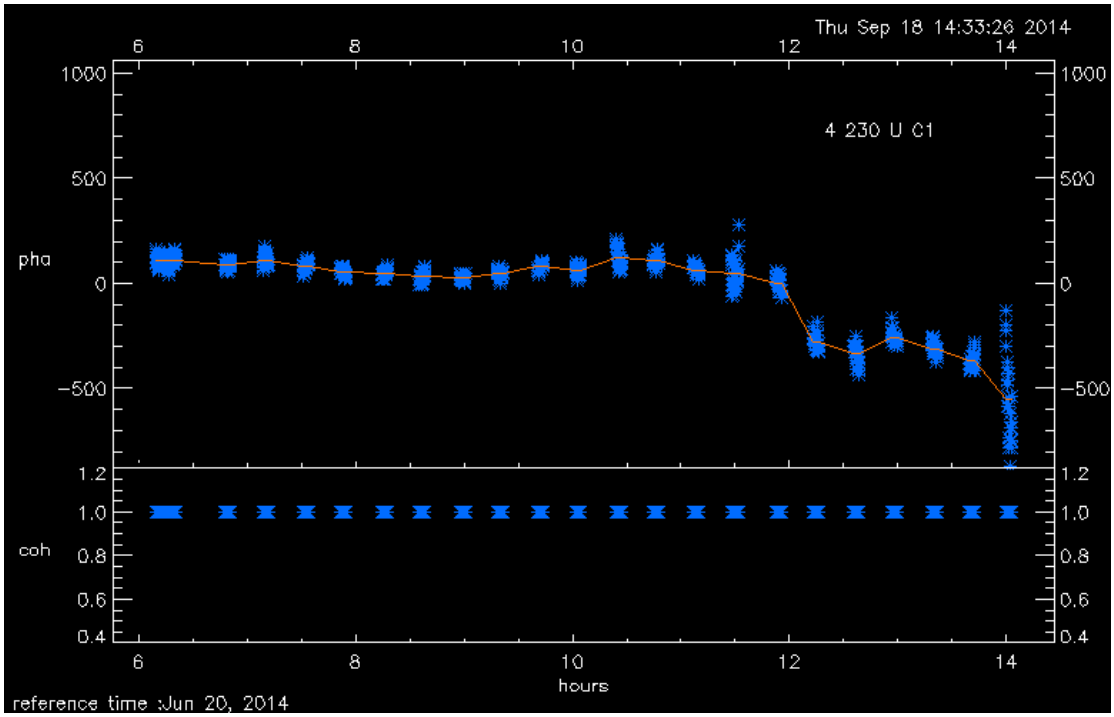
Phase wrapping

In some cases, running a phase-only **gain_cal** might produce a plot with a phase jump of ~2π. Flagging the data around the phase jump will remove the jump but also will remove the flagged pointing data. An alternative, which will leave the data untouched, is phase wrapping.



Select the frame that has the phase jump. Click/roll the middle button on your mouse to bring up the list of keyboard options. Type "w". This will select the option to phase-wrap.

```
*** w => wrap the phase with +/- 2pi
```

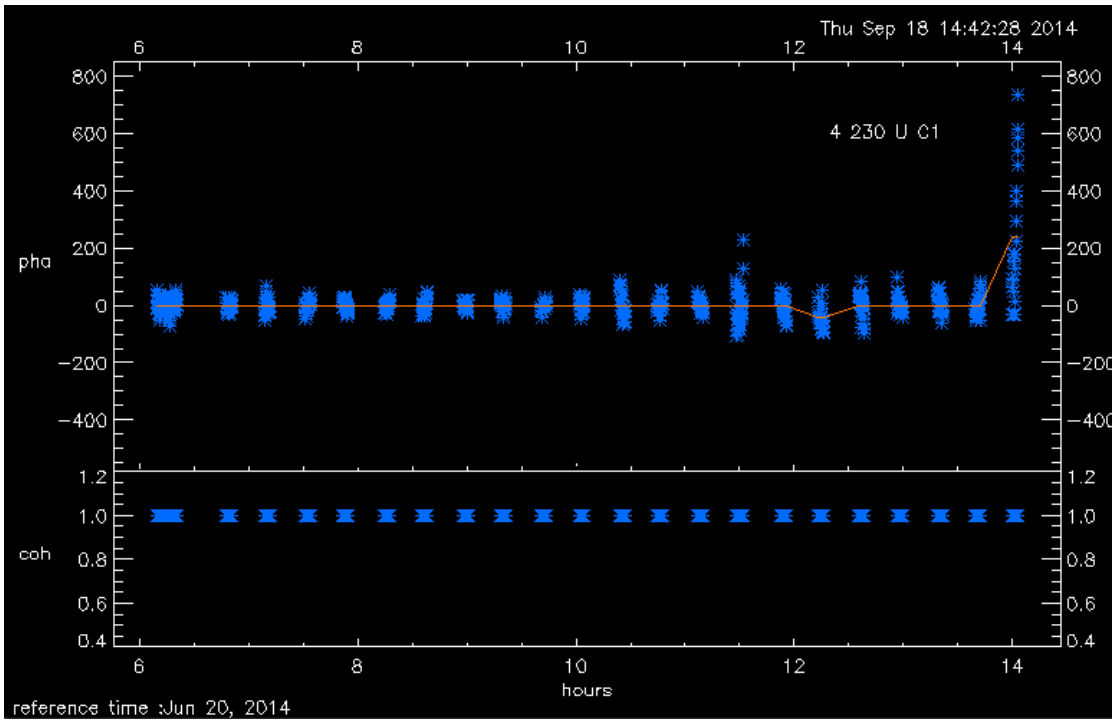
This will bring up the following options:

```
*** use left mouse button to select data point
                    and subtract 2pi in phase
*** middle to add 2pi in phase, right to quit
```

On the graph, left-click to the *left* of the first set of data points that is out of phase (i.e. in-between the last good set and the first bad set). This will select all the data points to the *right* of the

click. Then left-click if you want to subtract 2π in phase and middle-click if you want to add 2π in phase. Right-click to quit.

The pointing data will have shifted. Say yes to apply the calibration. Re-run the phase-only **gain_cal** to check that the solution is flat.



Phase wrapping can occur when the data is quite noisy. If the gap is roughly between -π and π, then it is likely to be just a phase wrap. However, there can be real phase jumps although it may be difficult to tell. Note that the phase wrap will only occur for that particular antenna. The phase wrap does not affect the actual data.