

- Purpose
 - Test the effectiveness of the GEO-CERES normalization
- GEO imager data
 - Poorly calibrated
 - GEO radiances are calibrated against MODIS
 - Calibration accuracy VIS 3-5% and ~1% IR
- Method
 - Modify the GEO radiances by $\pm 5\%$
 - Reprocess GEO cloud analysis and rerun interpolation
 - Compare monthly mean fluxes to assess impact

Fig. 6b: Change in Total-Sky TOA SW Flux, July 2002

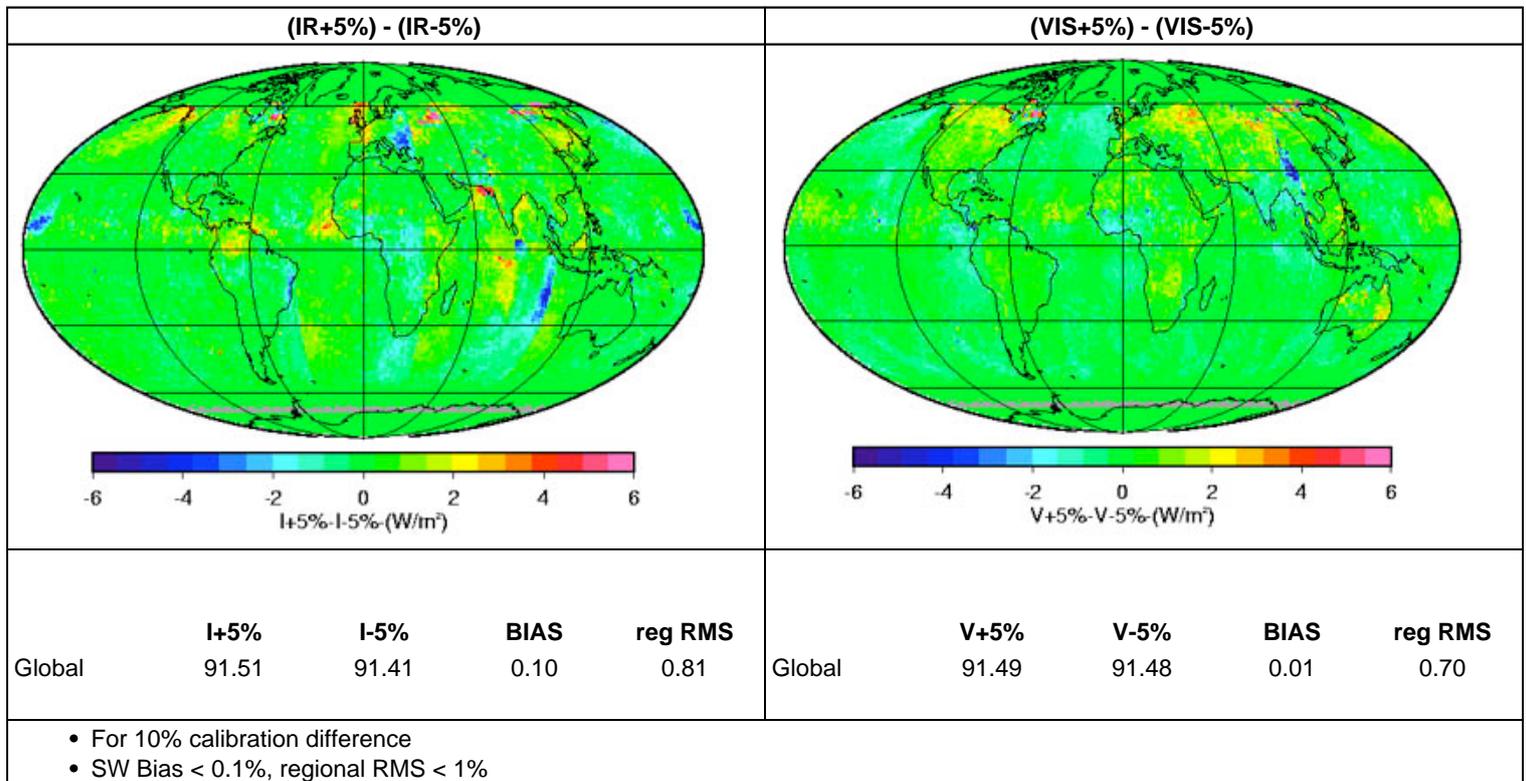


Fig. 6c: Change in Total-Sky TOA LW Flux, July 2002

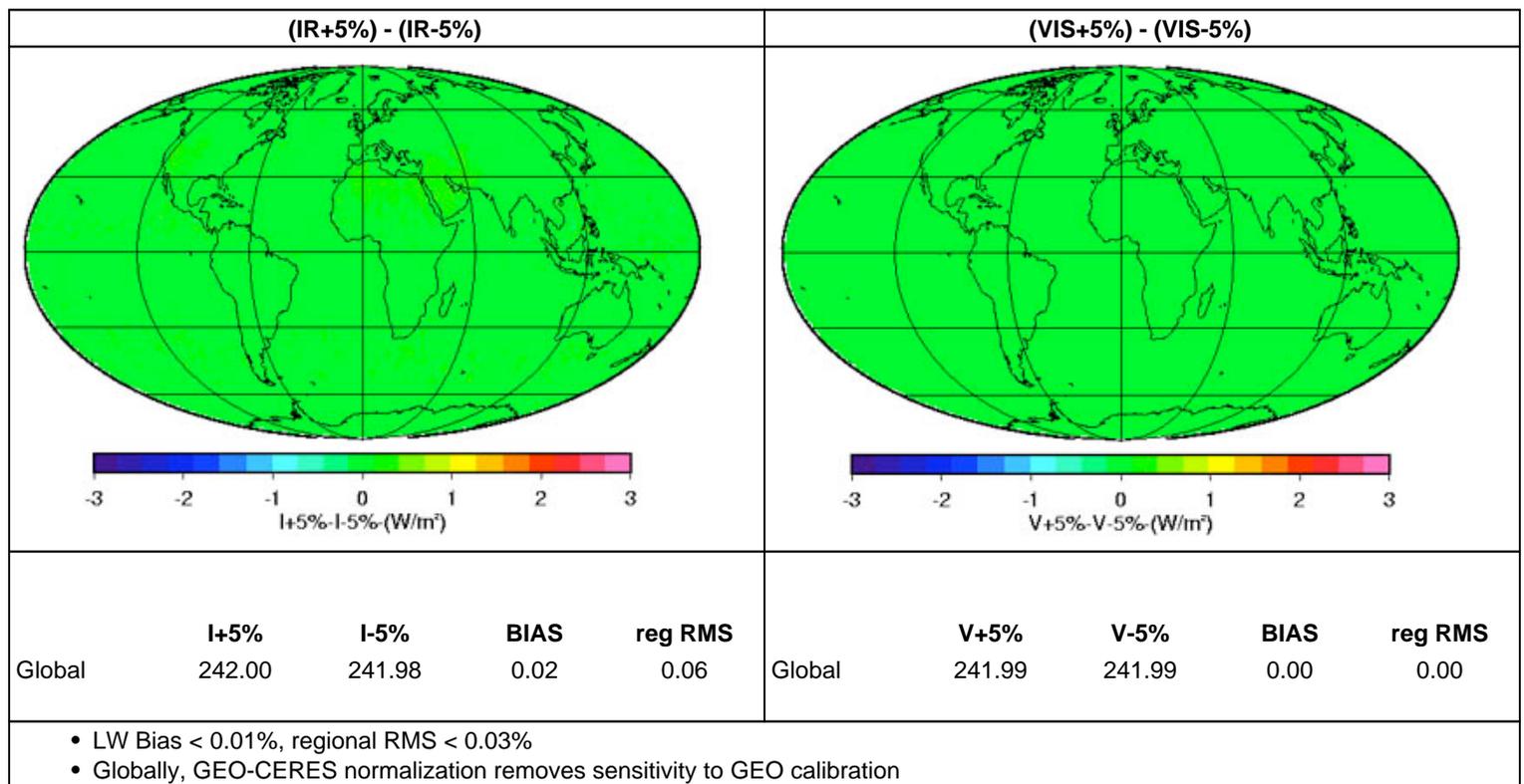


Fig. 6d: Change in Clear-Sky TOA SW Flux, July 2002

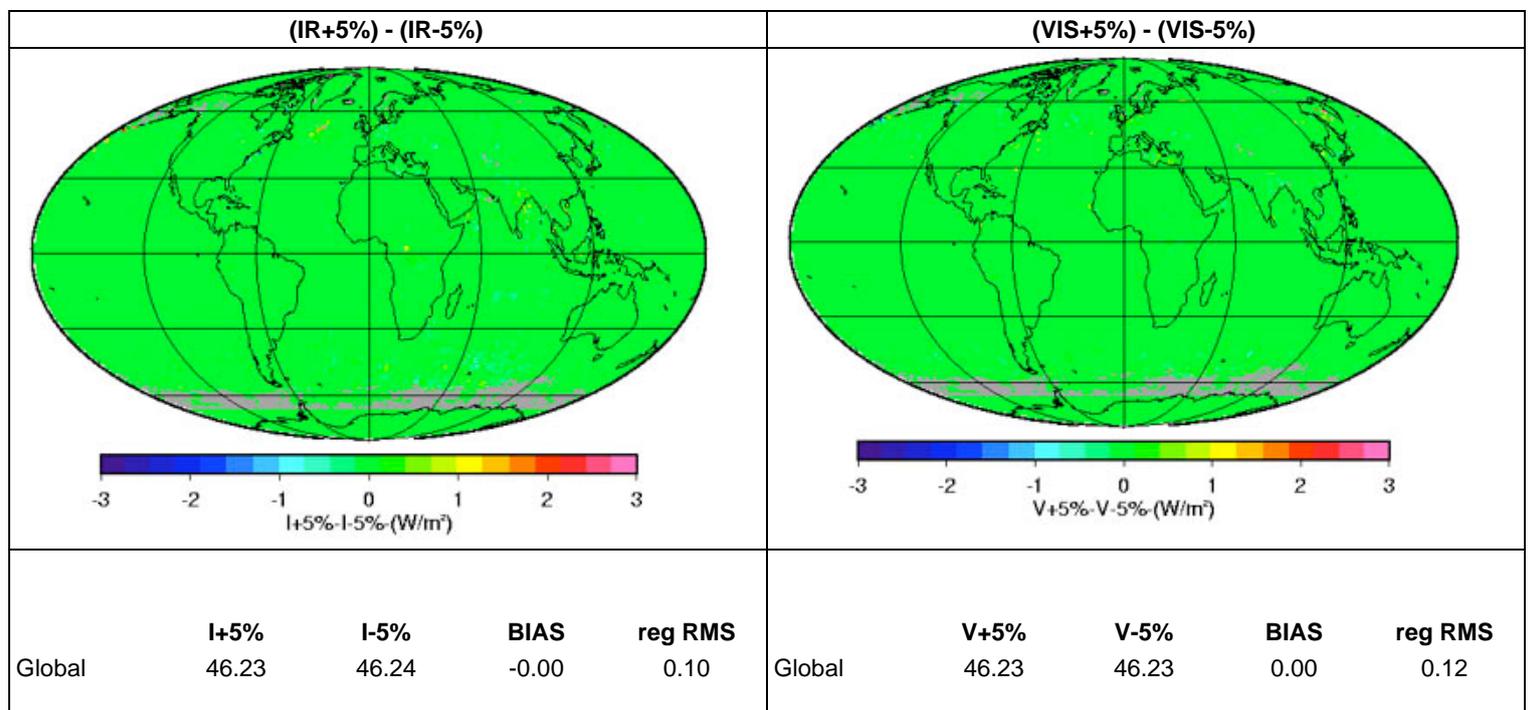
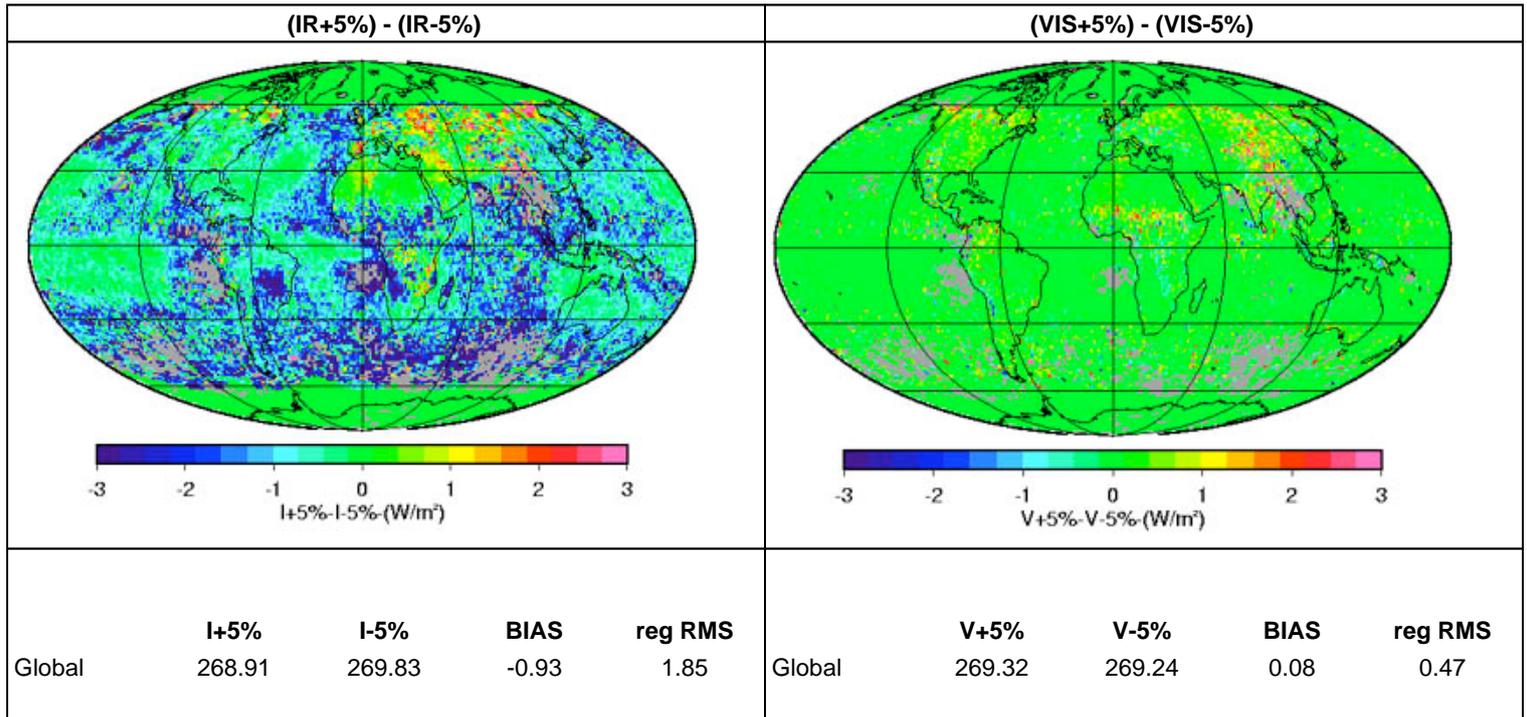


Fig. 6e: Change in Clear-Sky TOA LW Flux, July 2002



Summary of GEO calibration sensitivity study

- Total-sky flux sensitivity is <0.1% (<1% rms)
 - Except for clear-sky LW bias in IR 0.35%
 - LW and clear-sky SW bias and RMS differences are negligible
 - Plotted differences are for 10% change in calibration
 - SW calibration uncertainty is within 3-5%
 - LW calibration uncertainty is within 1-2%
- Regional differences can exceed 2% in limited areas
- Clear-sky fluxes show effect from changes in scene ID
 - IR+5% had the only statistically significant bias
- For global mean flux, the GEO-CERES normalization removes sensitivity to GEO calibration

