

**NAME**

FGMperl – Collection of routines for the Cluster FGM calibration.

**SYNOPSIS**

```
Use FGMperl;

%p=readcalfile($CalFile);
%p{$FGM_names{$key}}[$j]=$off;
print CFILE calfilestr(\%p);
```

**DESCRIPTION**

This perl module contains a collection of routines and variables which are used by various scripts for the Cluster FGM daily calibration.

**EXPORTED VARIABLES**

`%FGM_names`  
Correspondence hash between calibration parameter names as saved in the *cfgnew* files and those appearing in the *cls.pro* “calibration table”.

**EXPORTED FUNCTIONS**

`readcalfile($file_name)`  
returns a hash with the calibration parameters from *\$file\_name*.

`calfilestr(\%p)`  
returns the string in *cfgnew* format for the calibration parameters in the `%p` hash. If the hash does not include range 7 parameters (introduced later), they will be assigned default (0 offset, unit matrix) values.

`selectraw(ICL=>$ICL, sc=>$sc, bs=>$bs, yy=>$yy, mm=>$mm, dd=>$dd, dv=>$dv)`  
In list context returns a list of names of non-empty raw data files found.

Arguments:

`ICL=>n` : Search path. `n=1` for the Imperial College data `$ENV{FGMROOT}."/data/raw/ICL/$yy"."_"$mm`  
`n=2` for the ESTEC data `$ENV{FGMROOT}."/data/raw/ESTEC/`.

`sc=>n` : Data for spacecraft `n`

`bs=>s` : `s='BS'` for burst science, `s='NS'` for normal science, `s='BSNS'` for both

`yy=>y` : year

`mm=>m` : month

`dd=>d` : day

`dv=>dv` : Data version. One character ('a','b', ...) or 'last' to select the last version available.

In scalar context returns the last available raw data version ('a','b', ...)

In void context prints the regex for the names of the raw data files.

**AUTHOR**

Dragos Constantinescu <d.constantinescu@tu-bs.de>