

2.8cm secondary focus receiver

(10300-10600 MHz)

This is a 4-horn system for sensitive continuum measurement, polarimetry, VLBI, and pulsar observations.

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
10.45	A (BB)	LCP	7.5	51	1.35	38	47	2.4	56	68	Jul 2008
10.45	B (BB)	RCP	7.5	53	1.35	40	46	2.4	57	68	Jul 2008
normalized Gain curve ($G = A0 + A1 \cdot \text{Elv} + A2 \cdot \text{Elv}^2$)							Observed in	confirmed			
A0 = 0.99000		A1 = 8.2490e-04		A2 = -1.7433e-05		Feb 2007		Dec 2012			

Comments:

- The new gain curve (Feb 2007) was corrected for opacity.
- If no other information about the opacity is available a typical zenith tau value of about 0.02 should do a good job.

Version description for OBSINP

RX Name	Wavelength [cm]	Frequency (center) [GHz]	Nr. of Horns
S28mm 4-beam	2.8	10.3-10.6 (10.45)	4
Version:	Comment		
1. Continuum/Line (BW: 300 MHz)	Continuum/Spectroscopy + Polarimeter		
2. Pulsar (BW: 100 MHz)	Pulsar narrow band		
Horn offsets [arcsec]	Horn 1: 0.0,-450.0, 2: 186.0,-450.0, 3: -825.0,-450.0, 4: -535.0,-450.0		

Channel assignment in the MBFITS data files

2.8cm SFK multi horn receiver with polarimeter, 4 horns			
Module 1 (2 horns) and Module 2 (2 horns)			
Channel	IF	Pol.	Comment
1	BB	LCP	M1, Horn 1, TP A
2	BB	RCP	M1, Horn 1, TP B
3	BB	cross	M1, Horn 1, cos AB
4	BB	cross	M1, Horn 1, sin AB
5	BB	LCP	M1, Horn 2, TP A
6	BB	RCP	M1, Horn 2, TP B
7	BB	cross	M1, Horn 2, cos AB

2.8cm SFK multi horn receiver with polarimeter, 4 horns			
Module 1 (2 horns) and Module 2 (2 horns)			
Channel	IF	Pol.	Comment
8	BB	cross	M1, Horn 2, sin AB
9	BB	LCP	M2, Horn 3, TP A
10	BB	RCP	M2, Horn 3, TP B
11	BB	cross	M2, Horn 3, cos AB
12	BB	cross	M2, Horn 3, sin AB
13	BB	LCP	M2, Horn 4, TP A
14	BB	RCP	M2, Horn 4, TP B
15	BB	cross	M2, Horn 4, cos AB
16	BB	cross	M2, Horn 4, sin AB

Tcal and Tsys measurements

TODO

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