

# 21 ANTENNAS FULLY OPERATIONAL



# General Update

- SPR
  - AC replacement AUGUST
  - Antonio Feed
- Other
  - Antenna control box retrofit
  - Weather station up again
  - PY-018 at Minex for repair (2 weeks)
  - PY-001 LNA problem
- SRI 12m Antenna removed
  - Budget for full new build Antonio Feeds
- CHIME:
  - Agreement draft send to Chime
  - Need to get quotes for geotechnical survey
  - Construction permit minor modification
  - List of available equipment at HCRO

- Antonio Feed Overview
    - 21 Antennas fully operational
    - 17 / 19 Antonio Feeds

## Weather station:

- Replaced Davis station with second Vaisala
- Cleared out junction box



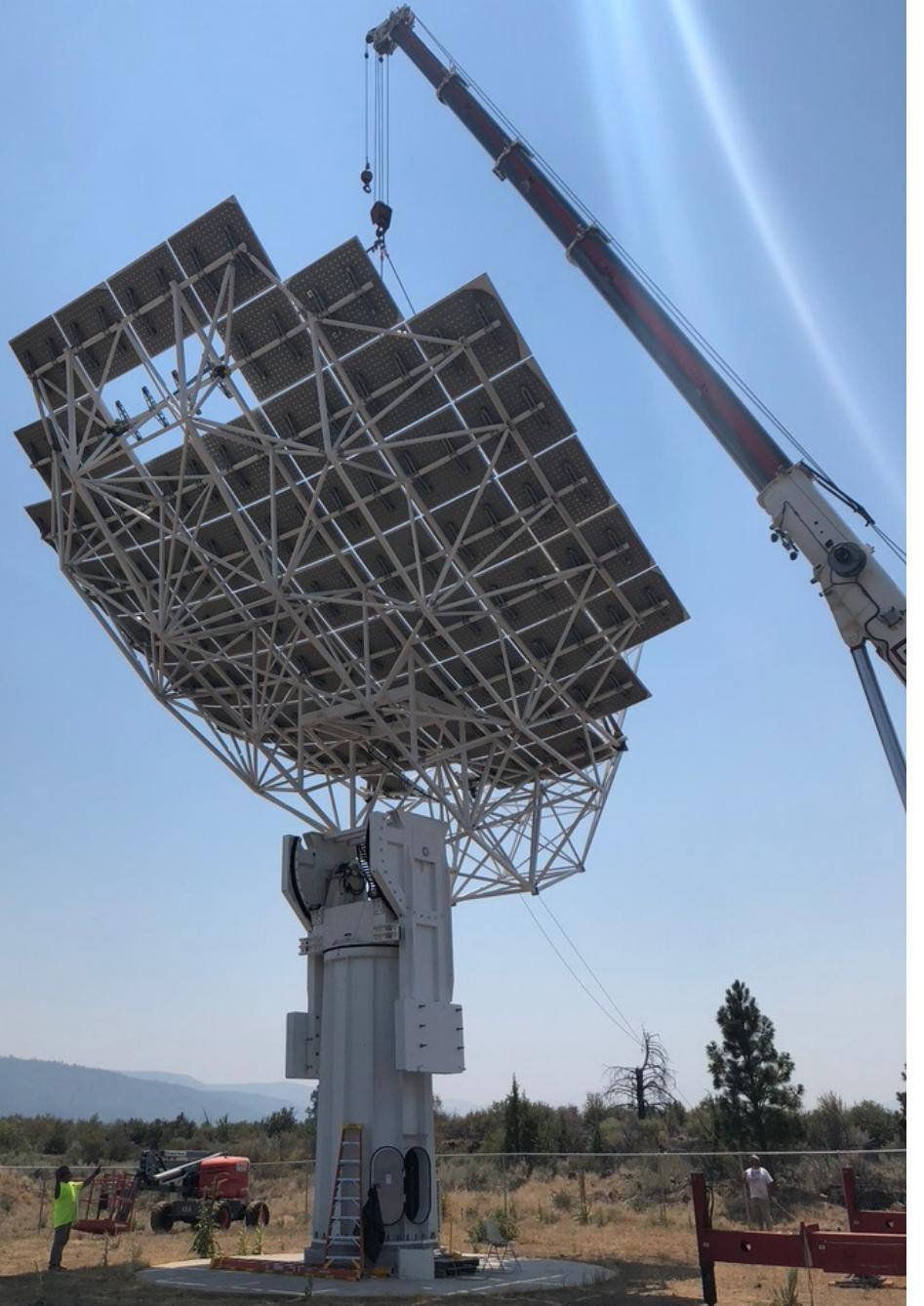
## Weather station:

