

# This Meeting

- Xray (H. Marshall)
- Radio-mm (Mangum, Butler)
- General Phot. Visible (Mironov, Dambis, Henden, Kaiser, Cramer, Pickles)
- Facilities. IR ( Carey, Marston)
- Surveys (visible): Bauer, Verdoes-Kleijn, Tucker, Kuehn, Allam, Marriner, Bessell, Jones, Huseman, Pancino, J. Marshall)
- wavelength and frequency (Holzworth)
- atmosphere (McGraw, Zimmer, Cramer, Li, Stubbs, Fagin, Kerber, Blake, Cuillandre)
- intercalibration (Betoule,)
- stellar atmos. models: Rauch,
- Time: Sterken
- Position: Fomalont
- Reference: ( Heap, Albert)

# What we Saw

- Meeting demand for
  - high accuracy
  - high precision
- Interest in further discussion and possibly collaboration on
- Common needs
  - ‘absolute’ source (across EMS)
  - removing the atmosphere
  - response of instruments
- Multiple approaches to common problems
  - survey photometric accuracy and precision
  - establishing network of celestial standards
  - Earth’s atmosphere
- DA white dwarfs good for x-ray to IR
- Cosmology science case

# Accuracy vs. Precision

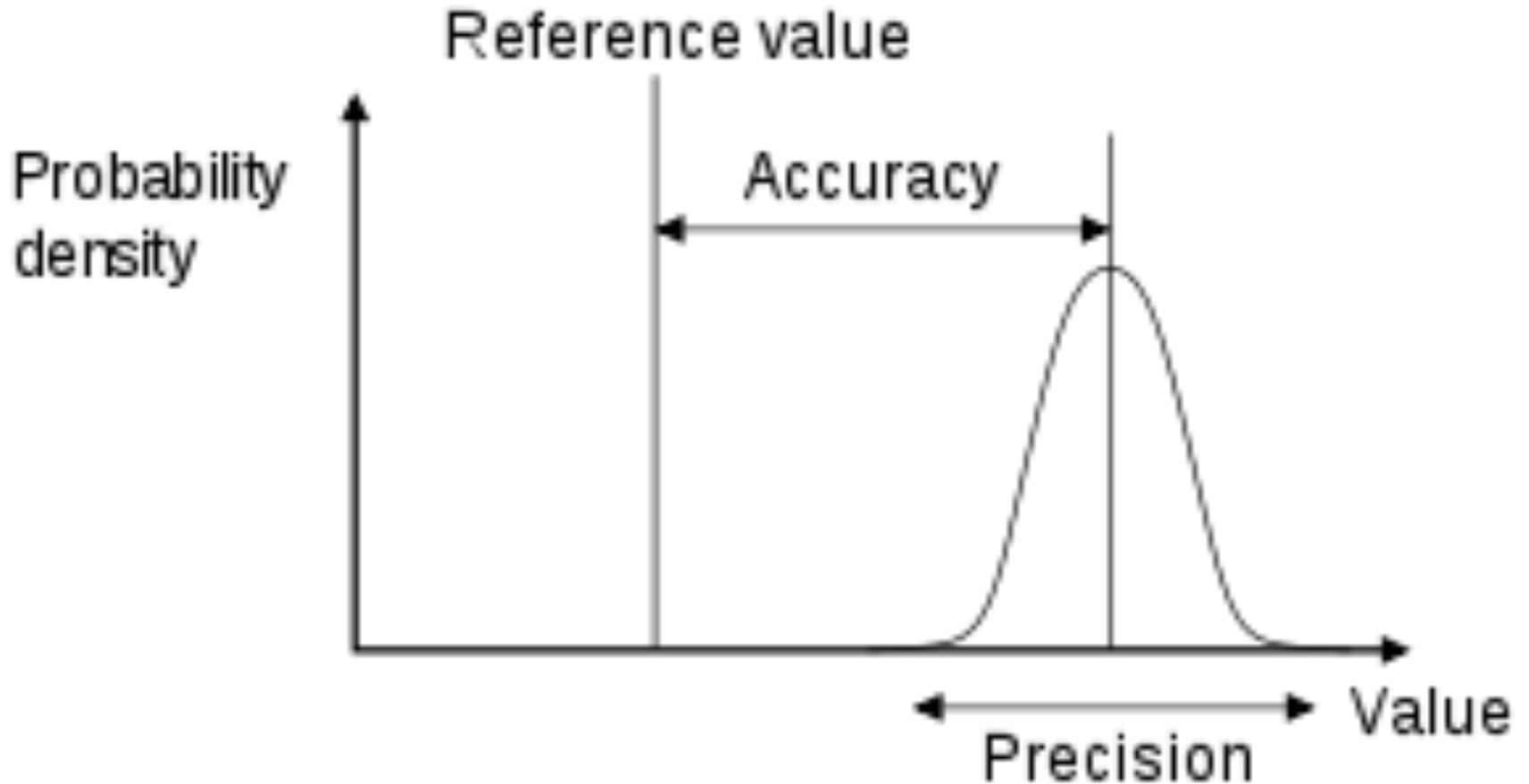
