
GILDAS
SOFTWARE

1

1,2

3



N_{tot}



$$N_{tot} = N_{good} + N_{bad}$$

i^{th}

j^{th}

$N_{set} \times N_{pix} \times N_{time}$

$$f = \frac{\mathrm{mjd}_S - \mathrm{mjd}_A(j)}{\mathrm{mjd}_A(j+1) - \mathrm{mjd}_A(j)}$$

$\mathrm{mjd}_A(j)$

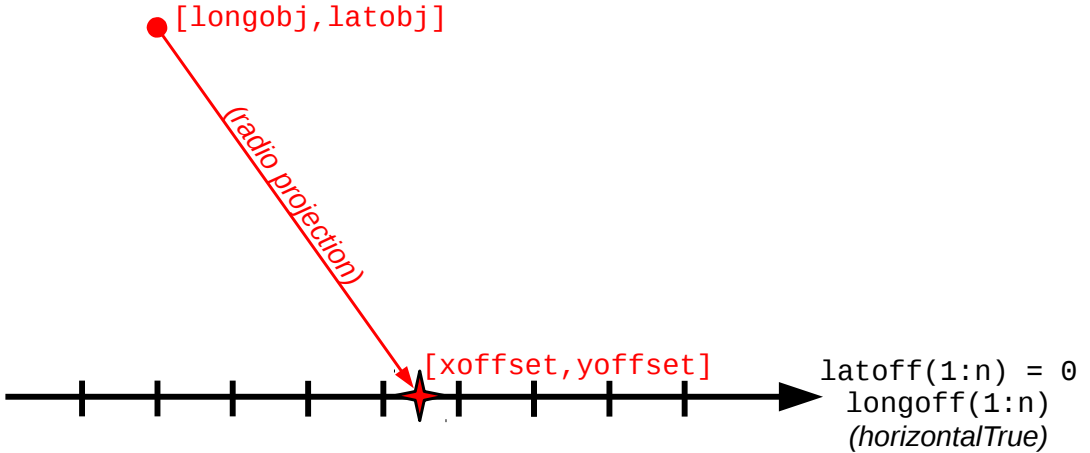
$$\mathrm{mjd}_A(j) \leq \mathrm{mjd}_S < \mathrm{mjd}_A(j+1).$$

$j + 1^{th}$

$$l_S = l_A(j) + f \times \left[l_A(j+1) - l_A(j) \right],$$

$\pm\Delta/2$




[longobj,latobj]
(radio projection)
[xoffset,yoffset]
latoff(1:n) = 0
longoff(1:n)
(horizontalTrue)

