```
I-BACKEND     ,  no receiver name specified as parameter
I-BACKEND     ,  no 2nd receiver name specified as parameter
I-BACKEND     ,  Continuum total hardware used [%]: 0.0
I-BACKEND     ,  100kHz total hardware used [%]: 0.0
I-BACKEND     ,  1MHz total hardware used [%]: 0.0
I-BACKEND     ,  4MHz total hardware used [%]: 100.0
I-BACKEND     ,  USB total hardware used [%]: 0.0
I-BACKEND     ,  WILMA total hardware requested [%]: 100.0
I-BACKEND     ,  VESPA total hardware used [%]: 33.3
I-BACKEND     ,  4MHz 1 4.000 4024.0 248.0 E090 horiz UO none 100.0 none
I-BACKEND     ,  4MHz 2 4.000 4024.0 -248.0 E090 verti UI none 100.0 none
I-BACKEND     ,  WILMA 1 2.000 3720.0 265.0 E090 horiz UO none 100.0 none
I-BACKEND     ,  WILMA 2 2.000 3720.0 -265.0 E090 verti UI none 100.0 none
I-BACKEND     ,  WILMA 3 2.000 3720.0 265.0 E230 horiz LI none 100.0 none
I-BACKEND     ,  WILMA 4 2.000 3720.0 265.0 E230 verti LI none 100.0 none
I-BACKEND     ,  VESPA 1 0.040 40.0 0.0 E090 horiz UO none 90.0 CO-1-0
I-BACKEND     ,  VESPA 2 0.040 40.0 0.0 E090 verti UI none 90.0 myLine2
I-BACKEND     ,  VESPA 3 0.040 40.0 0.0 E230 horiz LI none 90.0
I-BACKEND     ,  VESPA 4 0.040 40.0 0.0 E230 verti LI none 90.0 LILO
PAKO> show
I-SHOW        ,  paKo Revision v 1.1.1 2009-04-14
I-SHOW        ,  Level. For standard output: 0. For file: 0
I-SHOW        ,  Queue. doSubmit: F
I-SHOW        ,  Project "111-22"
I-SHOW        ,  PI "Dr. Jane D. Doe"
I-SHOW        ,  Observer "John Doe"
I-SHOW        ,  Operator "Pako"
I-SHOW        ,  Topology "LOW"
I-SHOW        ,  Pointing. azimuthCorrection: 0.0000000E+00
I-SHOW        ,  Pointing. elevationCorrection: 0.0000000E+00
I-SHOW        ,  Focus. focusCorrection: 0.0000000E+00
PAKO>
```