**High Accuracy, Low Precision**



**High Precision, Low Accuracy**



# A mathematical representation



# Would have like more of:

- Intercalibration
  - except for one talk on SLNL – SDSS
- high energy astronomy
- longitudinal studies of hardware
- what is a common reference set
- strengthening science cases

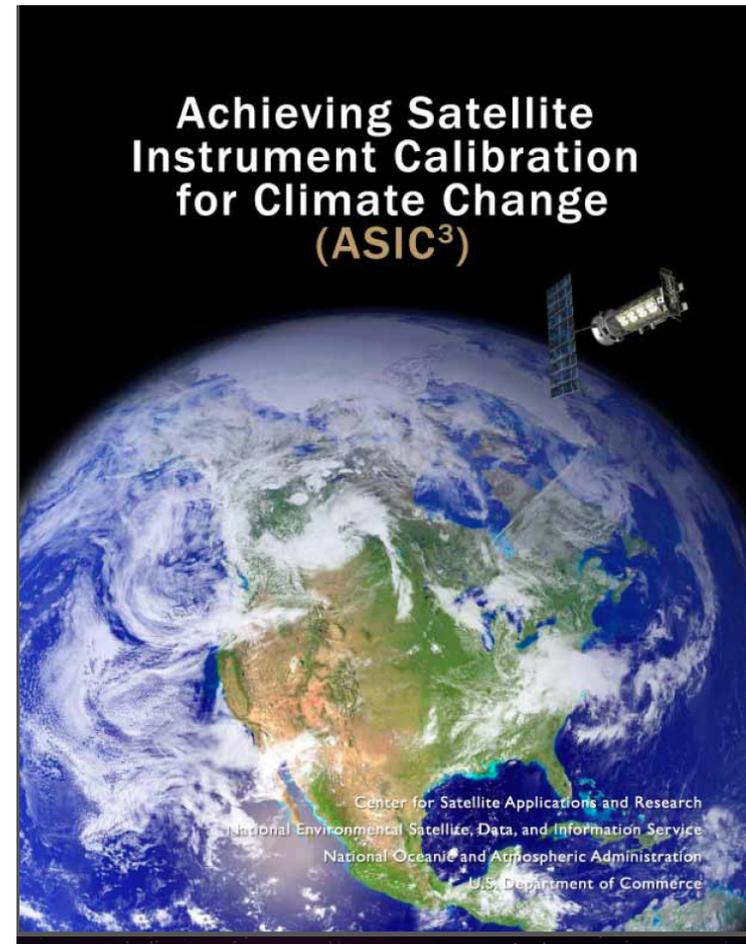
# Going forward

If I were ruler of the universe

- establish a common reference set of standards
- measure/improve absolute references (SI traceable) across the EM spectrum
- extra terrestrial reference sources
- improve cross calibration
- establish a common lexicon
  - absolute vs. relative
  - statistics

# Astropeeps see, Astropeeps do?

- <http://www.sdl.usu.edu/conferences/asic3/>  
“The Workshop on Achieving Satellite Instrument Calibration for Climate Change (ASIC3) was organized to formulate a national roadmap for developing the calibration systems to monitor long-term global climate change”



You can't always get  
what you want,  
But If you try sometime,  
you just might find you  
get what you need

- Calibration for 21<sup>st</sup>  
Century Astrophysics



# Working Groups

- Common OIR Standard Stars
- Reference Source Satellite