x

$$(A - A_0) \times \cos(d),$$

y

$d - d_0,$



A, d

x, y

x

d



1

$480'' \times 480''$

$(-1500'', 2000'')$

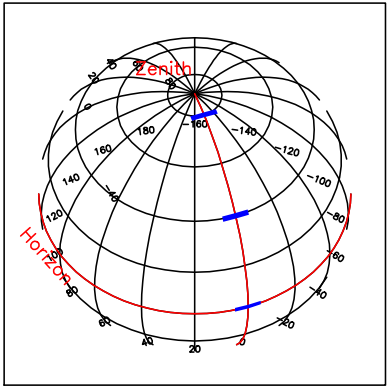
$cos(elevation)$

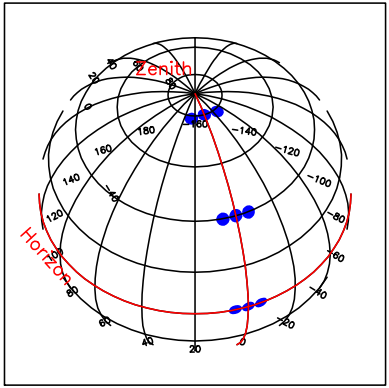
0°

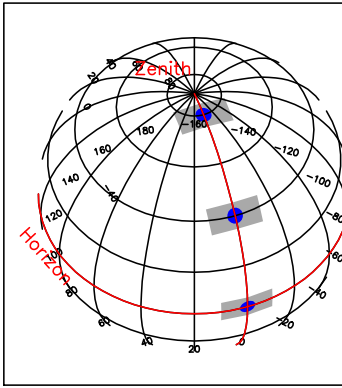
40°

80°

10°


Zenith
Horizon


Zenith
Horizon


Zenith
Horizon

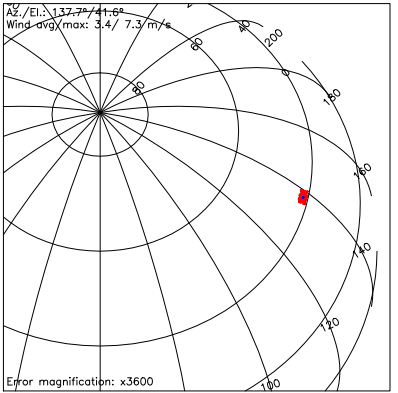
$10^\circ / cos(\mathrm{el})$

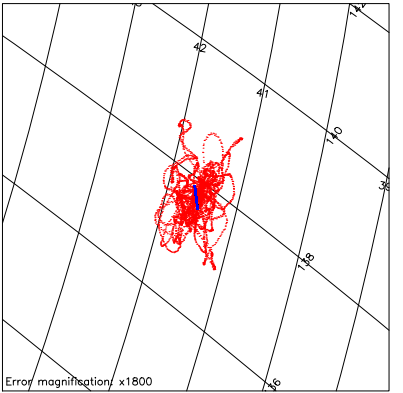


$cos(86^\circ) \simeq 0.07$

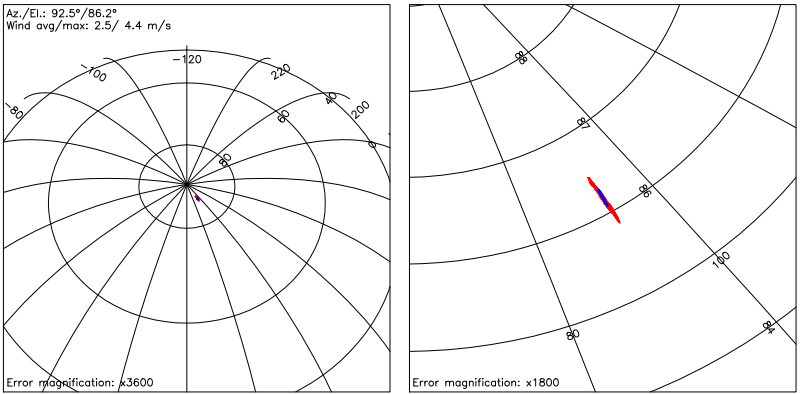
86°

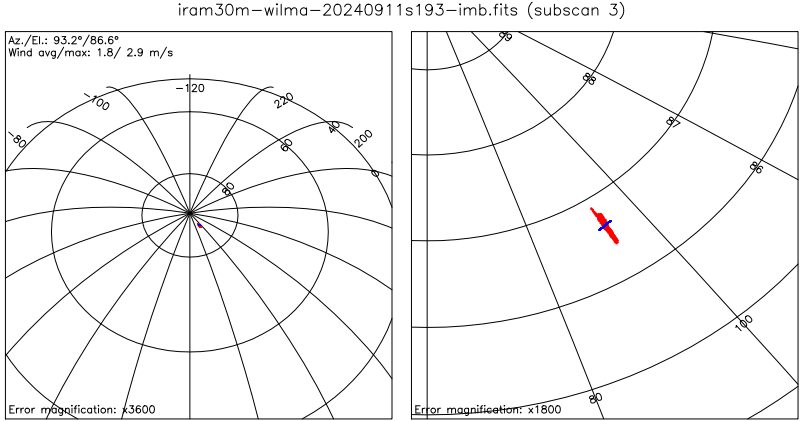
iram30m-fts-20120809s101-imb.fits (subscan 3)





iram30m-wilma-20240911s192-imb.fits (subscan 3)



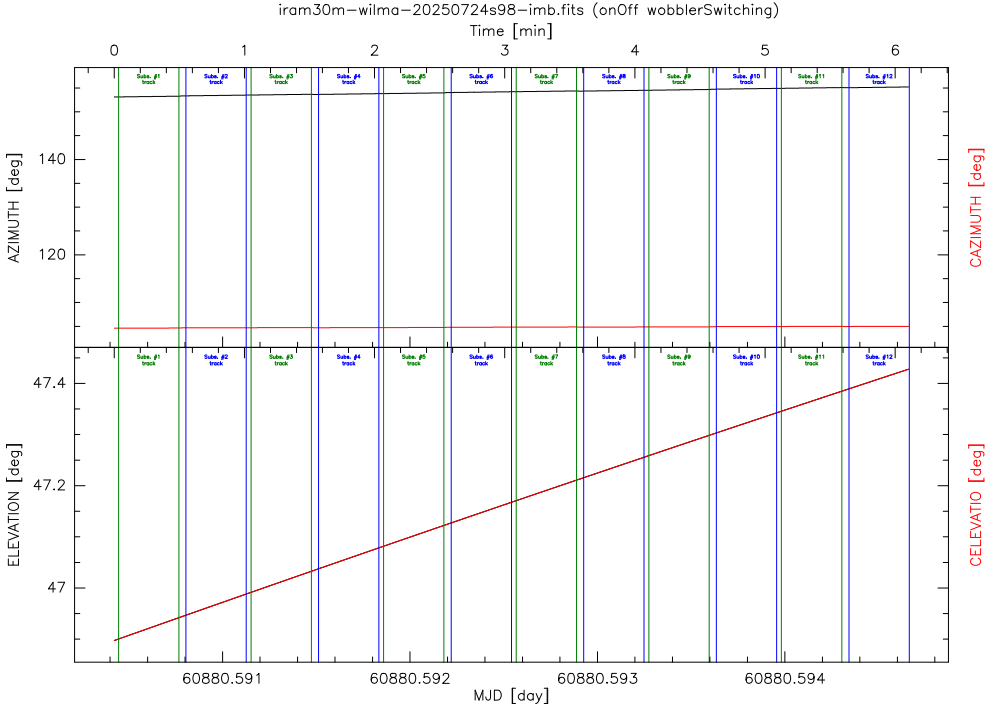

iram30m-wilma-20240911s193-imb.fits (subscan 3)
Az./El.: 93.2°/86.6°
Wind avg/max: 1.8/ 2.9 m/s
-120
-100
-80
220
40
200
60
80
0
Error magnification: x3600
90
90
90
90
160
80
Error magnification: x1800

