

To: File

From: Jon Hagen

Date: April 10, 2003, 4-16-03

Subject: Alfa backend requirements - summarized by Avinash Deshpande in a conversation following an Alfa meeting today:

	Bandwidth	Channels	Input Levels	Output Levels	Dump Time	Misc.
P-Alfa (pulsar)	300 MHz	1000 (300 kHz res.)	8 bits min	4 bits max (flexible)	64 usec	output after long-term mean removed in SW
E-Alfa (extra-galactic)	200 MHz min	800 (25 kHz res.)	8 bits min (12 desired)	16 bits min @ 1 sec dumps	1 sec (or less for rfi)	flexible blanking in hardware
G-Alfa HI (galactic)	1415-1425 MHz	1 kHz res. min =10k channels (20k desired)	10 desired (few ok if little rfi)	10 bits	1 sec	blanking not needed*
G-Alfa spectral line	One 6MHz band + eleven 3MHz bands (all fixed)	0.5kHz 1kHz min (~40k channels)	8 bits min	10 bits	<1 sec	blanking not needed*
G-Alfa continuum (like P-Alfa but w/full Stokes)	300 MHz	1k	8 bits min	16 bits	.1 sec	blanking not needed*

*rfi excised in software