

P170mm - ultra broad-band prime focus receiver (1300-6000 MHz)

This is an ultra broad band (UBB) 2-channel system covering a range from 1300 to 6000 MHz.

Overview

RX Name	Band	Frequency range [GHz]	Polarisation	Nr. of Horns	Horn position relativ to center of focus cabin
P170mm	L/S/C	1.3-6.0	dual-linear	1	Az: 0 arcsec, Elv: 0 arcsec

Calibration Information

Frequency [GHz]	Channel	Polarisation	Tcal [K]	Tsys [K]	Sensitivity [K/Jy]	SEFD [Jy]	Aperture Eff. [%]	TMB/S [K/Jy]	Main Beam Eff. [%]	FWHM [arcsec]	Last update
1.41	A+B	2x lin	5.7	19.8	1.3	15.2	46	1.90	68	569	first observations
1.665	A+B	2x lin	6.7	20.6	1.3	15.8	46	1.78	73	497	first observations
2.35	A+B	2x lin	8.8	16.1	1.3	12.4	46	1.68	77	363	first observations
3.35	A+B	2x lin	11.0	16.5	1.3	12.7	46	1.66	78	256	first observations
4.85	A+B	2x lin	12.5	18.8	1.3	14.5	46	1.71	76	174	first observations
5.54	A+B	2x lin	11.6	19.0	1.3	14.6	46	1.64	79	156	first observations
normalized Gain curve ($G = A0 + A1 \cdot Elv + A2 \cdot Elv^2$) Observed in confirmed											
A0 = 1.0		A1 = 0.0		A2 = 0.0							

Comments:

- The system delivers two basebands, 1.3-2.6 GHz and 3.0-6.0 GHz. Currently, it is only possible to record both bands in parallel for pulsar observations (timing and search mode), but not yet for continuum or spectroscopic observations.

Available receiver versions (for OBSINP)

Version	Description	Details
EDDPOL	spectro-polarimeter backend for continuum observations in the lower band	with 64k channels
EDDPOL3G	spectro-polarimeter backend for continuum observations in the upper band	with 64k channels
EDD_PULSAR_TIMING	pulsar folding mode observations	coherent dedispersion, configurable channels and subints

Version	Description	Details
EDD_PULSAR_SEARCH	pulsar search mode observations	coherent filterbank, configurable channels and time samples (down to 32 μ s)

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