goflib

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Abstract

Library of Fortran 90 utilities needed for Extended Source Analysis Software (ESAS) related tasks. Includes subprogram emanom for determining if EMOS chips are in an anomalous state.

1 Instruments/Modes

Instrument	Mode
EPIC	IMAGING, TIMING

2 Use

pipeline processing	yes
interactive analysis	yes

3 Description

3.1 Introduction

This library consists of a series of Fortran 90 modules useful for the development of SAS tasks. Each module is described in a separate section below. Each module is contained in a separate file and will be compiled separately. The resulting object files will be combined into a single library file.

Goflib is divided into seven submodules defined broadly as (i) constant calculators, (ii) coordinate transformations, (iii) I/O, (iv) matrix operations, (v)general utilities, and (vi) Jet Propulsion Lab Ephemeris routines (JPLEPHEM IDL routines converted to f95).

3.2 Module index

- Section **??**: `emanon`: Determines whether EPIC MOS chips are in an anomalous state.
- Section **??**: `constants`: Simple set of double precision constants for time and coordinates.

- Section ??: `coords`: Simple set of coordinate transformation subroutines.
- Section ??: `io`: Simple set of SAS DAL-accessing I/O routines specialized for ESAS routines.
- Section ??: `matrix`: Set of matrix-manipulation, probability functions, best fit functions, etc.
- Section ??: `utils`: Binning, smoothing, ascii text-manipulation, QDP file production functions.
- Section ??: `jplephemeris`: Functions to manipulate the JPL ephemeris file JPLEPH.405, IDL rewritten to f95.

4 Module descriptions

Module name: `constants`

Module name: `coords`

Module name: `coords`

5 Algorithm

6 Comments

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References