



Association of Universities for Research in Astronomy

NEW INITIATIVES OFFICE **GENERAL PRINCIPLES**

August 8, 2005

These General Principles are intended to guide the establishment and operation of a New Initiatives Office that will form the central planning organization within AURA for the next generation ground-based telescope. It is recognized that such an undertaking will be substantial and will involve the efforts of not just AURA units, but the broader US community, possibly multiple Federal Agencies, and eventually international partners. In addition, such an undertaking will need the active support and interest of industry.

The New Initiatives Office (NIO) was first established in 2001 to focus on developing initial design activities for a Giant Segmented Mirror Telescope (GSMT) and to initiate relationships with other groups such as the California Extremely Large Telescope (CELT) project. Since that time, AURA has submitted a proposal for GSMT design and development activities to the NSF. It is appropriate to revise the structure and focus of the NIO during the Design and Development phase.

Currently, the 30-m class GSMT recommended by the Decadal Survey is envisioned to be a US public-private partnership (with possible international contributions). Beyond that, larger scale projects such as the Overwhelmingly Large Telescope (OWL) will mandate collaboration at the international level.

The underlying goal is to build a strong basis for a public private partnership and a strong technical position capitalizing on the capabilities of NOAO and Gemini and coordinating with the US Independent Observatories. In addition, a longer range goal is to engage ESO in a constructive way that will achieve mutual aims.

Following the completion of the Design and Development phase, AURA will re-evaluate the need for and goals of a dedicated NIO as an AURA unit.

PREMISE: Both NOAO and Gemini have established strong institutional capabilities and potential complementary roles for involvement in GSMT. NOAO, as the US National Observatory, offers the appropriate interface with the US community including the Independent Observatories and the user groups. Gemini has developed and implemented telescope and instrument technologies and software and operational developments that are pathfinders for the Thirty Meter Telescope (TMT) needs, and also possesses key expertise in several high risk areas of the TMT Project. In carrying out the activities of the NIO, AURA recognizes:

- Any policy which seeks to provide public access to GSMT must also recognize that early user community involvement in developing science drivers and capabilities is essential. This is an inherent function of NOAO.
- Gemini personnel have a continuing obligation to serve the needs of the Gemini partnership but, as AURA employees, can also participate in the NIO as a means of fulfilling their professional desires and engagement in challenging engineering research. The participation of Gemini staff must be predicated on a direct benefit to Gemini capabilities, technical performance, and scientific output. It is expected that the FTE commitment be transparent to the Gemini Board and at a level which meets their approval.

Within NOAO, a separate activity is planned to interface with what is anticipated to be another major design activity for the Giant Magellan Telescope (GMT).

OBJECTIVES: The objective for the establishment of the NIO is to provide an effective internal management mechanism for the involvement of multiple Centers, and to establish a consistent interface to external organizations. The NIO will be the lead AURA management unit in the development of science drivers, identification of critical technologies, management of trade studies, assessment of performance requirements, delineation of design options, and evaluation of potential sites for GSMT or larger class telescopes. In addition, execution of AURA assigned work packages during the design and development phase will be coordinated through the NIO.

MANAGEMENT PHILOSOPHY: The NIO will be a separate management unit reporting to the AURA Board through the AURA President. Its management and oversight will be structured as a partnership between Gemini and NOAO acting as units of AURA in which each partner contributes resources including intellectual capital, personnel, facilities, and funding. All communications and representations of the NIO will recognize this partnership.

The NIO serves a valuable purpose in acting as a management and coordination mechanism internal to AURA. It will also form the AURA interface to the TMT project office. Under the NIO structure, work associated with the TMT project office can be collaborative between NOAO and Gemini, or, if appropriate, as individual Centers. However, for purpose of coordination, planning, and properly accounting for AURA contributions all AURA work must be carried out within this umbrella.

MANAGEMENT PLAN: The NIO will have a Management Board consisting of the Director of NOAO, the Director of Gemini, the AURA President the NIO Project Manager and Project Scientist acting in an ex-officio capacity. By mutual agreement, the Management Board may also appoint an Instrumentation Manager to coordinate AURA activities. The NIO will have the following management features:

- The Management Board will select an NIO Project Manager, a Project Scientist, and by mutual agreement, an Instruments Manager. These will also act as liaison to the appropriate interfaces within the TMT project office.

- The staff of the NIO will consist of both NOAO and Gemini personnel. In recognition that both Gemini and NOAO personnel may retain fractional responsibilities to their home units, such fraction will be under the direction of their home units.
- Each home unit will be responsible for payment of labor costs and other capital.

RELATIONSHIPS WITH OTHER ENTITIES: AURA is committed to achieving the public-private partnership envisioned by the Decadal Survey. Accordingly, NIO will seek to establish collaborative relationships with all partners demonstrating a commitment to this same goal and evidence of a viable program. The NIO will carry out work as a part of these collaborative relationships that advances generally applicable scientific and engineering concepts of mutual interest. AURA will encourage free and open exchange of information

It is recognized that the CELT partnership desires to engage NIO personnel early on in developing key capabilities for that telescope. NIO will maintain a record of all appropriate work as an “equity contribution” and will require that such contributions be acknowledged.

Any non-disclosure agreement must be subject to the approval of the AURA President. Although AURA generally prefers not to enter into non-disclosure agreements, it also recognizes that certain data are of value to the CELT partnership or commercial vendors and should be treated in accordance with the wishes of the partnership.

AURA’s goal is to seek to form a partnership with CELT in which AURA is integral to the establishment of science drivers and the development and construction of the telescope and can offer public access during the operations phase. AURA requires that a formal Memorandum of Understanding be developed which achieves this working relationship.

INTERNATIONAL LIAISON: The Management Board will establish regular interactions with other international organizations such as ESO that may have parallel and related interests. Any formal agreements shall be under the authority of the AURA President and subject to the approval of the AURA Board.

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