

```
cmode 1
/cmd3 "cmode 1"
lnkndasq
/cmd3 "lnkndasq"
subar 4
/cmd3 "subar 3"
```

```
goout
gosacout
/cmd3 "goout"
/cmd3 "gosacout"
```

```
dellist 2
dellist 2
addlist '/odisk/gtac/src.list'
addlist '/odisk/gtac/source/atnf_psr_updated.list'
/cmd3 "addlist '/odisk/gtac/src.list'"
/cmd3 "addlist '/odisk/gtac/source/atnf_psr_updated.list'"
```

```
*** Scan on target pulsar ***
```

```
*gts 'PSR'
gts 'J0332+5434'
sndsacsrc(1,12h)
sndsacsrc(1,12h)
stabct
/(gotosrc 10m 4)
/cmd3 "gts 'J0332+5434'"
/cmd3 "sndsacsrc(1,12h)"
/cmd3 "sndsacsrc(1,12h)"
/cmd3 "stabct"
/cmd3 "/(gotosrc 10m 4)"
```

```
strndasc
time 2s
/cmd3 "strndasc"
time 2s
* runsubband-cd-bm1.pl bandwidth lowest_freq output_subbands DM input_subbands band_flag
/runsubband-cd-bm1.pl 100.0 400.0 1024 26.76 2048 -1
* runsubband-cd-bm2.pl bandwidth lowest_freq output_subbands DM input_subbands band_flag
/runsubband-cd-bm2.pl 200.0 550.0 1024 26.76 2048 -1
/time 10s
* write-cd-bm1.pl output_subbands time_integ duration dataarea filename
/write-cd-bm1.pl 1024 4 3600 data6 J0332+5434_500_200_1024_4.raw0
/write-cd-bm2.pl 1024 4 3600 data6 J0332+5434_500_200_1024_4.raw0
time 3600s
/gwbpsr.stop
time 10m
/kill-vlt_gwb.pl
stpndasc
time 2s
/cmd3 "stpndasc"
time 2s
```

\*\*\* Phasing on calibrator source,replace the 'CAL' by nearby phase calibrator source to the target, use your reference antenna \*\*\*

```
gts 'CAL'
sndsacsrc(1,12h)
sndsacsrc(1,12h)
stabct
/(gotosrc 10m 4)
/cmd3 "gts '1459+716'"
/cmd3 "sndsacsrc(1,12h)"
/cmd3 "sndsacsrc(1,12h)"
/cmd3 "stabct"
/cmd3 "/(gotosrc 10m 4)"
```

```
strndas
time 2s
/cmd3 "strndas"
time 2s
```

```
/(phase_gwb.pl -r C09 -s 4 -t 40 -p 37_052)"
/cmd3 "/(phase_gwb.pl -r C00 -s 3 -t 40 -p 37_0523)"
```

```
stpndas
time 2s
/cmd3 "stpndas"
```

```
strndas
/cmd3 "strndas"
time 180s
stpndas
/cmd3 "stpndas"
time 180s
```

\*\*\* Repeat the sequence as needed \*\*\*

```
*** gwbpsr.start dataarea pulsarname centralfrequency1 centralfrequency2
*** 1st entry : data area (e.g. data4)
*** 2nd entry : pulsar name (e.g. J0332+5434)
*** 3rd entry : centre frequency (e.g. 400 for band3 using 300-500MHz)
*** 4th entry : centre frequency (e.g. 650 for band4 using 550-750MHz)
*** omit the 4th entry for single frequency observations
*** Example : gwbpsr.start data4 J0332+5434 400
```

```
*** Step 1: do coherent dedisp
*** runsubband-cd-bm1.pl bandwidth lowest_freq output_subbands DM input_subbands band_flag
1st entry : band width in MHz (e.g. 200 )
2nd entry : lowest frequency of band (e.g 300 for 500-300)
3rd entry : output number of subbands (e.g. 1024 frequency channels)
4th entry : DM of the pulsar in pc/cc (e.g. 26.76)
5th entry : input number of subbands (e.g. 2048 frequency channels)
6th entry : band_flag (e.g. for LO>RF, -1 for inverted band)
Above configuration will generate 1024 output frequency channels
Example : runsubband-cd-bm1.pl 200.0 300.0 1024 26.76 2048 -1
```

Step 2 : write the CD output (16 bit recording)

write-cd-bm1.pl output\_subbands time\_integ duration dataarea filename

1st entry : output number of subbands (e.g. 1024 frequency channels)

2nd entry : time integration factor (e.g. 4,8,16..)

3rd entry : observation duration in sec (e.g 3600 s)

4th entry : data area (e.g. data4)

5th entry : filename (keep short)

This will write 1024 channels at 40.96 micro sec time resolution

Example : write-cd-bm1.pl 1024 4 3600 data4 J0332+5434\_CDP\_400\_200\_1024\_4.raw0

end

/bell