**MVN\_STA\_MAG\_parameters\_interactive installation guide**

1. Install MATLAB. Also install the following toolboxes (list may be excessive): Aerospace Toolbox, Curve Fitting Toolbox, Financial Toolbox, Optimization Toolbox, Parallel Computing Toolbox, Statistics and Machine Learning Toolbox.
2. Install CDF patch for MATLAB: <https://cdf.gsfc.nasa.gov/html/matlab_cdf_patch.html>. The procedure generally consists of downloading and extracting folder with CDF functions to your computer, and then adding the path to this folder to MATLAB path: addpath('path\to\folder')
3. Add library with MAVEN programs to MATLAB path: addpath('\\192.232.6.100\Data\Maven\data for MATLAB\software\Library')
4. Copy the following file to your local MATLAB work folder, specify the desired time in it and launch the script: \\192.232.6.100\Data\Maven\data for MATLAB\software\MVN\_STA\_MAG\_parameters\_interactive.m

HINT: In order to avoid adding path to folders manually after each MATLAB launch, you can create a “startup.m” in the root of MATLAB work folder and specify the commands from p.2 and 3 there. This file will run automatically after each MATLAB launch.

If you are utilizing MAVEN data stored anywhere else except for IKI server \\192.232.6.100\, the following paths must be specified in scripts stored in Library folder:

1. *find\_CDF\_file\_d1\_Version2.m*

line “*root = '…';*” must indicate STATIC d1 data folder. Folder structure must be the following: \*yyyy\mm\mvn\_sta\_l2\_d1-32e4d16a8m\_yyyymmdd\_v\*\_r\*.cdf*

1. *find\_CDF\_file\_swia\_moments.m*

line “*root = '…';*” must indicate SWIA onboard survey moments data folder. Folder structure must be the following: \*yyyy\mm\mvn\_swi\_l2\_onboardsvymom\_yyyymmdd\_v\*\_r\*.cdf*

1. *find\_CDF\_file\_swia\_spec.m*

line “*root = '…';*” must indicate SWIA onboard survey spectra data folder. Folder structure must be the following: \*yyyy\mm\mvn\_swi\_l2\_onboardsvyspec\_yyyymmdd\_v\*\_r\*.cdf*

1. *find\_mag\_file.m*

line “*monthpath\_MAG = '…';*” must indicate **32-Hz** resolution MAG \*.mat files data folder in **Sun-State** coordinates. Folder structure must be the following: *\mvn\_mag\_l2\_\*ss\_yyyymmdd\_v\*\_r\*.sts.mat*

1. *find\_mag\_pc\_file.m*

line “*monthpath\_MAG = '…';*” must indicate **1-Hz** resolution MAG \*.mat files data folder in **Planetocentric** coordinates. Folder structure must be the following: *\mvn\_mag\_l2\_\*pc1s\_yyyymmdd\_v\*\_r\*.sts.mat*

1. *find\_STA\_mat\_file\_cleaned.m*

line “*root\_STATIC = '…';*” must indicate folder to \*.mat files with pre-calculated STATIC moments. Folder structure must be the following:

*\\*H.mat*

*\\*O.mat*

*\\*O2.mat*

ALSO, in lines 38, 62, 68, numbers in expression “name(26:33)” must indicate positions of *“yyyymmdd”* in the full file pathname string.

1. *find\_svyspec.m*

line “*root = '…';*” must indicate SWEA survey spectra data folder. Folder structure must be the following: \*yyyy\mm\mvn\_swe\_l2\_svyspec\_yyyymmdd\_v\*\_r\*.cdf*