- new cables installed



12m Removal:





12m Removal:



12m Removal:



12m Removal:



12m Removal:



12m Removal:

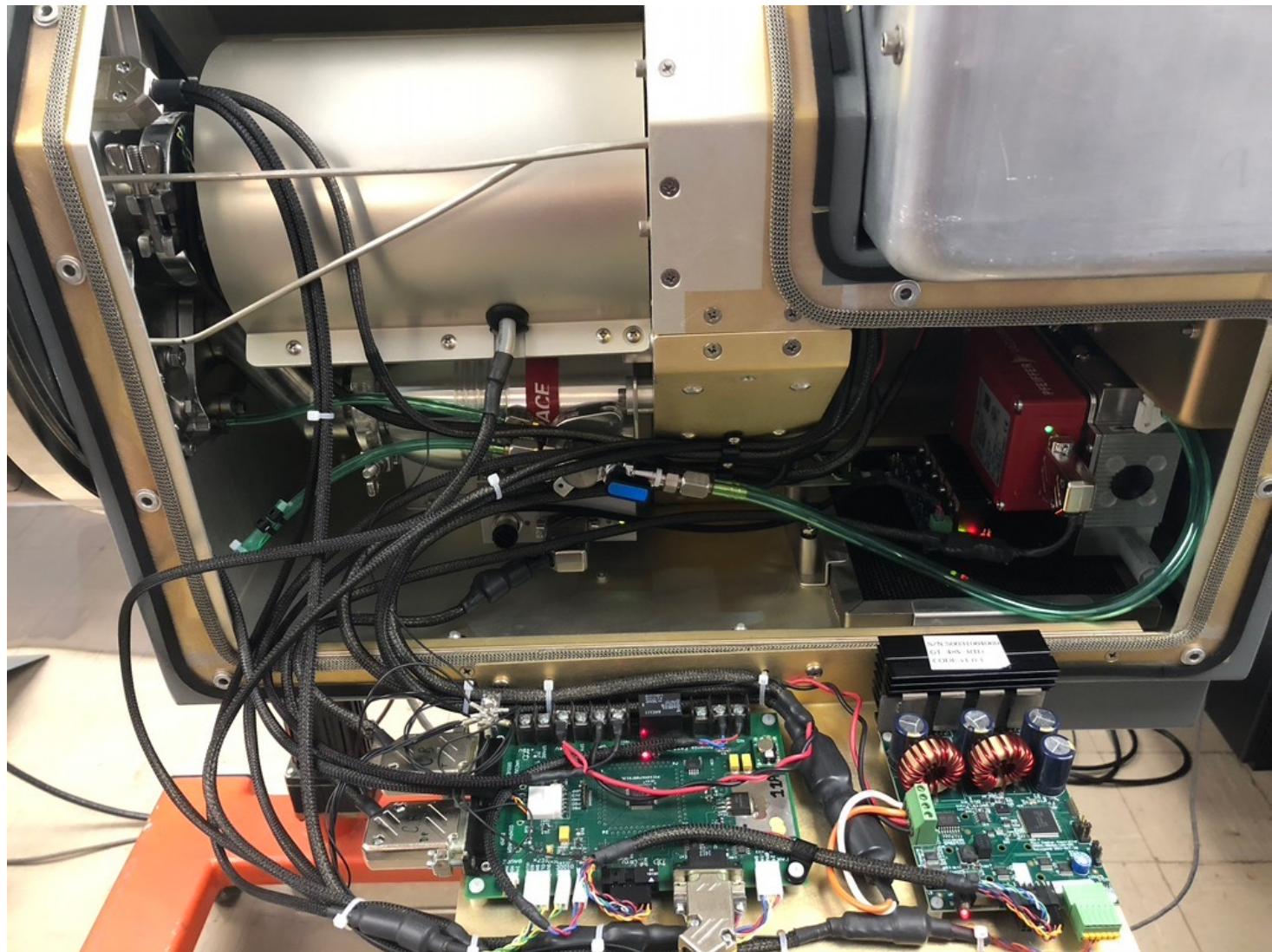
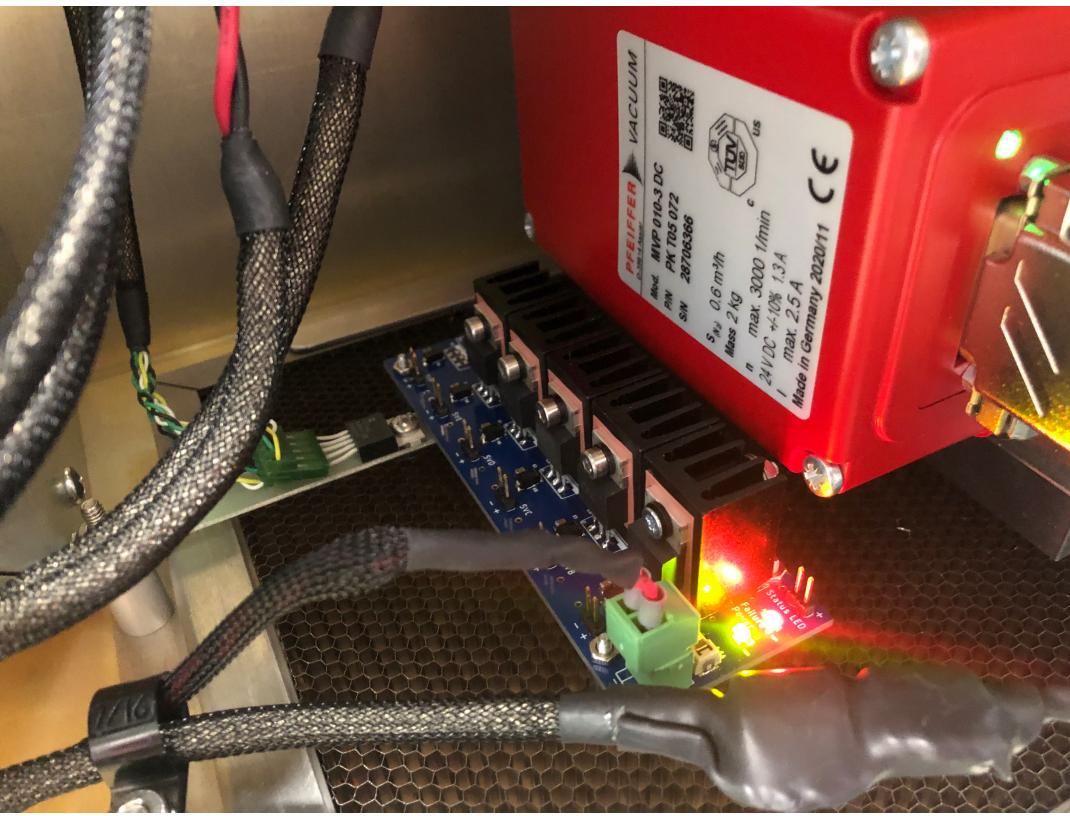


12m Removal:



