

## SLR2000 Status: February 2005

- Work continues on closed-loop tracking. Attempts at closing the loop during several LEO passes have uncovered several small software problems with the signal processing interface to the quadrant bias calculation. These problems have been corrected.
- Visual tracks of satellites indicate that the Point Ahead using the Risley Prisms is working properly in both direction and magnitude.
- Software to control the rest of the transceiver optics is in development and will continue throughout the next several months.
- The star camera failed and was replaced with our only spare. A new optical alignment was performed to boresight the transmit with the receiver FOV using photon counting techniques on stars in the receiver. The detector quadrants are now receiving signal counts more uniformly.
- Near term goals – complete major technical challenges:
  - move Risley Prism driver into operational software (almost complete).
  - get closed-loop tracking working for satellites (very close).
  - demonstrate LAGEOS ranging.
- Long term goals:
  - get ranging data quality to operational level.
  - complete decision making software to make the station semi-automated.