

Science & Integration Meeting

Agenda

- Detector & R&D

- ›› NPRO stabilization results Mason/Savage

- ›› Interferometer acquisition modeling results Sievers

- ›› FMI wavefront sensing results Mavalvala/Sigg

- ›› PNI status & plans Fritschel

- ›› 40m recycling status Logan/Spero

- ›› Core Optics Status: REO coating performance analysis Jungwirth

- ›› FFT modeling (20 min) Kells

- ›› DAQ prototype plan for 40m Bork/Barker

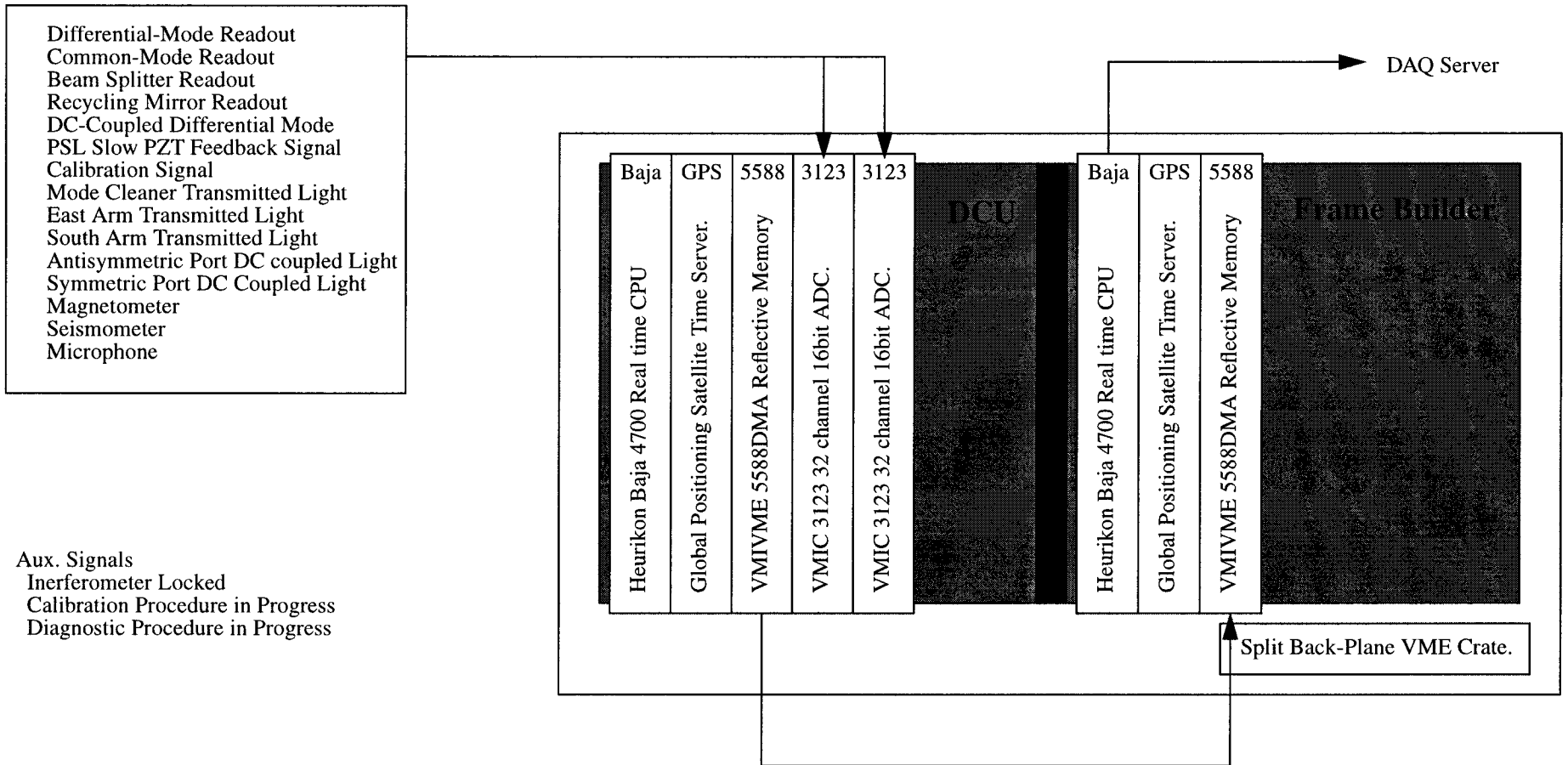
40m Data AcQuisition (DAQ) Primary Objectives

