

1 Default Formatfiles

- 1 Images: These are default files for making model images. Replace 'SS' with the species: 'Na', 'Ca', or 'Mg'
 - `Mercury.SS.image.xy.wid6.format`: Image of equatorial plane (view from above north pole) from $\pm 3 R_M$ in each direction.
 - `Mercury.SS.image.xz.wid6.format`: Image of noon-midnight plane (view from above dawn point) $\pm 3 R_M$ in each direction.
 - `Mercury.SS.image.yz.wid6.format`: Image of Dawn-Dusk plane (view from sun) from $\pm 3 R_M$ in each direction.
- 2 MASCS Simulations: These are default files from simulating the MASCS lines-of-sight. Replace 'SS' with the species: 'Na', 'Ca', or 'Mg'. Replace 'XXXX' with the four digit orbit number. Orbit 33 is '0033'.
 - `MESSENGER.OrbitXXXX.SS.dphi1.format`: cone with opening 1° .
 - `MESSENGER.OrbitXXXX.SS.dphi3.format`: cone with opening 3° .
 - `MESSENGER.OrbitXXXX.SS.dr0p05.format`: cylinder of width $0.05 R_M$.
 - `MESSENGER.OrbitXXXX.SS.dr0p1.format`: cylinder of width $0.1 R_M$.
- 3 I can create more default files on request.

2 Using these files

- 1 Basic usage with no changes.

```
IDL> formatfile = 'MESSENGER.Orbit0022.Ca.dphi3.format'
IDL> result = produce_results(inputfile, formatfile)
```

It is not necessary to specify the path. If the given formatfile is not found in the current directory, the program searches a default path.

- 2 To make a change:

```
IDL> formatfile = 'MESSENGER.Orbit0022.Ca.dphi3.format'
IDL> format = read_resultformat(formatfile)
IDL> format.geometry.dphi = 1*!dior ;; use a 1 degree cone angle
IDL> result = produce_results(inputfile, format)
```

The function *produce_results* can take either a file name or a format structure as an input.