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 frequency receiver boxes are installed at the prime focus, yielding again a higher flexibility. At the moment, two multi-receiver boxes are available. The first contains the 18/21 cm (single pixel), the 1.9 cm and the 1.0 cm receivers; the second one includes the 30 cm, 5 cm, 2.2 cm and 0.3 cm systems. Changes within a 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.

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**
P500mm	92-30	0.3-0.9 (0.6)	1	LCP/RCP	contact staff, if interested	more details	tech. data
P300mm (4-Box)	30	0.8-1.3 (1.05)	1	LCP/RCP	multi-box II	more details	tech. data
P217mm 7-Beam	21	1.27-1.45 (1.36)	7	1xLCP/RCP, 6xH/V		more details	tech. data
P200mm (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	25-10	1.2-3.0 (2.1)	1	LCP/RCP	was 0.6-3.0	more details	
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
P26mm (4-Box)	2.6	11.7	1	1xlinear	holography RX, multi-box I	more details	

Prime focus receivers Picture							
RX Name	**Wavelength [cm]**	**Frequency range (center) [GHz]**	**Nr. of Horns**	**Polarization**	**Comment**	**Calibration information**	**Technical information**
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
P19mm (4-Box)	1.9	13.5-18.7 (16.0)	1	1xlinear	multi-box I	more details	tech. data
P10mm (4-Box)	1.0	27.0-38.5 (32.0)	1	1xlinear	multi-box I	more details	tech. data
P3mm (4-Box)	0.3	84.0-95.5 (89.0)	2	LCP/RCP	multi-box II	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	geo-VLBI	more details	tech. data
S110mm	11	2.6-2.68 (2.64)	1	LCP/RCP	polarimeter	more details	tech. data
S60mm Double Beam	6	4.6-5.1 (4.85)	2	LCP/RCP	polarimeter	more details	tech. data
S45mm	4.5	4.0-9.3 (6.65)	1	H/V	under test	more details	
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
S14mm Double Beam RX	1.3	18.0-26.0 (22.0)	2	LCP/RCP		more details	
S9mm 7-beam	0.9	30.0-34.0 (32.0)	7 (2 usable)	LCP, H/V		more details	tech. data
S7mm Double Beam RX	0.7	33.0-50.0 (41.5)	2	LCP/RCP	in commissioning	more details	

Receivers not operational any more							
RX Name	**Wavelength [cm]**	**Frequency range (center) [GHz]**	**Nr. of Horns**	**Polarization**	**Comment**	**Calibration information**	**Technical information**

Receivers not operational any more							
RX Name	**Wavelength [cm]**	**Frequency range (center) [GHz]**	**Nr. of Horns**	**Polarization**	**Comment**	**Calibration information**	**Technical information**
P13mm	1.3	18-26 (22)	1	linear	not available any more	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
S7mm Multifrequency RX	0.7	41.6-44.4 (42.9)	1	LCP/RCP		more details	tech. data

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