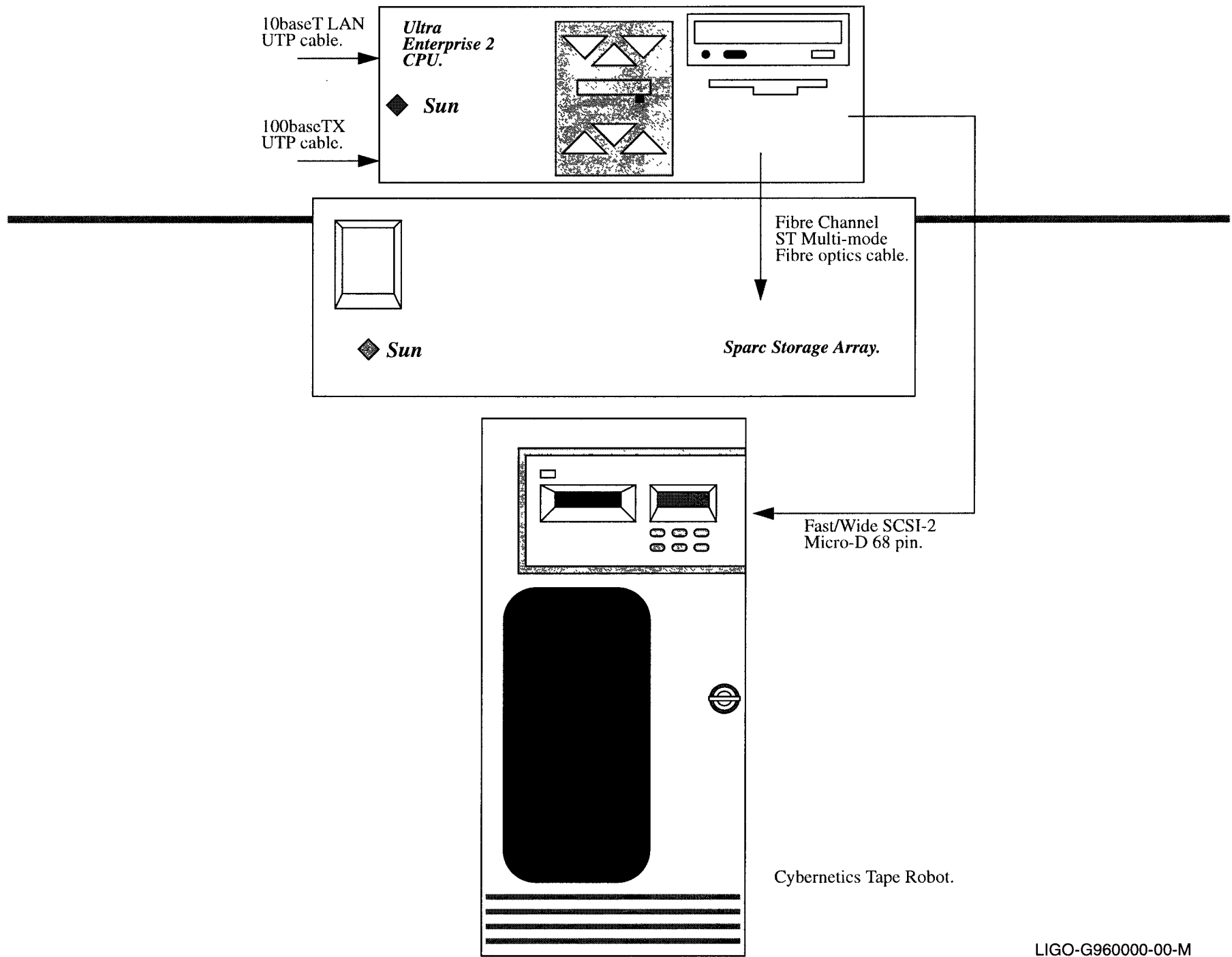
- Implement a LIGO prototypical system which is capable of collecting and storing data at LIGO rates to verify CDS conceptual design.
- Provide data in a standard LIGO/VIRGO frame format to allow users to:
 - ›› Begin process of connecting analysis software and using frame library routines
 - ›› Feedback data framing / feature requirements for implementation in a final LIGO system