# Feed 017:

- Installed at antenna 3D



## Feed 017:

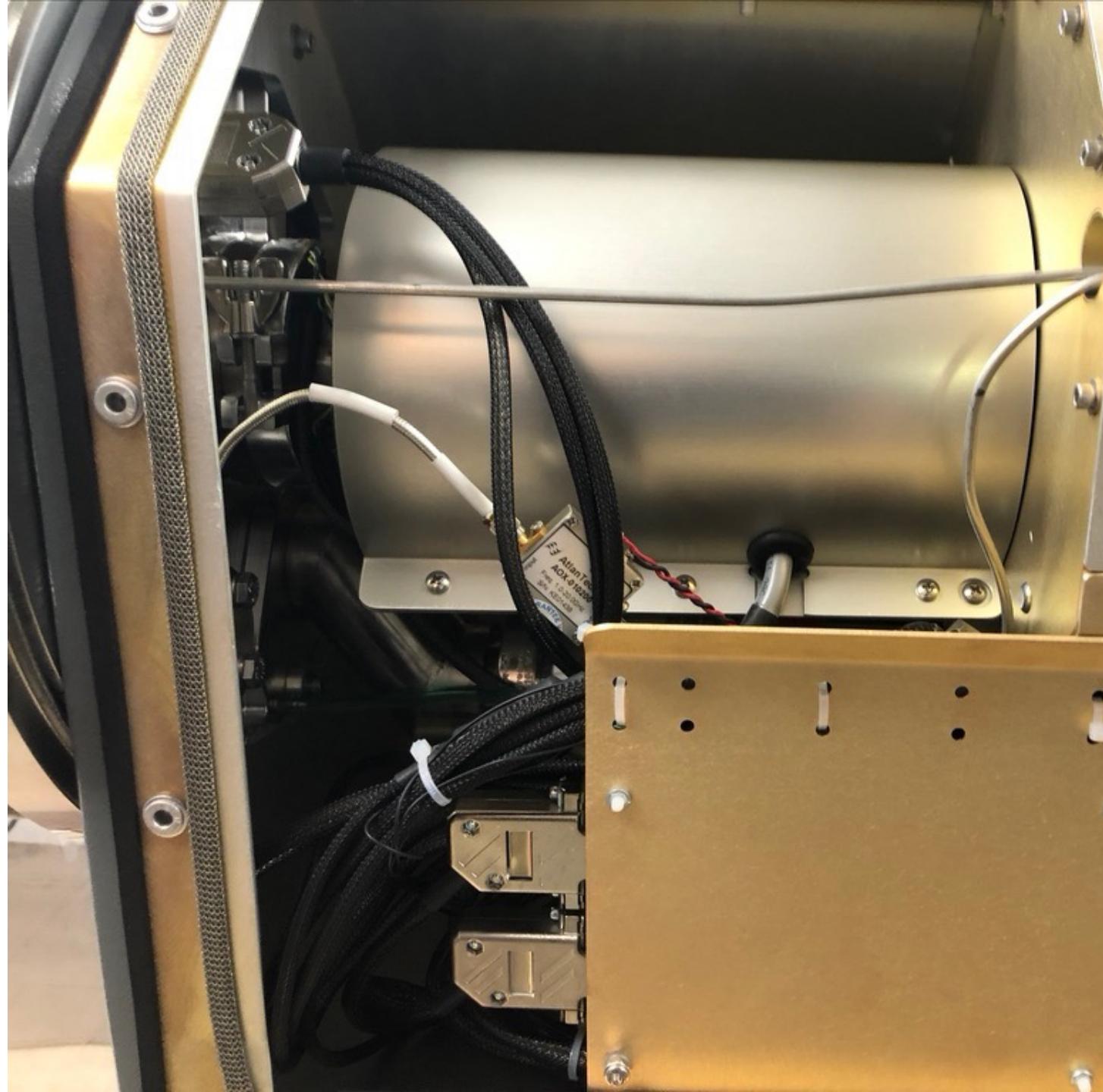
- Installed at antenna 3D



## Feed 017:

- Installed at antenna 3D
  - IAF LNAs without AOX approx.
  - IAF LNAs with AOX approx.
  - LNF LNAs approx.

