

NAME

mkuncal.pl – Produces the FGM uncal files.

SYNOPSIS

```
mkuncal.pl [--month month] [--year year] [--ICL] [--All] [--Length length] [--inboard]
[--(no)log] [--(no)check] [--help]
```

DESCRIPTION

This script produces the 5 minutes FGM *uncal* files used for calibration. The dates, begin times, and ranges for each spacecraft are read from the uncal configuration file. Compressed input files are transparently managed.

OPTIONS

-m month, --month month

The month. One or two digits. If given, the *uncal_yymm.txt* configuration file is used and the **--inboard** option is set. If omitted, the *uncal.txt* file is used instead. In the latter case, the month must be given in the header of the file.

-y year, --year year

The year. One or two digits. Default is the current year.

-i, --inboard

Produce uncal files also for the inboard sensors.

-I, --ICL

Use the Imperial College London raw data. Default is to use the ESTEC raw data.

-A, --All

Pass the option '-a' to fgmtel. As a result all vectors, including range changes, calibration mode, and eclipses data will be produced. See the fgmtel man page. Default is to produced only non-marked vectors.

-L length, --Length length

Length of the uncal interval in minutes. Default value is 5 minutes.

-c, --check

Check if the range given in the *uncal.txt* file corresponds with the range of the interval (from the log file). Default is yes. Can be disbled using the **--nocheck** option.

-l, --log

Record the run to dailycal log file. Default is enabled. Can be disbled using the **--nolog** option.

-h, -?, --help

Prints a brief help message.

ENVIRONMENT

FGMROOT

Root for the FGM calibration directory structure. Default to */home/FGM/* if not set.

FGMPATH

Path to calibration files (*.fgmcal and *.cfgnew). Default to *\$FGMROOT/data/dcal/* if not set.

SATTPATH

Path to orbit parameters files. Default to *\$FGMROOT/log/atorb/* if not set.

FILES

\$FGMROOT/cfg/uncal.txt, *\$FGMROOT/cfg/uncal_yymm.txt* – Configuration file giving the dates, ranges, and begin times for each spacecraft.

Format:

Header (optional for *uncal_yymm.txt*):

Y = YY

mm = mm

Config lines:

```
sc1 sc2 sc3 sc4 range day hbeg mbeg
```

sc=0|1, range=2-7, day is given as two digits, hbeg is the beginning hour (two digits), and mbeg is the beginning minute (two digits).

\$FGMROOT/data/raw/ICL/\$yy_\$mm/ – Imperial input path

\$FGMROOT/data/raw/ESTEC/cluster\$sc/[n/b]sd_\$sc/ – ESTEC (default) input path

\$FGMROOT/data/uncal/\$yy_\$mm/ – output path

C\$s_\$yy\$mm\$dd_B.[B/N]S – Imperial input files

\$YY\$mm\$dd.f[n/b].?a\$sc – ESTEC (default) input files

c\$s_\$yy\$mm\$dd_\$hh\$minr\$range.uncal – outboard FGM uncal files

c\$si_\$yy\$mm\$dd_\$hh\$minr\$range.uncal – inboard FGM uncal files

\$FGMROOT/log/dailycal/dailycal_\$yy\$mm.log – Dailycal log file.

DEPENDENCES

This script uses the following:

```
ddscut,
fgmtel,
fgmcut,
fgmvec.
```

AUTHOR

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