Science with ODI
The Outlook from NOAO

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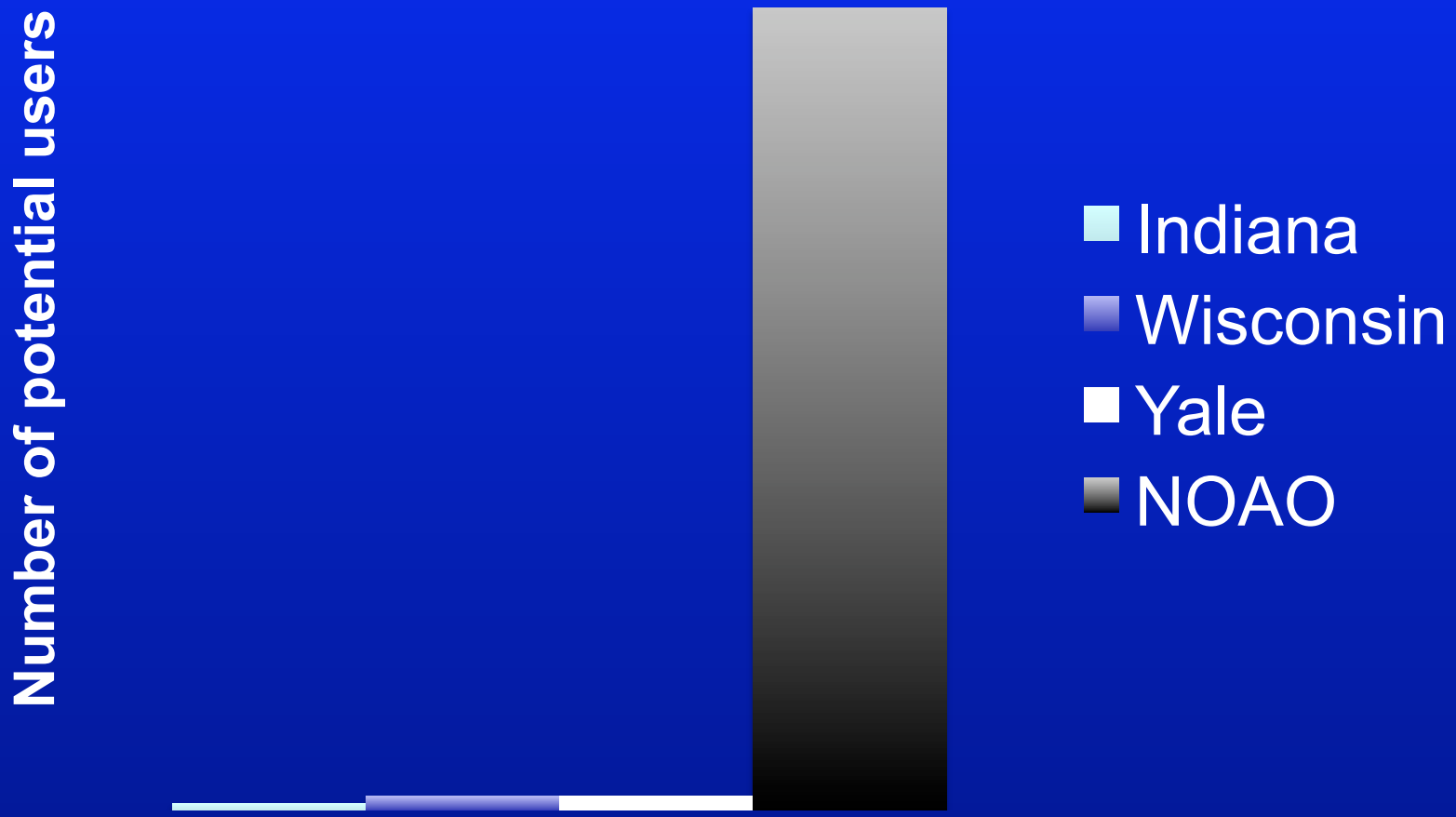
Relative number of users among WIYN partners



Strengths

- Image Quality
- Field size
- Blue efficiency

Other Advantages

- “Long” Focal Ratio promotes narrow band filters
- Queue facilitates time domain projects
- Archival data would allow secondary use
- LSST pre-cursor

Science with ODI (NOAO)

- Galaxy Luminosity Function: dwarf galaxies through star count over-densities on degree scales; also star streams in the Galaxy from CMDs
- Metallicity and gravity based stellar surveys in the Galaxy (filter choices, esp. narrow band)
- High proper motion surveys (improving solar neighborhood census: complete volume sample to 500 pc in 10 years)
- Age-metallicity correlations in dwarf spheroidals

Science with ODI (NOAO)

- Cepheids, LPVs, and massive binaries to 8 Mpc; other variables in nearer systems
- Novae in Virgo cluster: esp. as tracers of intergalactic “tramps”
- Positional transients: KBO detection
- Mid-range (z ~ 0.1-0.3) SNe searches

Science with ODI (NOAO)

- Temporal monitoring of SFR's: binaries and masses
- Strong gravitational lensing—strong lensing over significant fields
- Weak gravitational lensing (image quality improvement)
- Narrow band filter surveys for small high-z galaxies (seeing wins)
- Galaxy population studies on fields >> COSMOS

NOAO Survey Programs

- The NOAO Deep Wide-Field Survey
- Deep Lens Survey
- Deep Ecliptic Survey
- The *w* Project: Measuring the Equation of State of the Universe (ESSENCE Project)
- The Resolved Stellar Content of Local Group Galaxies Currently Forming Stars
- ChaMPlane: Measuring the Faint X-ray Binary and Stellar X-ray Content of the Galaxy
- First Look Survey: R-band Imaging

ODI is a uniquely capable instrument

We look forward to many exciting and ground breaking proposals