b

x

y

$$x = (l - l_{source}) * \cos(b)$$

$$y = b - b_{source}$$

$$\Delta a = (a - a_{source}) * \cos(e)$$

$$\Delta e = e - e_{source}$$

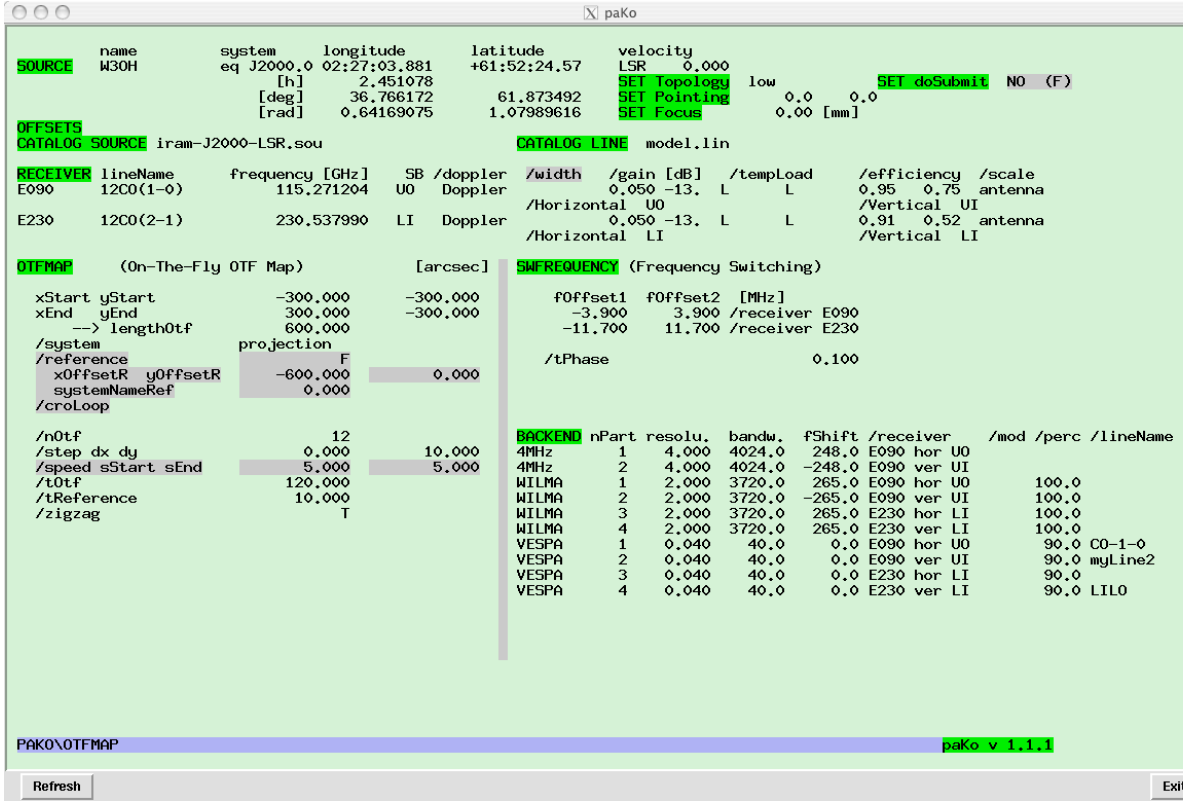
a

e

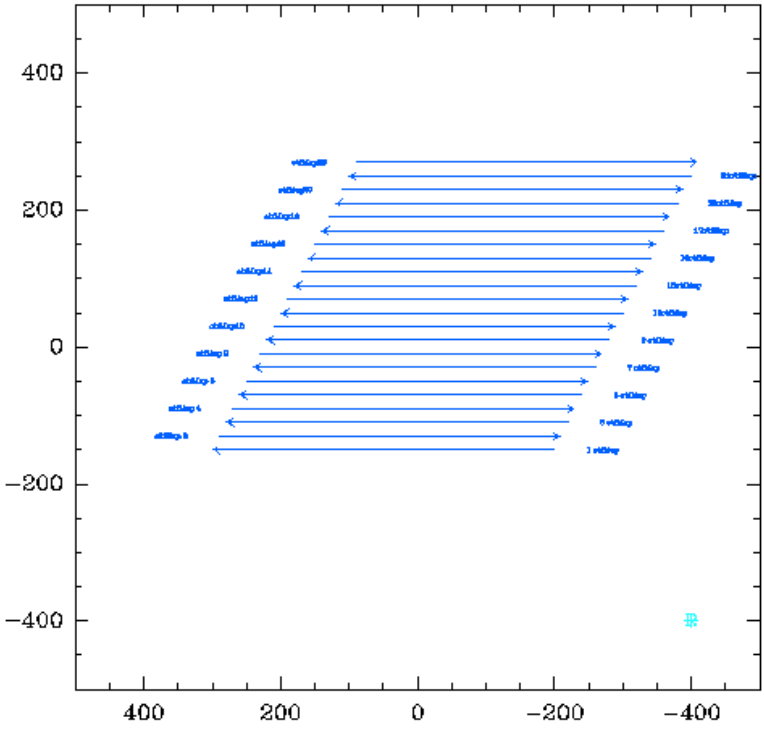

e_{source}

-600

-700


paKo
name system longitude latitude velocity
SOURCE W30H eq J2000.0 02:27:03.881 +61:52:24.57 LSR 0.000
[h] 2.451078 SET Topology low SET doSubmit NO (F)
[deg] 36.766172 61.873492 SET Pointing 0.0 0.0
[rad] 0.64169075 1.07989816 SET Focus 0.00 [mm]
OFFSETS
CATALOG SOURCE iram-J2000-LSR.sou
CATALOG LINE model.lin
RECEIVER lineName frequency [GHz] SB /doppler /width /gain [dB] /tempLoad /efficiency /scale
E090 12CO(1-0) 115.271204 UO Doppler 0.050 -13. L L 0.95 0.75 antenna
/Horizontal UO /Vertical UI
E230 12CO(2-1) 230.537990 LI Doppler 0.050 -13. L L 0.91 0.52 antenna
/Horizontal LI /Vertical LI
OTFMAP (On-The-Fly OTF Map) [arcsec]
xStart yStart -300.000 -300.000
xEnd yEnd 300.000 -300.000
--> lengthOtf 600.000
/system projection
/reference F
xOffsetR yOffsetR -600.000 0.000
