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TO: Distribution

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SUBJECT: UVLBI high-data-rate configuration options

Table 2 lists the various combinations of baseband conversion equipment, recording systems and correlator playback systems necessary to record data rates from 1024Mbps to 2048 Mbps for UVLBI.

Equipment Key

Table 1 describes the various pieces of equipment referred to in Table 2.

BBC	VLBA or Mark 4 BBC
DBE	Digital backend (replacement for analog BBCs)
Mk4 frmtr	Standard Mark 4 formatter
Mk4B frmtr	Mark 4 formatter upgraded to support 2 VSI outputs
VLBA sample adapter	Adapter card to convert VLBA sampler outputs to VSI
Mk5A	Mark 5A; max 1024 Mbps; optionally upgraded for SATA compatibility
Mk5A+	Mark 5A upgraded to support reading of Mk5B disks
Mk5B	Mark 5B; VSI compatible; max 1024 Mbps; optionally upgraded for SATA compatibility
Mk5B+	Mark 5B with SATA and StreamStor upgrade ¹ ; 2048 Mbps max record rate; 1024 Mbps max replay rate

Table 1: Key to equipment referred to in Table 2

¹ Upgraded StreamStor expected (but not promised) to be available early 2006

Configuration Options

Aggregate rate (Mbps)	Minimum hardware	#chans	chan BW (MHz)	Correlator Requirements
1024	8 BBC Mk4 frmtr Mk5A	16	16	Mk5A or Mk5A+
	8 BBC Mk4B frmtr Mk5B	16	16	Mk5A+ or Mk5B
	8 BBC VLBA sample adptr Mk5B	16	16	Mk5A+ or Mk5B
	DBE Mk5B	16	16	Mk5A+ or Mk5B
1792	14 BBC Mk4B frmtr 2 Mk5B	28	16	Mk5A+ or Mk5B; may require multiple passes
2048	DBE 2 Mk5B	32	16	Mk5A+ or Mk5B; may require multiple passes; may require software upgrades
	DBE Mk5B+	16	32	Mk5B or Mk5B+; replay at 1024 Mbps max (1/2 speed); will require software upgrades
4096	DBE 4 Mk5B	64	16	Mk5B or Mk5B; may require multiple passes and software upgrades
	DBE 2 Mk5B+	32	32	Mk5B or Mk5B+; replay at 2048 Mbps max; may require multiple passes; will require software upgrades

Table 2: Configuration Options