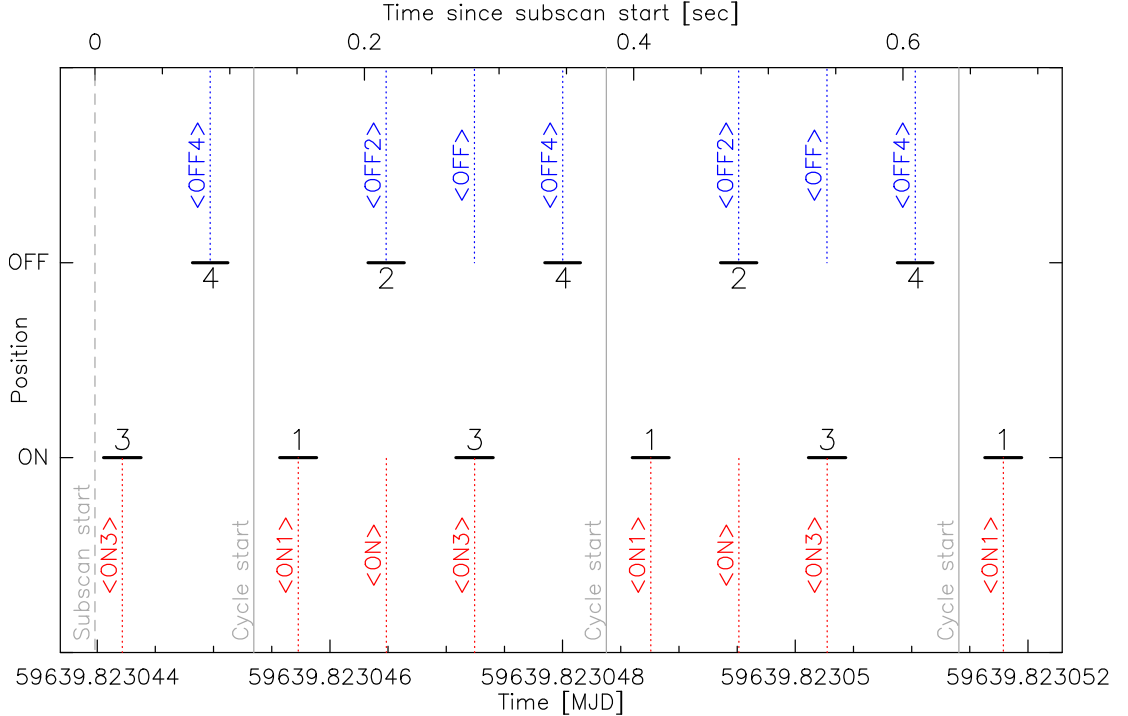
105°

154°

47°

$$154 \times cos(47) \simeq 105$$


iram30m-wilma-20250724s98-imb.fits (onOff wobblerSwitching)
Time [min]
0
1
2
3
4
5
6
AZIMUTH [deg]
140
120
CAZIMUTH [deg]
ELEVATION [deg]
47.4
47.2
47
CELEVATIO [deg]
Subs. #1 track
Subs. #2 track
Subs. #3 track
Subs. #4 track
Subs. #5 track
Subs. #6 track
Subs. #7 track
Subs. #8 track
Subs. #9 track
Subs. #10 track
Subs. #11 track
Subs. #12 track
60880.591
60880.592
60880.593
60880.594
MJD [day]


Time since subscan start [sec]
0
0.2
0.4
0.6
Position
OFF
ON
<OFF4>
<OFF2>
<OFF>
<OFF4>
<OFF2>
<OFF>
<OFF4>
4
2
4
2
4
3
1
3
1
3
1
Subscan start
Cycle start
Cycle start
Cycle start
<ON3>
<ON1>
<ON>
<ON3>
<ON1>
<ON>
<ON3>
<ON1>
59639.823044
59639.823046
59639.823048
59639.82305
59639.823052
Time [MJD]

$$\langle ON \rangle = 1 + 3$$

$$\langle OFF \rangle = 2 + 4$$


$\langle ON \rangle$


$\langle OFF \rangle$

$\langle ON \rangle - \langle OFF \rangle$

2π

USED

$$N = \text{nint}\left(\frac{\text{USED} \times |\text{SPACING}|}{W}\right)$$

W

N

$$\mathrm{USED} \geq N \geq 1.$$

$$\mathrm{USED} = q \times N + r,$$

q

r


USED/N

$0 \leq r \leq N-1$

$$\mathrm{USED} = [q \times (N - r)] + [(q + 1) \times r] \, .$$