals would be set. Comments in the process resource file serve to remind the user of the units, if you ever want to change the values.

Errors in different OTFR pipeline stages will result in different flushing behavior.

Error in Pipeline stage	Action
PO - poll for OTFC_request	Send only OTFR_response back to DADS
LS - copy FITS files from DADS	
RQ - submit an archive request	
WK - segment a POD file	
MO - move POD/EDT to science pipeline	

Errors in early pipeline stages result in only an OTFR_response file being returned to DADS, since no useful work has yet been done. The FILE_COUNT parameter in the response file will be set to zero (0) to indicate that no FITS files have been sent back by the OTFR pipeline.