Function description of input options

GravLab Team

Contents

load_data_filtering

Description:
load_data_filtering reads and classifies the user's data. The input data must be a MAT-file.

Syntax:
[app.data_for_filtering,k] = load_data_filtering();

Input variables:

The compatible input format (MAT-file) is the following:

Cells	Content
1st	Vxx in GRF
2nd	Vyy in GRF
3rd	Vzz in GRF
4th	Vxy in GRF
5th	Vxz in GRF
6th	Vyz in GRF
7th	longitude (degrees)
8th	latitude (degrees)
9th	GOCE atitude (meters)
10th	GPS time (seconds)
11th	Names of the processed files

Output variables:

Variable name	Size	Description
app.data_for_filtering	6x1	Contains the reduced gravity gradients for the upcoming filtering.
k	1x1	Counter/ is needed for further actions in GUI.

load_1_2_gui_output

Description:
load_1_2_gui_output reads the SGG_GRF and the GGM_LNOF_2_GRF MAT-files. It classifies and checks the data in their lengths. After a successful checking, it removes the GGM contribution from the initial GOCE GGs and creates the primary input variable for the forthcoming filtering.

Syntax:
[app.data_for_filtering,k,q] = load_1_2_gui_output();

Input variables:

Variable name	Size	Description
SGG_GRF.mat	15x1	The main output of the first tab
GGM_LNOF_2_GRF.mat	37x1	The main output of the second tab

Output variables:

Variable name	Size	Description
app.data_for_filtering	6x1	Contains the reduced gravity gradients for the upcoming filtering.
k	1x1	Counter/ is needed for further actions in GUI.
q	1x1	Counter/ is needed for further actions in GUI.

load_3rd_option_for_filtering

Description:
load_3rd_option_for_filtering reads the SGG_GRF and the user's computed GGM gravitational tensor components in GRF. It classifies and checks the data in their lengths. After a successful checking, it removes the GGM contribution from the initial GOCE GGs and creates the forthcoming filtering's primary input variable.

Syntax:
[app.data_for_filtering,k,q] = load_3rd_option_for_filtering();

Input variables:

Variable name	Size	Description
SGG_GRF.mat	15x1	The main output of the first tab
.MAT (*)	6x1	user's computed GGM gravitational tensor components in GRF.

(*) The Compatible input format (MAT-file) for the GGM gravitational tensor components is the following:

Cells	Content
1st	Vxx in GRF (Eötvös)
2nd	Vyy in GRF (Eötvös)
3rd	Vzz in GRF (Eötvös)
4th	Vxy in GRF (Eötvös)
5th	Vxz in GRF (Eötvös)
6th	Vyz in GRF (Eötvös)

Output variables:

Variable name	Size	Description
app.data_for_filtering	6x1	Contains the reduced gravity gradients for the upcoming filtering.
k	1x1	Counter/ is needed for further actions in GUI.
q	1x1	Counter/ is needed for further actions in GUI.