Interferometer Design Subsystem
Tasks, Schedules and Budgets

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Overall Goals

- Determine the interferometer parameters, including but not limited to:
  - Mirror specs (reflectivity, ROC, size, etc)
  - Recycling cavity lengths
  - Optical layouts
- Develop the sensing and control schemes for both length and angular degree of freedoms
- Clarify the requirements to other subsystems, including but not limited to:
  - Seismic attenuation
  - Mirror quality
  - Incident laser properties
  - Noise and bandwidth requirements to electric circuits

Task List

- Rough optical parameters
  - Mirror sizes, IFO lengths, Optical Layout
  - Information necessary for initial negotiations with mirror companies, tunnel design and vacuum system design.

- Detailed optical parameters
  - Mirror reflectivity, ROC, wedge, surface quality, error specs, etc

- Length Sensing Scheme

- Alignment Sensing Scheme

- Define interfaces with other subsystems
  - Seismic isolation requirements
  - Actuator performance requirements
  - Local sensors requirements
  - Signal sensing ports
  - Electric circuit requirements

Schedule

Tasks	FY 2010								
	7	8	9	10	11	12	1	2	3
Rough optical parameters	▓	▓							
Detailed optical parameters		▓	▓	▓	▓	▓			
Length Sensing Scheme	▓	▓	▓	▓					
Alignment Sensing Scheme	▓	▓	▓	▓					
Interfaces with other subsystems									
Seismic Isolation			▓	▓					
Actuator performance			▓	▓					
Local sensors				▓	▓				
Signal sensing ports					▓				
Electric circuit requirements						▓	▓	▓	

Budget

No money is needed for the design tasks.