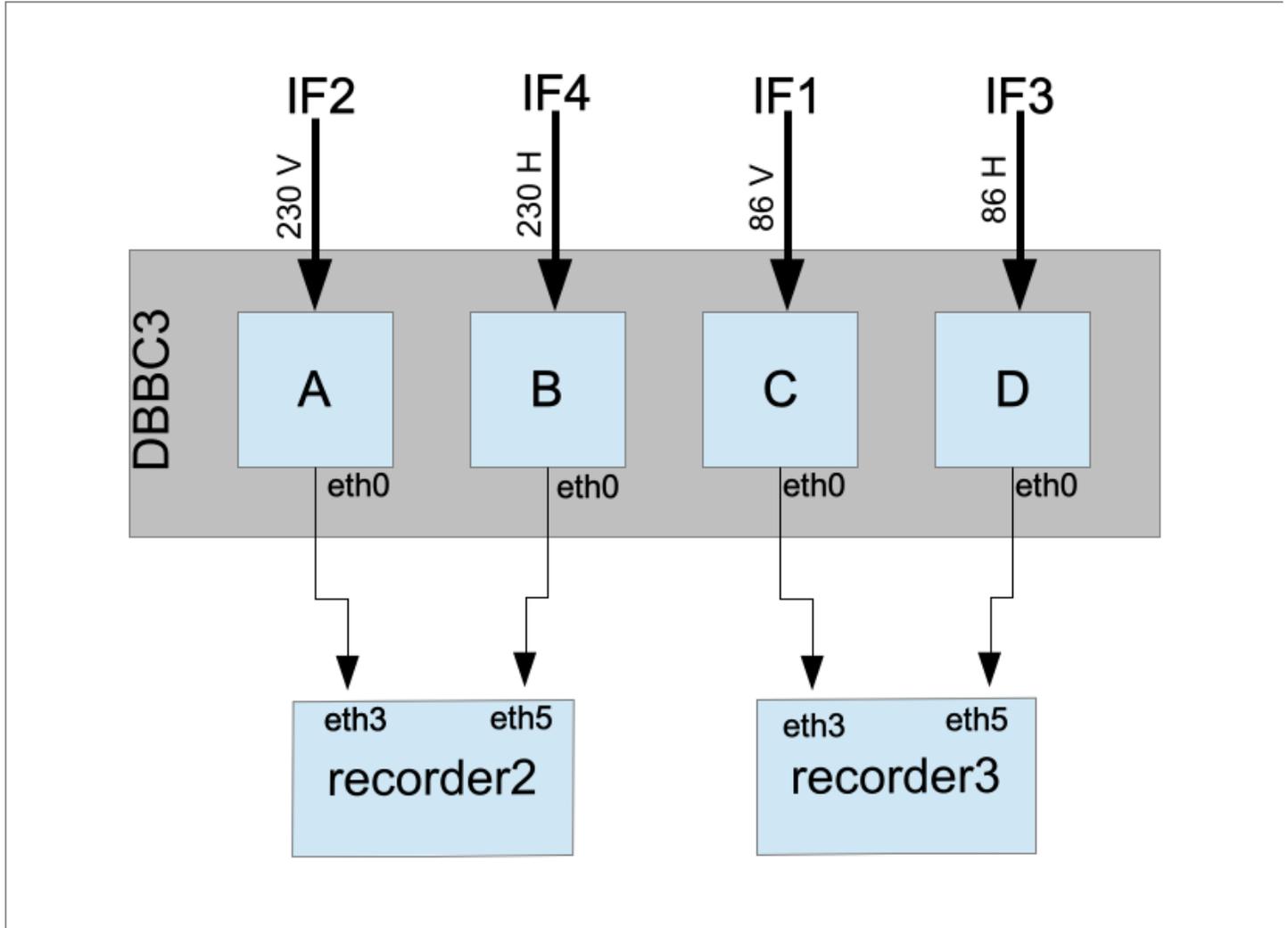


Overview

Dual-frequency test observations between PV and APEX in conjunction with the GMVA session C242.

System schematics



Setup 86 GHz

Target band: 86.012 - 87.036

1st LO: 93.012 GHz (confirmed OK)

RF: E90LI (4-9GHz LSB)

2nd LO (DBBC3): 9.048 GHz

Sky freq: 83.964 - 88.060 GHz

sky	83964	84988	86012	87036
after 1st DC	9048	8024	7000	5976

after 2nd DC	0	1024	2048	3072
--------------	---	------	------	------

=> DBBC3 should use filter1= 2000-3000

Setup 260 GHz

Target band: 258.036 - 259.060

1st LO: 267.084 GHz (confirmed OK)

RF: ?? (assuming LSB 4-9 GHz)

2nd LO (DBBC3): 9048 GHz

Sky freq: 258.036 - 262132 GHz

sky	258036	259060	260084	261108
after 1st DC	9048	8024	7000	5976
after 2nd DC	0	1024	2048	3072

=> DBBC3 should use filter1 = 0-1000

DBBC3 setup

- Check the setup files (located in c:\DBBC_CONF\OCT_D_120)
 - When using 1GHz filters the vsi_bitmask needs to be adapted in the core3h config files for all the boards running a 1 GHz filter. Files with the correct setups have been prepared e.g.: oct_D_1GHz_core3H_1.fila10g (for board A). These files need to be referenced in the main config file: dbbc3_config_file_oct_D_120.txt. In the setup folder:
 - delete dbbc3_config_file_oct_D_120.txt
 - copy dbbc3_config_file_oct_D_120_copy_1GHz.txt -> dbbc3_config_file_oct_D_120.txt
 - **Note:** in order to restore the correct setup with 2 GHz filters after the FPT test do:
 - delete dbbc3_config_file_oct_D_120.txt
 - copy dbbc3_config_file_oct_D_120_copy_2GHz.txt -> dbbc3_config_file_oct_D_120.txt
- load the OCT_120 firmware (from the DBBC3 desktop)
- verify the setup *from the control computer*:

```
/home/oper/rothmann/dbbc3/utilities/dbbc3ctl.py dbbc3
```

and do

```
check system all
```

- run /home/oper/rothmann/dbbc3/utilities/setupFPT_Oct24.py dbbc3 (sets the 1GHz filters and the LO freqs)

Modules & Recorders

recorder2

slot 1: MPIH%028/48000

slot 2: MPIH%029/48000

recorder3

slot 1: MPIH%034/48000

slot 2: EHT%0036/48000

module setup (do on both recorders)

```
group=new:12
input_stream=add:stream1:vdif:8224:50:42:eth3:::1
input_stream=add:stream2:vdif:8224:50:42:eth5:::2
input_stream=commit
group=open:12
```

Record tone in recorders

From recorder2/3:

plot_dbbc3_generic.sh

(Note labelling will always be 0-1024 MHz regardless if the real position in the basband of the DBBC3)

Action

.