Report of Breakout Session on

Stellar Physics

1) Science Priorities:

- Precision fundamental parameters at sub-percent accuracy (visible & IR)
- Interacting binaries: image (disks/jets) (visible & IR)
- Dust in SN remnants, Cepheids (4-20 microns) – sub mas?
- asteroseismology + interferometry (visible)
- Snapshot imaging: e.g., interacting binaries, Wolf Rayets
- Spectral resolution needed + differential astrometry

2) Performance Requirements:

Next generation, national array:

- Imaging – don't' need big filling factors, but 12-20 apertures
  Aperture size vs. reconfigurability
- Baselines ≥ 1 km
- Sensitivity – need table of limiting fluxes for each type of target
- Spectral resolution
- Critical observing timescales, e.g., pulsation

3) Near term:

- Staffing to complete current systems!
- Big payoff in investment in AO improvements for existing facilities
- Need images now!
  e.g., spots, interacting binaries,
- Time variability requires more apertures
- More nights for Keck observations
- Visitor programs at existing facilities, with money to fund support scientists
- Fund speaker's pool to disseminate science results to non-specialists

4) Longer term:

- Go to space systems such as SI in UV for stellar activity studies