70K at 5GHz  
45K at 5GHz  
41K at 5GHz



3d

Trec\_x [K]

200  
0

2 4 6 8 10

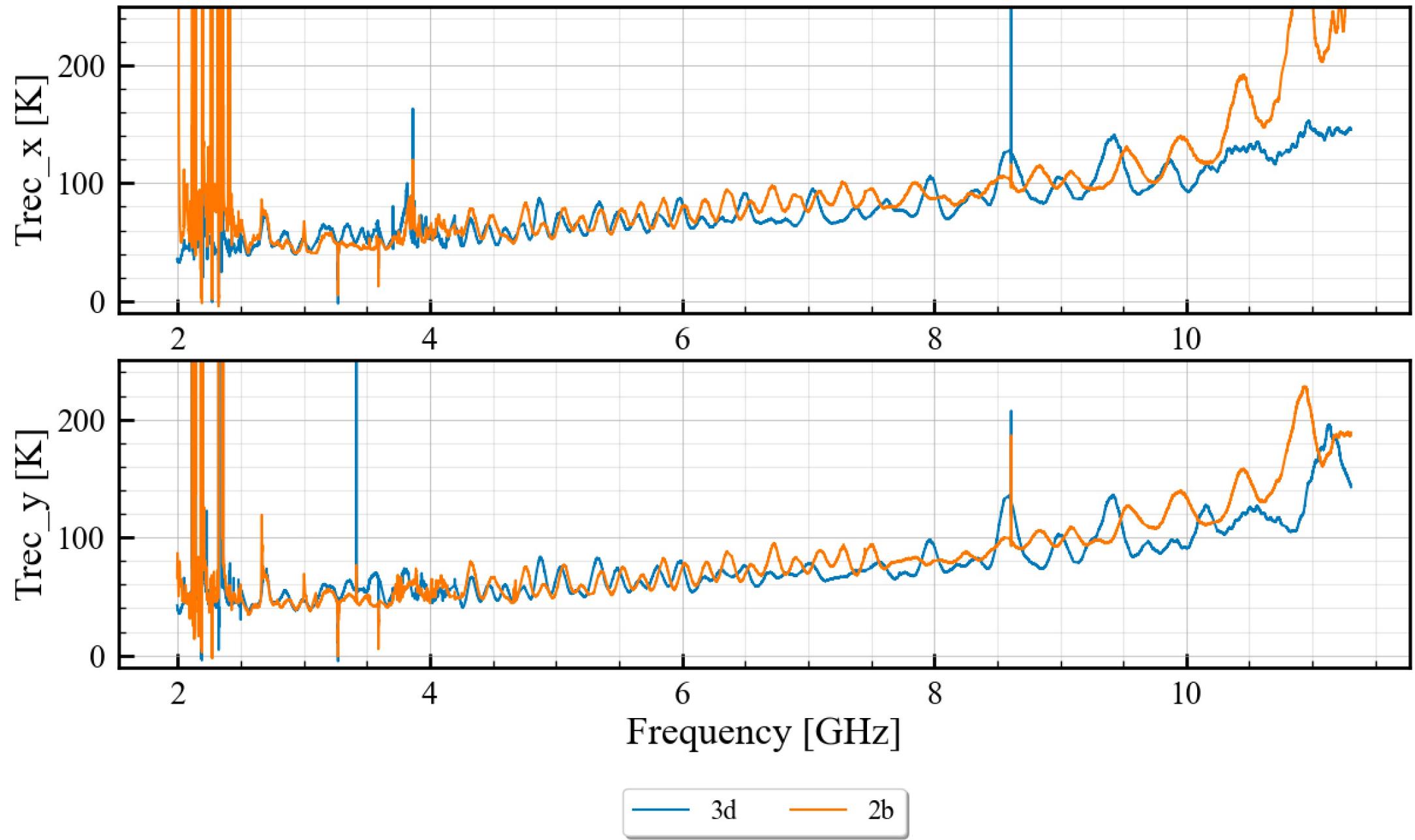
Trec\_y [K]

