

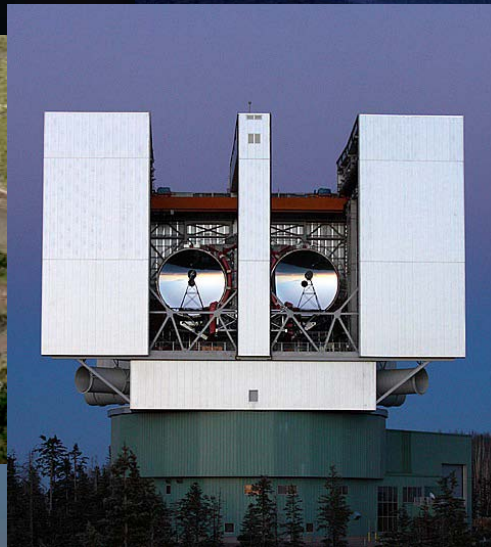
# ACCORD Presentation to the ASTRO2010 O/IR Panel

June 9, 2009  
Pasadena

# ACCORD

- Association of all Directors of US O/IR Observatories with telescopes of aperture  $>3\text{m}$
- Goal is to optimize astronomy research capabilities for US ground-based O/IR facilities

<b><i>Director</i></b>	<b><i>Institution</i></b>	<b><i>Telescopes</i></b>
Charles Alcock	CfA	MMT, Magellan
Michael Bolte	UC Santa Cruz	Shane, Keck
Wendy Freedman	OCIW	Magellan
Suzanne Hawley	U Washington	ARC
Rolf-Peter Kudritzki	U Hawai`i	CFHT, Keck
Shri Kulkarni	Caltech	Hale, Keck
David Lambert	U Texas	HET
Pierre Martin	WIYN	WIYN
David Silva	NOAO	KPNO/CTIO 4m
Peter Strittmater	U Arizona	MMT, Magellan, LBT
William Smith	AURA	



~80% of the collecting area of large telescopes in the US is at facilities operated by independent observatories and in most cases funded by non-federal sources

# The US O/IR System\*

- Building an “efficient” US O/IR system of facilities is growing increasingly important for maintaining the US strong competitive position in astronomy research
  - Federal funding for the independent observatories provides a greatly-needed ability to add to their capabilities
  - The demand for community access to the independent observatories is great and accessing it via this federal funding is a highly-leveraged arrangement for the NSF
- A next step would be close enough coordination to have a more coherent set of complementary capabilities within the system

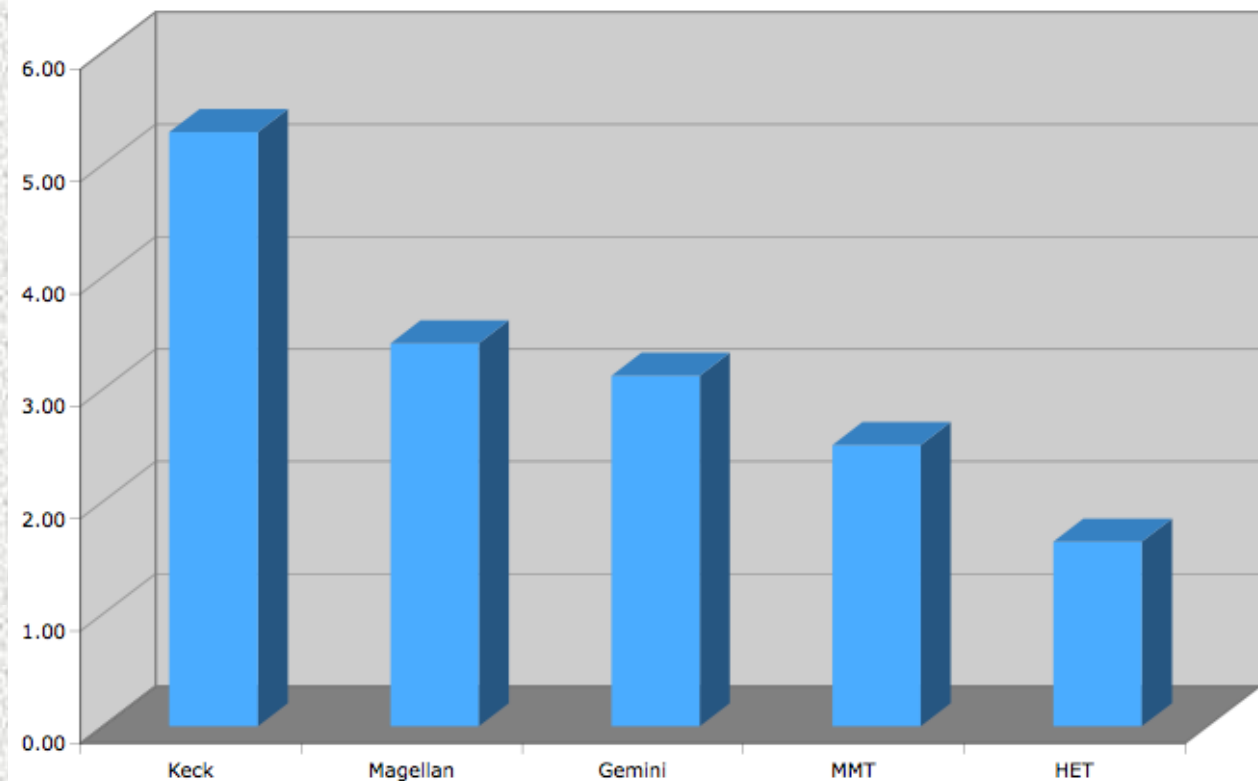
\* Note the lack of quotation marks around “System”

