

## Gain Monitoring System: Choices

- (1) Fiber-based system vs (2) light distribution plate
- Cost (1) Fibers:  $> \$100,000k$ , (2) Plate:  $< \$1k$
- (1) Laser-based system vs LED based-system
- (1) Laser: (administrative) safety issues, electronic interference
- (2) LED: might be simpler and as good or better

## LED System: Tests

- Radiation resistance of light-distribution plate: could use better but more expensive Plexiglas, (ca. \$1,000 UVT plate vs \$300 UVA plate)
- Uniformity of light distribution: Lubomir + Andrey
- Absolute light calibration:
  - (1) Temperature dependence (temperature stabilized enclosure + Si PIN photodiode)
  - (2) Radiation degradation (use calibrated light source + reference PMT and/or Si photodiode, inside ECal)