200  
0

2 4 6 8 10

Frequency [GHz]

— moon 2021-06-07-15:49:08



# Feed 017:

- Installed at antenna 3D

- IAF LNAs without AOX approx. 70K at 5GHz
- IAF LNAs with AOX approx. 45K at 5GHz
- LNF LNAs approx. 41K at 5GHz

- Detector value set to -10dBm
- PAM Attenuation 14.5dB / 14dB

Component	Gain dB	Physical temp (K)	Gain temp (K)	Running Gain (dB)	Power at this stage (dBm) (P1dB)		Dynamic Range (dB)	Tsys (K)
CMB	0.000	2.7	0	0	-92.53	-	-	2.700
Atmosphere	-0.060	220.0	0	-0.060	-89.30	-	-	5.761
Dish	-0.020	290.0	0	-0.080	-88.40	-	-	7.118
Mirror	-0.020	290.0	0	-0.100	-87.66	-	-	8.481
Radome	0.000	290.0	0	-0.100	-87.66	-	-	8.481
Feed	-0.040	80.0	0	-0.140	-87.32	-	-	9.239
Link-Capacitor	-0.300	80.0	0	-0.440	-85.48	-	-	15.148
Cable1	-0.100	80.0	0	-0.540	-85.02	-	-	17.210
<b>LNA</b>	<b>27.000</b>	0.0	<b>20</b>	26.460	-54.38	-10.00	<b>44.38</b>	39.858
SS cable	-1.500	80.0	0	24.960	-55.87	-	-	39.932
Feedthru SMA	-0.100	290.0	0	24.860	-55.96	-	-	39.954
<b>AOX LNA</b>	<b>0.000</b>	0.0	<b>200</b>	24.860	-55.89	14.50	<b>70.39</b>	40.607
SS cable	-2.000	290.0	0	22.860	-57.84	-	-	41.161
Bandwidth red. 12/15 GHz	-1.000	0.0	0	21.860	-58.84	-	-	41.161
<b>NDA-412</b>	<b>12.000</b>	0.0	<b>630</b>	33.860	-46.42	14.00	<b>60.42</b>	45.266
Filter	-3.000	0.0	0	30.860	-49.42	-	-	45.266
<b>HMC424</b>	<b>4.000</b>	0.0	0	26.860	-53.42	22.00	<b>75.42</b>	45.266
<b>NDA-412</b>	<b>12.000</b>	0.0	<b>630</b>	38.860	-41.30	14.00	<b>55.30</b>	46.564
Slope Compensator	-2.000	0.0	0	36.860	-43.30	-	-	46.564
<b>NDA-412</b>	<b>12.000</b>	0.0	<b>630</b>	48.860	-31.29	14.00	<b>45.29</b>	46.694
Slope Compensator	-2.000	0.0	0	46.860	-33.29	-	-	46.694
<b>NDA-412</b>	<b>12.000</b>	0.0	<b>630</b>	58.860	-21.29	14.00	<b>35.29</b>	46.707
<b>HMC424</b>	<b>-10.000</b>	0.0	0	48.860	-31.29	22.00	<b>53.29</b>	46.707
<b>NDA-412</b>	<b>12.000</b>	0.0	<b>630</b>	60.860	-19.29	14.00	<b>33.29</b>	46.715
Slope Compensator	-2.000	0.0	0	58.860	-21.29	-	-	46.715
<b>NDA-412</b>	<b>12.000</b>	0.0	<b>630</b>	70.860	-9.29	14.00	<b>23.29</b>	46.716
PAM output cable to OTX	0.000	0.0	0	70.860	-9.29	-	-	46.716
NX8560LJ-CC189	0.000	0.0	0	70.860	-9.29	11.60	<b>20.89</b>	46.716
Fiber cable	-35.000	290.0	<b>7284180</b>	35.860	-44.22	-	-	47.389

# ATA Signal Parts Available:

- 45 RFCBs (43 fully populated)
- 45 PAX Boxes (35 fully operational)
- All Antenna control parts (none spare)

