

GBT Gregorian Receiver Status

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The attached table summarizes the current status of the Gregorian receiver system described initially in GBT memo No. 66. The second column gives the nominal frequency coverage of each receiver. All will perform well up to their band edge. The "Wide IF" will block-convert the entire front-end bandwidth to the 1-8 GHz range. NRAO will provide converters tunable over this range with 10 KHz resolution, allowing users to observe widely separated spectral lines simultaneously, for example. The lower-frequency receivers will use an IF system with a bandwidth of about 500 MHz. Column 5 identifies receivers that would be used with a tertiary reflector (to be designed) for pointing or beam-switching. Column 6 shows whether we plan to build initially one or two feeds for a given receiver. The feeds would be separated by 5 to 7 HPBW's on the sky. Note that each feed of a receiver will detect both polarizations, so "dual feed" implies that there will be two feeds, four RF amplifiers and four IF lines. A general priority ranking of the receivers is given in column 7. Those of rank 1 and 2 will be completed by the time the GBT comes online in early 1995, with the others to follow as soon as possible.

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GBT GREGORIAN RECEIVERS

Receiver	Freq. (GHz)	BW (GHz)	Wide IF	Tertiary	Dual Feed	Rank	Status (completion date)
1	1.15-1.73	0.58	No	No	No	1	Under development (Sept. 1993)
2	1.73-2.60	0.87	No	No	No	4	
3	2.60-3.95	1.35	No	No	No	3	
4	3.95-5.85	1.9	No	No	No	2	Under development (Nov. 1993)
5	5.85-8.20	2.35	No	No	No	3	
6	8.00-10.0	2.0	Yes	No	No	2	Ordering parts (Sept. 1993)
7	10.0-12.4	2.4	Yes	No	No	3	
8	12.0-15.4	3.4	Yes	?	Yes	1	Ordering Parts (May 1993)
9	15.4-18.0	4.6	Yes	?	No	4	
10	18.0-22.0	4.0	Yes	Yes	Yes	2	Under Construction (Dec. 1992)
11	22.0-26.5	4.5	Yes	Yes	Yes	1	Under Construction (Dec. 1992)
12	26.5-33.0	6.5	Yes	Yes	Yes	3	
13	33.0-40.0	7.0	Yes	Yes	Yes	3	(1994?)
14	40.0-45.5	5.5	Yes	Yes	Yes	1	
15	45.5-52.0	6.5	Yes	Yes	Yes	2	(1994)