

## 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 <a href="#">Picture</a>							
RX Name	Wavelength [cm]	Frequency range (center) [GHz]	Nr. of Horns	Polarization	Comment	Calibration information	Technical information
<b>P500mm</b>	92-30	0.3-0.9 (0.6)	1	LCP/RCP	contact staff, if interested	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P300mm (4-Box)</b>	30	0.8-1.3 (1.05)	1	LCP/RCP	multi-box II	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P217mm 7-Beam</b>	21	1.27-1.45 (1.36)	7	1xLCP/RCP, 6xH/V		<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P200mm (4-Box)</b>	18/21	1.29-1.43 (1.36) / 1.57-1.72 (1.65)	1	LCP/RCP	multi-box I, polarimeter	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P170mm UBB</b>	25-10	1.2-3.0 (2.1)	1	2x lin	was 0.6-3.0	<a href="#">more details</a>	
<b>P90mm</b>	9.0	2.9-3.1 (3.0) / 3.3-3.6 (3.45)	1	1xlinear		<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P50mm (4-Box)</b>	5.0	5.75-6.75 (6.25)	1	LCP/RCP	multi-box II	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P26mm (4-Box)</b>	2.6	11.7	1	1xlinear	holography RX, multi-box I	<a href="#">more details</a>	

Prime focus receivers <a href="#">Picture</a>							
RX Name	Wavelength [cm]	Frequency range (center) [GHz]	Nr. of Horns	Polarization	Comment	Calibration information	Technical information
<b>P22mm (4-Box)</b>	2.2	12.1-12.2 (12.1)/ 12.9-13.6 (13.2)	1	LCP/RCP	multi-box II	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P19mm (4-Box)</b>	1.9	13.5-18.7 (16.0)	1	1xlinear	multi-box I	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P10mm (4-Box)</b>	1.0	27.0-38.5 (32.0)	1	1xlinear	multi-box I	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>P3mm (4-Box)</b>	0.3	84.0-95.5 (89.0)	2	LCP/RCP	multi-box I	<a href="#">more details</a>	<a href="#">tech. data</a>

Secondary focus receivers <a href="#">Picture</a>							
RX Name	Wavelength [cm]	Frequency (center) [GHz]	Nr. of Horns	Polarization	Comment	Calibration information	Technical information
<b>S130mm</b>	13	2.2-2.3 (2.25)	1	RCP	geo-VLBI	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>S110mm</b>	11	2.4-2.7 (2.55)	1	LCP/RCP	polarimeter	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>S60mm Double Beam</b>	6	4.6-5.1 (4.85)	2	LCP/RCP	polarimeter	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>S45mm</b>	4.5	4.0-9.3 (6.65)	1	H/V		<a href="#">more details</a>	
<b>S36mm</b>	3.6	7.9-9.0 (8.35)	1	LCP/RCP	polarimeter	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>S28mm Double Beam</b>	2.8	10.3-10.6 (10.45)	2	LCP/RCP	polarimeter	<a href="#">more details</a>	<a href="#">tech. data</a>
<b>S20mm Double Beam RX</b>	2	12.0-18.0 (15.0)	2	LCP/RCP		coming soon	
<b>S14mm Double Beam RX</b>	1.3	18.0-26.0 (22.0)	2	LCP/RCP		<a href="#">more details</a>	
<b>S9mm 7-beam</b>	0.9	30.0-34.0 (32.0)	7 (2 usable)	LCP, H/V		<a href="#">more details</a>	<a href="#">tech. data</a>
<b>S7mm Double Beam RX</b>	0.7	33.0-50.0 (41.5)	2	LCP/RCP	in commissioning	<a href="#">more details</a>	

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	<a href="#">more details</a>	<a href="#">tech. data</a>
P6mm	0.65	41.0-49.7 (45.0)	2	linear		<a href="#">more details</a>	<a href="#">tech. data</a>
S20mm Multifrequency RX	2.0	13.6-15.6 (14.60)	1	LCP/RCP		<a href="#">more details</a>	<a href="#">tech. data</a>
S13mm Multifrequency RX	1.3	21.7-24.4 (23.05)	1	LCP/RCP	not available any more	<a href="#">more details</a>	<a href="#">tech. data</a>
S7mm Multifrequency RX	0.7	41.6-44.4 (42.9)	1	LCP/RCP		<a href="#">more details</a>	<a href="#">tech. data</a>

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Last update: 2019/10/09 10:56

