

A Summary of the 2008 Guillermo Haro Workshop

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First, Our Thanks to

The members of
INAOE

and especially

Rosario Sanchez

The Known Knowns: Science

- High z universe is explored
 - ▶ (quasars, lensed galaxies, GRBs)
- Clusters at $z > 1$ are found
- 1000s of SN discovered
- Mira variables are mapped
 - ▶ to 4Mpc
- IMF is constrained
 - ▶ to $M < 0.1 M_{\text{sun}}$
- Mass function of local galaxies is determined
- Low SB profiles of dwarf galaxies are resolved
- Fraction of dust obscured AGN established

The Known Knowns: Technical

- Data management is within grasp
- SPM is completing its infrastructure upgrades
- 6.5m mirror will be cast shortly
- K-band imaging is required
- Science demands a minimum of imaging in 2 simultaneous bands
- ~1deg FOV is achievable
- We should build a test IR camera at SPM

The Known Knowns: Politics

- There are strong observational synergies between this project and existing and forthcoming UC/Mexican facilities
 - ▶ (Keck, LMT, GTC, TMT)
- A strong UC/Mexico astronomical collaboration would be beneficial scientifically, socially, and politically
- The project will benefit from the further development of the long-term use of the telescope
- SASIR has participation from multiple Mexican and UC institutions
 - ▶ (IAUNAM, INAOE, IPN, UdeG, UIA, UCSC, UCB, UCD, LLNL, LBL, UCI, ...)

The Known Unknowns: Science

- Impact on low-mass star science
- Local census of stars is established
- High energy/gravitational wave events may be identified
- How many deep fields and how deep?
- Transient IR science is unique to SASIR,
 - ▶ but what are “the killer apps”?

The Known Unknowns: Technical

- Is y-band imaging essential?
- What is the optimal cadence for a shallow survey?
- Is there sufficient space, etc. for multiple dichroics?
- How far up do we place the collimator?
- Can we get the detectors across the border?

The Known Unknowns: Politics

- Funding for initial design phase is positive but unsecured
- Enhanced UC/Mexico student, postdoc, and faculty 'exchanges' are desired
 - ▶ and the prospects are under-exploited
- Can we leverage a fraction of SASIR to gain unfettered access to 10m-class telescopes?
- What are the collaboration rules?
 - ▶ Science teams and data access
- How do we ensure that this project has a reasonably high profile in the next US Decadal Review?

The Unknown Unknowns: Science

- Planet detection
- Is there a strong science case for PN and stellar population studies?
- Can we sell SASIR on the unknown unknowns?
 - ▶ To the scientific community and/or funding 'agencies'

The Unknown Unknowns: Technical

- What (additional) cadences will achieve unique transient science?
- How much weight can a Magellan telescope support?

The Unknown Unknowns: Politics

- Will we require additional partners?
- Who is going to pay for the telescope?
- Who is going to pay for us to use it?

The Next Steps

- Science

- ▶ Integrate the new science cases into an expanded white paper
- ▶ Identify the “killer apps” for SASIR
- ▶ Re-engage a team on the wide-field spectroscopic survey

- Technical

- ▶ Direct MANY more resources here
- ▶ Optical, mechanical
- ▶ Telescope, camera, dome, etc.

- Politics

- ▶ Further engage members of the UC/Mexican community
- ▶ Establish the rules of the collaboration
 - ◆ (top and lower level)
- ▶ Engage (vigorously) in fund raising

Upcoming Actions

- UC/US Opportunities
 - ▶ UC
 - ◆ Labs: \$1.5 million over 3 years (submitted)
 - ◆ UC/Mexus: ??
 - ▶ NSF:
 - ◆ ATI: <\$2 million over 3 years (due Nov 1, 2008)
 - ◆ MRI: <\$5 million over 5 years
 - ◆ PIRE: <\$2.5 million over 5 years (due early 2009)
 - ▶ Private fellowships
 - ▶ Developed white paper for the Decadal Review
 - ◆ Due early 2009
- Mexico
 - ▶ Seek matching funds from Conacyt
- Together
 - ▶ Next SASIR 'workshop' at UC in the next few months
 - ▶ Build a test camera?

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