

Update on GMT procurement plans

28 September 2009

Introduction

The main GMT telescope project is currently in the Design Development Phase, which is planned to last until the end of 2011. In this phase, the international GMT Project Office is taking the lead in developing the designs both of the overall telescope system and of selected sub-systems, while some sub-systems will be the subject of contracted design studies.

The preliminary design of the telescope system has been described in a publicly available document, available for download at URL:

<http://www.gmto.org/CoDRpublic>

Potentially interested companies should familiarize themselves with this document to understand the terminology used and the goals of the project for each sub-system. More detailed requirements and specifications will be included in formal statements-of-work when appropriate.

To facilitate planning, we provide here both a selection of the sub-system design studies likely to be contracted to industry, and we foreshadow selected major external sub-system procurements, together with the anticipated dates of contract.

It will be understood that the dates provided here are indicative only: the developmental nature of many sub-systems may require revision to current planning, and such revision may occur without notice. As required, additional work-packages may also be contracted to industry.

Australian companies wishing to participate in the program will want not only to demonstrate capability and capacity, but the Project Office is unfamiliar with Australian industry and will wish to establish a level of mutual trust with potential bidders. Interested companies are encouraged to contact both relevant Project Office staff in Pasadena and at the Australian GMT Project Office at Mt Stromlo Observatory, Canberra, well before the indicated dates to discuss their interests, their capabilities, and their approach to the Project.

Selected GMT Work packages

	Work Package	Indicative start date
Systems Engineering	Wind flow studies	Feb 10
	Wind tunnel validation	Oct 10
	GMT wind dynamic response	Dec 10
	Enclosure optimisation	Feb 11
	Seismic analysis	Nov 09
System Software	Architectural study	Oct 09
	System prototyping	Nov 10
	Implementation	May 12
Telescope Assembly	Pre-qualifying engineering firms	Jul 10
	Telescope engineering support	Oct 11
	Mount fabrication	May 12
	Main drive design	Jan 11
	Drive fabrication	Apr 14

Hydrostatic bearing design	Mar 11
Bearing fabrication	Jan 13
Instrument rotator design	Apr 11
Rotator fabrication	Sep 14
Counterweight engineering study	May 11
Counterweight fabrication	Jul 14
Mirror cover design	Jan 10
Mirror cover fabrication	Jun 14
Utility transfer system design	Jan 10
Utility transfer system fabrication	Jan 15
Dummy mirror and cell fabrication	Sep 11
Mirror support fabrication, 1 st primary	May 12
Production of mirror cells assemblies	Jul 14
Corrector/ADC design	Nov 09
Corrector/ADC fabrication	Jul 14
Telescope control system design	Jul 10
Telescope control system fabrication	Aug 12
On-site telescope assembly, test	Aug 16
Adaptive Optics	
System modelling	Sep 09
Focal plane design development	Mar 10
Focal plane fabrication	May 12
Laser Guide Star system design	Apr 10
Laser Guide Star system construction	Nov 12
Phasing system design	Oct 09
AO system software design	Mar 10
AO system software development	Mar 12
Scientific Instrumentation	
Design studies (incl. GMTIFS)	Sep 09
Design development of instruments	May 12
Fabrication initial instruments	Jul 14
Enclosure, Facilities (Chile)	
Soil/geophysical tests	Aug 10
Site civil works	Jun 12
Telescope enclosure design development	Jun 10
Telescope enclosure construction	May 13
Lodge design	Sep 10
Lodge construction	May 13
On-site facilities design	Apr 10
Facilities building construction	May 13
Sea level facility design	Mar 12
Sea level facility construction	Oct 13
Mirror coating plant design	Jul 10
Mirror coating plant fabrication	Mar 14