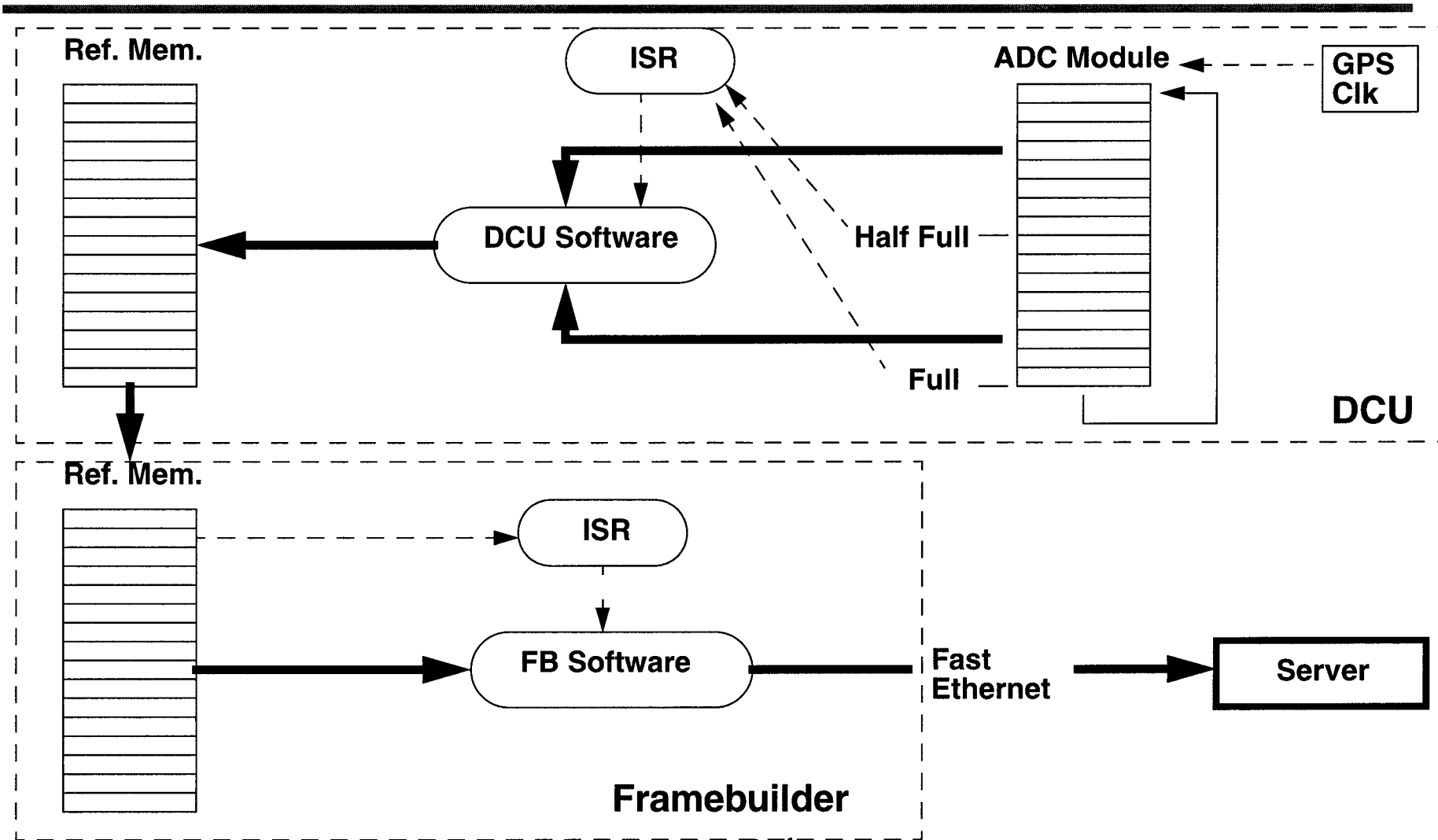
40m DAQ - Basic Features

- Features to be included in Rev. 1: (Feb/Mar 1997)
 - ›› 32, 16 bit ADC channels with sampling rates of 16384 K samples/sec
 - ›› TBD DAC channels for diagnostic stimulus (calibration, etc.)
 - ›› Digital networks to move data to a central framebuilder
 - ›› Framebuilding, using VIRGO defined frames and software library
 - ›› Data storage to disk and tape
- Features NOT to be included:
 - ›› Anything beyond that necessary for CDS to verify system capabilities

DCU/Framebuilder







Status

- All hardware in house
- Software under development
 - ›› Operational
 - DCU interrupts and data transfer to RM (20MBytes/sec)
 - VIRGO frame code ported to MIPS processor
 - Data writes to disk drive
 - ›› In progress
 - DCU/FB communication
 - Fast Ethernet debug
- Meetings every Thursday @3:00PM in SCR