

Correlator

Objectives:

1. Complete designs of all boards
2. Fabricate and test prototypes of all boards
3. Procure and test prototype quantity of custom correlator chips

Budget:

1. Custom PC board manufacture (station card, FIR filter card, control card, LTA card, adder card, interface card, correlator card)	\$ 31,000
2. Custom PC board parts (not including correlator chips)	\$ 14,500
3. Custom PC board assembly	\$ 11,500
4. Correlator chips (quantity 400)	\$224,000
chip contingency recommended by designer	\$ 25,000
5. Test fixtures	\$ 27,000
6. Test equipment (oscilloscope, logic analyzer, PC, solder station, microscope)	\$ 42,000
7. Software support (Xilinx, Autocad, ORCAD)	\$ 5,000
TOTAL	\$380,000

The above includes a contingency only on the correlator chip procurement.

Total remaining in 1998-2000 budget: ~\$145,000

Additional funds required: ~\$235,000

Grand Totals for CDL

Including SIS mixer for 86-116 GHz:

SIS mixers	\$1,463,500
LO	\$ 636,000
Correlator	\$ 380,000
TOTAL	\$2,479,500
Remaining in 2000 budget	\$ 876,000
Additional required	\$1,603,500

Admin

- Reduce M&S from \$200K to \$100K

Antenna

- Defer metrology option in antenna contract (\$469K)
- Defer Nutator or transfer to partners (\$500K)
- Small cuts in various M&S

Site

- Maintain current modest (\$15K) M&S

SIS / HFET development

- Defer Dewar & equipment rack
- Slow mixer mask sets, bodies, parts
- Defer one of the Nb wafer contracts
- Defer further vacuum window development
- Defer FTS
- Defer some test equipment

Rx Development

- Defer holography system or transfer to partners (\$220K)
- Defer significant prototype Rx expenditures
- No additional staff

Multiplier chain LO

- Reduce overall M&S from \$636K to \$436K

LO Reference, IF, and FO systems

- Reduce estimated M&S from \$958K to \$638K

Correlator

- Defer chip contract until 2001-Oct
- Defer some test equipment & fixtures

Computing

- Defer "Desirable" hardware
- Reduce \$106K "Essential" hardware by \$5k

System Integration M&S

- No change in \$80K request

Science

- No change in \$34K request

ALMA Test site

- Maintain budget, with European participation