DEIMOS
SSC Presentation: May 22, 1995
Major Milestones: Third Quarter

Optics:

- Finalize entire optical design including cameras and collimator
  - Extend wavelength coverage blueward to 3900 Å.
- Finalize focal plane position on platform: 3-inch back from nominal focus.
- Complete end-to-end ray trace in both imaging and spectroscopic modes.
- Order all optical glass, CaF_2, and collimator blank.

Structure:

- Overall structural concept: stress-relieved steel cylinder with drive disk and bulkheads. Drive disk major weight-bearing member. All loads on drive disk and bulkheads counterweighted for minimum torsional deflection.
- Conceptual design of grating slide, number and sizes of gratings, tilt mechanism, kinematic mounts, changer mechanism, and slide support structure.
  - Three gratings and one mirror. Two 8×12-inch slots.
  - All gratings fully encoded (no more detents).
- Caterpillar-drive slitmask holder mechanism – holds 10 slits. Simple straight-line insertion path. Fits between focal plane and drive disk. Solves major packaging problem.
- Optical/mechanical error budget 80% complete.
- Hire structural/mechanical design consultant (Frank Melsheimer).

Detectors and Electronics:

- Lincoln Labs contract began.
- Good progress on Lick in-house detector project. Remains on budget and schedule.
- Detailed, comprehensive electronics plan and budget.
- New Galil motor controllers simpler, save money.
- Instrument-control electronics design and schematics 50% complete.
- Electronics engineer Shepard let go; retired engineer Ricketts filling in and doing beautiful job.

Software:

- FITS scheme for storing and cross-referencing subunits of mosaic image.
- Early tests of disk I/O speed look encouraging (14 sec per full 8-chip mosaic).

Miscellaneous:

- Ordered pre-cut slitmask test patterns from laser-cutter manufacturers.
- Fringing tests continuing on Kast spectrograph. White card mounted in front of secondary mirror for alternative flat-fields is awaiting new tests.
- Draft prospectus for private support for second beam nearly complete.