systemNameRef 0.000
/croLoop
/nOtf 12
/step dx dy 0.000 10.000
/speed sStart sEnd 5.000 5.000
/tOtf 120.000
/tReference 10.000
/zigzag T
SWFREQUENCY (Frequency Switching)
fOffset1 fOffset2 [MHz]
-3.900 3.900 /receiver E090
-11.700 11.700 /receiver E230
/tPhase 0.100
BACKEND nPart resolu. bandw. fShift /receiver /mod /perc /lineName
4MHz 1 4.000 4024.0 248.0 E090 hor UO
4MHz 2 4.000 4024.0 -248.0 E090 ver UI
WILMA 1 2.000 3720.0 265.0 E090 hor UO 100.0
WILMA 2 2.000 3720.0 -265.0 E090 ver UI 100.0
WILMA 3 2.000 3720.0 265.0 E230 hor LI 100.0
WILMA 4 2.000 3720.0 265.0 E230 ver LI 100.0
VESPA 1 0.040 40.0 0.0 E090 hor UO 90.0 CO-1-0
VESPA 2 0.040 40.0 0.0 E090 ver UI 90.0 myLine2
VESPA 3 0.040 40.0 0.0 E230 hor LI 90.0
VESPA 4 0.040 40.0 0.0 E230 ver LI 90.0 LILO
PAKO\OTFMAP
paKo v 1.1.1
Refresh
Exit

X <GREG 0



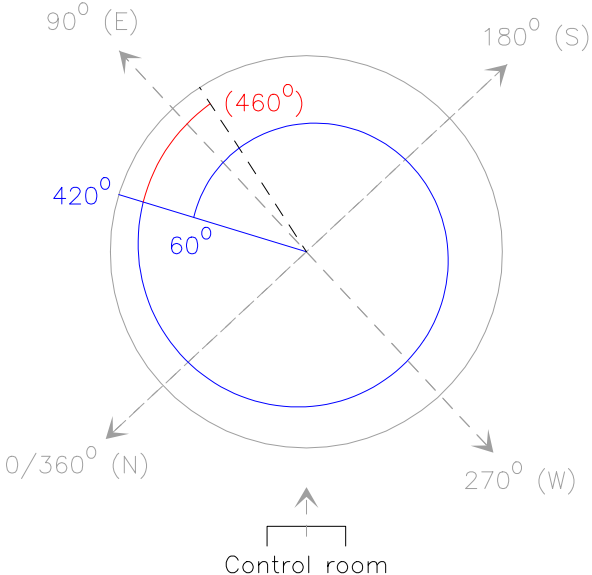
$+3.4$

-1.2

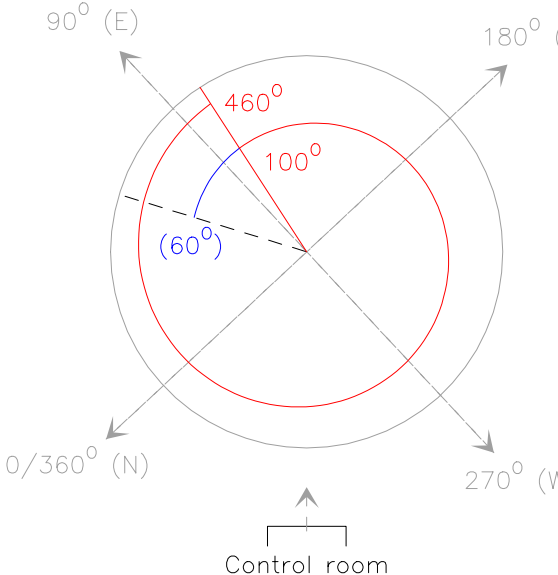
-2.1

$+300$

TOPO LOW : Az [60°,420°]



TOPO HIGH : Az [100°,460°]



0.25

$\pm 120''$

1

2