riseset_notebook

March 28, 2023

1 `riseset` Examples

This notebook demonstrates the J `riseset` script. `riseset` computes the rise, transit, and set times of named IAU Stars.

To run this notebook you must install a J jupyter kernel. See Martin repository for instructions.

```
[7]: NB. J version and date
     smoutput 9!:14 ''
     smoutput 6!:0 ''
```

```
j9.4.1/j64avx512/windows/commercial/www.jsoftware.com/2023-02-27T15:21:53/clang-
15-0-7/SLEEF=1
2023 3 28 22 50 24.29
```

1.1 Installation

`riseset` is distributed as a J addon. It is installed in the J `~addons/jacks` folder. It can be installed from GitHub with:

```
[5]: load 'pacman'
     smoutput install 'github:bakerjd99/jackshacks'
```

```
installed: bakerjd99/jackshacks master into folder: jacks
```

The `jacks` (J-hacks) addons are self contained JOD generated J scripts. Each `ijs` script is accompanied with `pdf` document that describes how to use it. Some scripts, like `riseset` are also packaged with a Jupyter notebook (this file) and a `pdf` version of the notebook. For example, the `riseset` files are:

```
 riseset.ijs
 riseset.pdf
 riseset_notebook.ipynb
 riseset_notebook.pdf
```

The are other scripts in `~addons/jacks` and more will be added from time to time. To refresh the folder, reissue the install command.

In addition to these files the subfolder `~addons/jacks/testdata` contains data files. `riseset` files in `testdata` are:

```
 Bright_Stars_Meridian_Almanac_23mar27.md
```

```
iau_named_stars_2022.txt
Navigation_Stars.txt
```

[3]: *NB. load riseset*
`load '~addons/jacks/riseset.ijs'`

```
NB. (riseset) interface word(s): 20230328j184103
NB. --------------------------
NB. iau_tonight   NB. named IAU stars visible tonight
NB. loadstars     NB. loads riseset star data
NB. riseset       NB. rise, transit, set times of stars
```

[ ]: