

Receivers for the Effelsberg 100-m Telescope

The receiver list below is separated by prime and secondary focus receivers ordered by wavelengths. With the installation of the new subreflector receiver changes in the prime focus became more flexible. Receiver changes from prime focus to secondary focus and vice versa are now possible within 30 minutes. In addition also multi a frequency receiver box with the 18/21cm (single pixel), the holography and the 3mm receiver is available. Changes within the multi-box are done by rotating the box and shifting the subreflector, which takes about a minute.

In the secondary focus of the telescope the receivers are permanently mounted on their positions described in the receiver description. In secondary focus observations, these receivers can be used "quasi-parallel", ie one can easily change by software from one receiver to another in a timescale of ~ 30 sec without manual interventions.

[Band designations used at Effelsberg.](#)

Look [here](#) for a table of noise values for continuum observations.

Receiver List

Prime focus receivers Picture							
RX Name	Wavelength [cm]	Frequency range (center) [GHz]	Nr. of Horns	Polarization	Comment	Calibration information	Technical information
P740mm	74	0.400-0.405 (0.402)	1	RCP	contact staff, if interested	NA	tech. data
P500mm	100-33	0.3-0.9 (0.6)	1	LCP/RCP	contact staff, if interested	more details	tech. data
P217mm 7-Beam	21	1.27-1.45 (1.36)	7	1xLCP/RCP, 6xX/Y		more details	tech. data
P180mm/P210mm (4-Box)	18/21	1.29-1.43 (1.36) / 1.57-1.72 (1.65)	1	LCP/RCP	multi-box I, polarimeter	more details	tech. data
P170mm UBB	23-5	1.3-6.0 (2.1)	1	2x linear		more details	please contact the receiver division
P26mm (4-Box)	2.6	11.7	1	1xlinear	holography RX, multi-box I	more details	tech. data
P3mm (4-Box)	0.3	84.0-95.5 (89.0)	2	LCP/RCP	multi-box I	more details	tech. data

Secondary focus receivers Picture							
RX Name	Wavelength [cm]	Frequency (center) [GHz]	Nr. of Horns	Polarization	Comment	Calibration information	Technical information
S130mm	13	2.2-2.3 (2.25)	1	RCP	only for geo-VLBI	more details	tech. data
S110mm	11	2.4-2.7 (2.55)	1	LCP/RCP	polarimeter	more details	tech. data
S60mm Double Beam	6	4.6-5.1 (4.85)	1	LCP/RCP	polarimeter	more details	tech. data
S45mm	4.5	4.0-9.3 (6.65)	1	2xlinear		more details	tech. data
S36mm	3.6	7.9-9.0 (8.35)	1	LCP/RCP	polarimeter	more details	tech. data
S28mm Double Beam	2.8	10.3-10.6 (10.45)	2	LCP/RCP	polarimeter	more details	tech. data
S20mm Double Beam RX	2	12.0-18.0 (15.0)	2	LCP/RCP		more details	tech. data
S14mm Double Beam RX	1.3	18.0-26.0 (22.0)	2	LCP/RCP		more details	tech. data
S7mm Double Beam RX	0.7	33.5-50.0 (41.5)	2	LCP/RCP		more details	tech. data
Receivers not operational any more							
RX Name	Wavelength [cm]	Frequency range (center) [GHz]	Nr. of Horns	Polarization	Comment	Calibration information	Technical information
P300mm (4-Box)	37-23	0.8-1.3 (1.05)	1	LCP/RCP	multi-box II, currently not available	more details	tech. data
P170mm UBB (old)	25-10	1.2-3.0 (2.1)	1	2x linear	was 0.6-3.0	more details	tech. data
P90mm	9.0	2.9-3.1 (3.0) / 3.3-3.6 (3.45)	1	1xlinear		more details	tech. data
P50mm (4-Box)	5.0	5.75-6.75 (6.25)	1	LCP/RCP	multi-box II	more details	tech. data
P22mm (4-Box)	2.2	12.1-12.2 (12.1)/ 12.9-13.6 (13.2)	1	LCP/RCP	multi-box II	more details	tech. data

Receivers not operational any more							
RX Name	Wavelength [cm]	Frequency range (center) [GHz]	Nr. of Horns	Polarization	Comment	Calibration information	Technical information
P19mm (4-Box)	1.9	13.5-18.7 (16.0)	1	1xlinear	not available any more	more details	tech. data
P13mm	1.3	18-26 (22)	1	linear	not available any more	more details	tech. data
P10mm (4-Box)	1.0	27.0-38.5 (32.0)	1	1xlinear	multi-box I	more details	tech. data
P6mm	0.65	41.0-49.7 (45.0)	2	linear		more details	tech. data
S20mm Multifrequency RX	2.0	13.6-15.6 (14.60)	1	LCP/RCP		more details	tech. data
S13mm Multifrequency RX	1.3	21.7-24.4 (23.05)	1	LCP/RCP	not available any more	more details	tech. data
S9mm 7-beam	0.9	30.0-34.0 (32.0)	7 (2 usable)	LCP, H/V	currently not available	more details	tech. data
S7mm Multifrequency RX	0.7	41.6-44.4 (42.9)	1	LCP/RCP		more details	tech. data

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Last update: 2024/09/09 09:12

