



## What global variables are available in scriptForPI.py?

Erica Keller - 2024-03-20 - Offline Data Reduction and/or CASA

The global variables SPACESAVING, USEMS, DOSPLIT, and DOCONTSUB can be set prior to executing scriptForPI.py. The variables can be used independently or in conjunction.

**USEMS** can be set to use pre-imported measurements sets (MS) rather than import them from the ASDMs in the raw directory. You must have created the directory *calibrated* and put the imported raw MSs *uid\*.ms* into individual working directories named *uid\*.calibration* inside the *calibrated* directory. It can be set to either 0 or 1 with the following meaning.

USEMS = 0 same as not set, ASDMs will be imported from the raw directory

= 1 MSs have been pre-imported in the calibrated directory

**SPACESAVING** limits the disk space usage during and after execution of the script. It can be set to an integer from -1 to 3 with the following meaning.

SPACESAVING = -1 do not check disk space

= 0 same as not set (all intermediate MSs are kept)

= 1 do not keep intermediate MSs named *\*.ms.split*

= 2 do not keep intermediate MSs named *\*.ms* and *\*.ms.split*

>= 3 do not keep intermediate MSs named *\*.ms*, *\*.ms.split*, and *\*.ms.split.cal* (if possible)

With SPACESAVING=0, the required additional disk space is up to 14 times as large as the delivered data (products and rawdata) while with SPACESAVING=3 (maximum savings), it is up to 6 times as large. The script will estimate the required disk space and will not execute if there is not sufficient free space available.

**DOSPLIT** can be set to create the *\*.ms.split.cal* MSs, containing the only the calibrated data and science spectral windows (spws).

DOSPLIT=True will force the creation of the *\*.ms.split.cal* MS.

DOSPLIT=False is the same as not setting DOSPLIT at all. In that case, the script will only create the *\*.ms.split.cal* MSs in the case there was manual imaging (i.e. not pure pipeline imaging) performed during QA2.

**DOCONTSUB** can be set to re-create the continuum-subtracted MSs for line imaging. This is only relevant for pipeline-imaged data.

DOCONTSUB=True creates the continuum-subtracted MSs. In this case scriptForPI.py runs the first imaging stages. From Cycle 10 onwards, DOCONTSUB will automatically be run if the pipeline used self-calibration.

DOCONTSUB=False is the same as the default of unset. Continuum subtraction will not be applied.

For example, after initiating CASA in the script directory, the following commands would use pre-imported MSs and the highest degree of spacesaving and ensure that the calibrated data is split out into new *\*.ms.split.cal* MSs at the end.

```
SPACESAVING = 3
```

```
USEMS = 1<
```

```
DOSPLIT = True
```

```
execfile('scriptForPI.py')
```

For more information, see [the ALMA QA2 Data Products document](#).

Tags

calibration

restore

restoredata

restoring

scriptforpi