# The System in 2009

- The system of US astronomy facilities is currently built primarily around TSIP
  - Initiated in 2002
  - Two levels of “incentive factor”
  - No call in 2003 or 2008 (continued funding of previous commitments)
  - \$24.53M committed with 354 nights allocated at Keck, MMT, Magellan, WIYN and LBT, HET
  - ~\$3M/year
  - 2009 call \$2.5M new funds

# TSIP Time is Popular

Oversubscription 04A-09A



**ALTAIR Report**  
“To develop and expand the large telescope system, we recommend that NSF increase the funding, to \$10M per year, for an NOAO-led TSIP or TSIP-like program in order to increase the open access time available on non-federal facilities.”

Oversubscription of public access time for >6.5m US telescopes, 2004B - 2009A

# ACCORD Issue #1

- TSIP has been unexpectedly successful from all points of view, but the program has not been a priority for NSF astronomy
- Independent Observatories would be able to support ALTAIR recommended \$10M/year
- **Recommendation:** Increase the funding available via TSIP and have the priority of the program be high enough that it becomes stable

# AO Development Funding



*“Over the last decade, adaptive optics (AO) has proven itself as a powerful tool for ground-based astronomical science and has been integrated into the infrastructure of nearly every major US optical/infrared observatory.”*

- from 2008 Roadmap for Development of US Astronomical Adaptive Optics

AO-based scientific productivity is increasing greatly every year. Gains are strongly aperture dependent.

AO is a key component for the science case of ELTs

# AODP history

- AODP is perceived as less successful although the total amount of US Federal funding to AO development has been significant as as been progress (Frogel presentation)
- Three “roadmaps” with significant expert, considered input have resulted in one round of proposals that were partially funded and another round that was never funded and a perhaps a third to result from the 2008 effort

# ACCORD Issue#2

- Investment in key AO components/technology and in AO systems is crucial to maintain competitiveness of the US System
- As is the case with TSIP, *stable* funding is important. A renewed AODP with timescale of a decade and appropriate AO emphasis in MRI and ATI would a reasonable way to implement AO investment

# The Next Generation System

- ACCORD strongly endorses a powerful and complementary set of survey (LST) and detailed study (GSMT) new capabilities available to the US community for the coming decade.
- *This is an ambitious vision, but is what will be required if the goal is for the US to remain a world leader in astronomy research. Will require partnerships between the US federal funding agencies, state and private sources and foreign governments.*

# National Treasure Programs

- In an expansion of the US telescope system concept, funding for programs such as the Gemini “Aspen Process” instruments should be competed. The most ambitious and forward-looking projects at major observatories, federally-funded or independent, exceed the funding available through MRI, ATI or TSIP yet represent an important part of the future of A&A research
- Put in place a process that identifies the best programs and best “home” for those programs that considers federal and independent facilities

# Doing Business a Different Way

- Merging of public-private interests is more than exchanging money for nights
  - Providing broad access to data obtained at Independent Observatories is a part of the system future
  - Providing tools for observing preparation, observing support and data analysis is important for maximizing value of public access time
  - For any large program undertaken partial or completely with public funds, the program design will need to include community input and the program carried out to appropriate levels of planning and oversight
- The ACCORD community recognizes these changes in how the Independent Observatories will be run

# The System Going Forward

- The size of the investment in forefront telescopes/instruments/programs has grown to the point that efficient private-public partnerships are a necessity
- The ACCORD community is ready to engage in a serious and mutually-beneficial relationship with the federal agencies to build a System
- Although progress has been made in the last decade, a more serious federal investment is required for the System to work in the next decade