

#-----

1. login to the fs4 machine

```
ssh -X pbackup@fs4
```

##-----

2. Change group to "pulsarg"

```
newgrp pulsarg
```

##-----

3. Put all the required softwares in your path (enable the required softwares)

```
source /home1/ymaan/pulsarV6.3rc
```

##-----

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==== Above three steps need to be done ONCE for every login

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==== All the remaining steps below need to be re-done whenever new data from any session are reduced =====

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##-----

4. Copy the raw data from the observing session that needs to be processed, to /temp20/observatoryProcess/inputData/.

If a command similar to the following does not work, try copying from the gwbh machine to fs4, or contact Mangesh:

```
rsync -av gpuuser@gwbh<7/8/9/10>:/data<>/gpuuser/<data_directory> /*  
/temp20/observatoryProcess/inputData/.
```

Example command:

```
rsync -av gpuuser@gwbh8:/data8/gpuuser/43_120_data8_13dec2022/*  
/temp20/observatoryProcess/inputData/.
```

##-----

5. Create the directory where the reduced data products will be moved.

```
mkdir
```

```
/Data/pbackup/observatoryReduced/<date_in_YYYYMMDD_format>_<project_code>_<machine_where_original_data_were_recorded>
```

Example command:

```
mkdir /Data/pbackup/observatoryReduced/20221213_43_120_gwbh8
```

##-----

6. Change to the "working-directory"

```
cd /temp20/observatoryProcess/workDir/
```

##-----

7. Prepare the "pipeline.in" file

Details on how to prepare the pipeline.in file can be found in pinta's detailed-manual.

An easy way to prepare the pipeline.in file would be to copy the example pipeline.in

file inside /temp20/observatoryProcess/ to the "working-directory", and add the entries for all the individual data files for the session that is being processed.

(remember to comment out using hash or delete the previous entries that were got copied from the example pipeline.in file)

There should be as many un-commented/new entries in pipeline.in as there are the number of data files in the "inputData" directory to be processed.

##-----

8. Start the pinta-pipeline processing in background, using the following command:

```
nohup pintav6.3 --gptdir /home1/ymaan/gptool_infiles.V6.2/Cycle41/
--no-gptool --auto-safeguard --rficconf /home1/ymaan/rficlean.flags --pardir
/home1/ymaan/psrcatv1p64_parFiles --retain-aux
/temp20/observatoryProcess/inputData/ /temp20/observatoryProcess/workDir/ &
```

```
=====
***** THE FOLLOWING STEPS SHOULD BE DONE ONLY AFTER THE PROCESSING STARTED
IN STEP #8 IS COMPLETED *****
=====
```

##-----

9. Examine the \*summary.pdf files (use evince) to see if these look sensible

##-----

10. Move reduced data products to the directory created in step #5 above

```
mv /temp20/observatoryProcess/workDir/*
/Data/pbackup/observatoryReduced/<directory_created_in_step_5_above>/.
```

Example:

```
mv /temp20/observatoryProcess/workDir/*
/Data/pbackup/observatoryReduced/20221213_43_120_gwbh8/.
```

##-----

```
=====
===== ALL DONE =====
=====
```

## Sampling Time

Beam_Integ	Actual sampling time
1 microsec	0.00000128 seconds
2 microsec	0.00000256 seconds
5 microsec	0.00512 sec
10 microsec	0.00001024 sec
20 microsec	20.48 microsec
40 microsec	41.96 microsec
81 microsec	81.92 microsec
164 microsec	163.84 microsec
327 microsec	327.68 microsec
655 microsec	655.36 microsec
1.3 ms	1.31072 ms
2.6 ms	2.62144 ms