

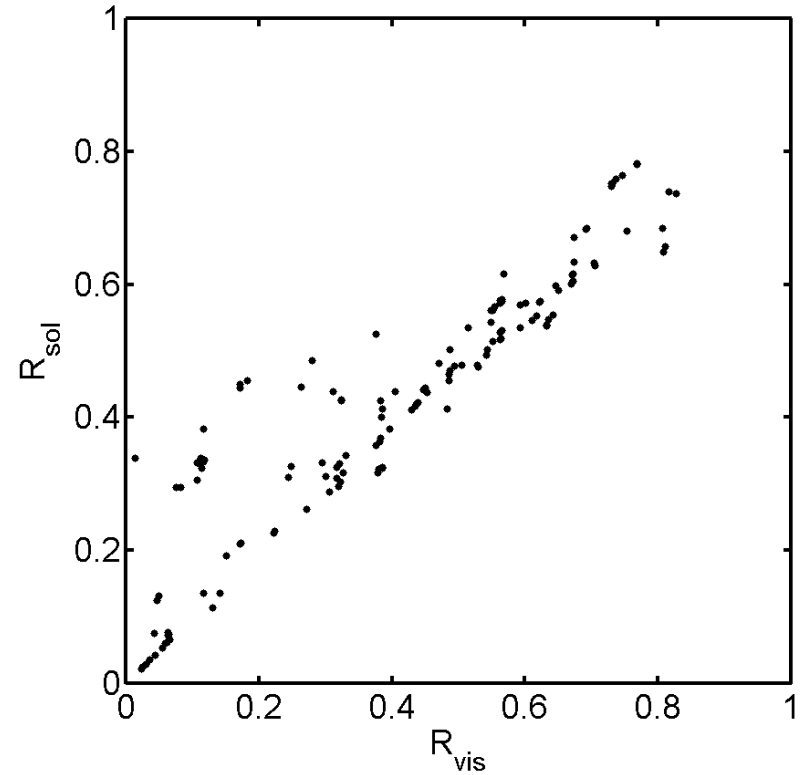
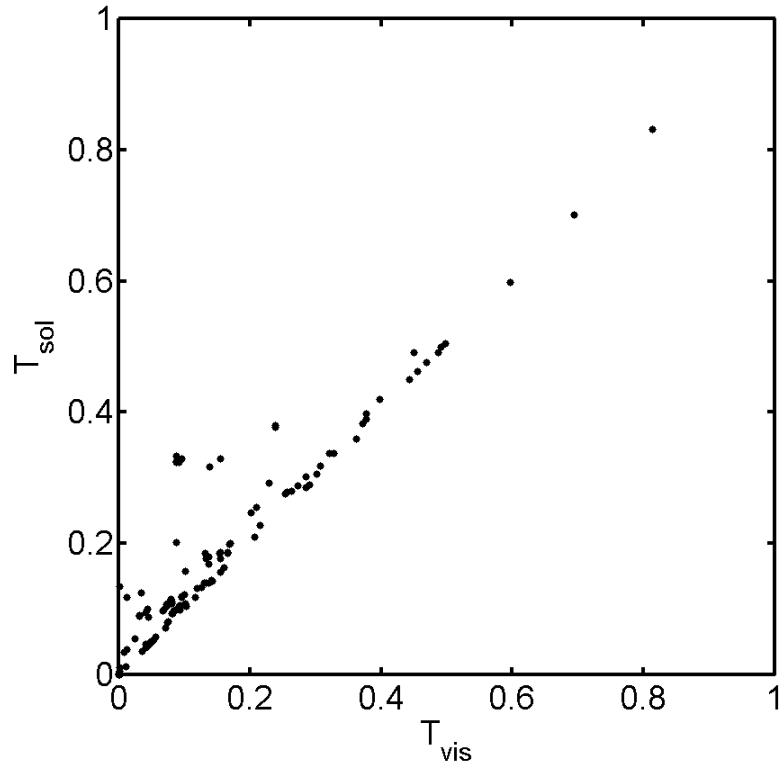
Status of shade screen characterization at LBNL

Jacob C. Jonsson

Main directions

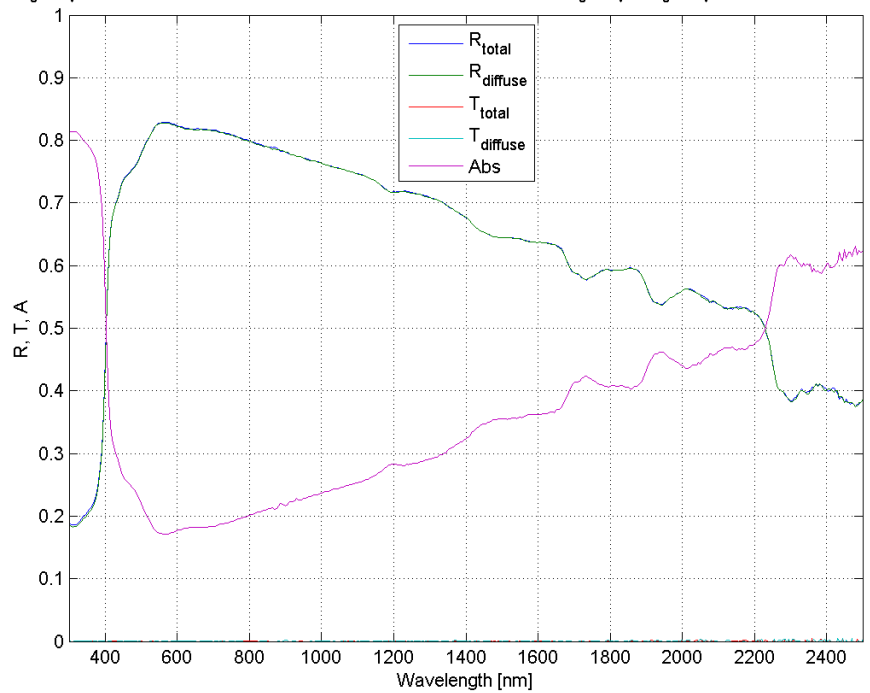
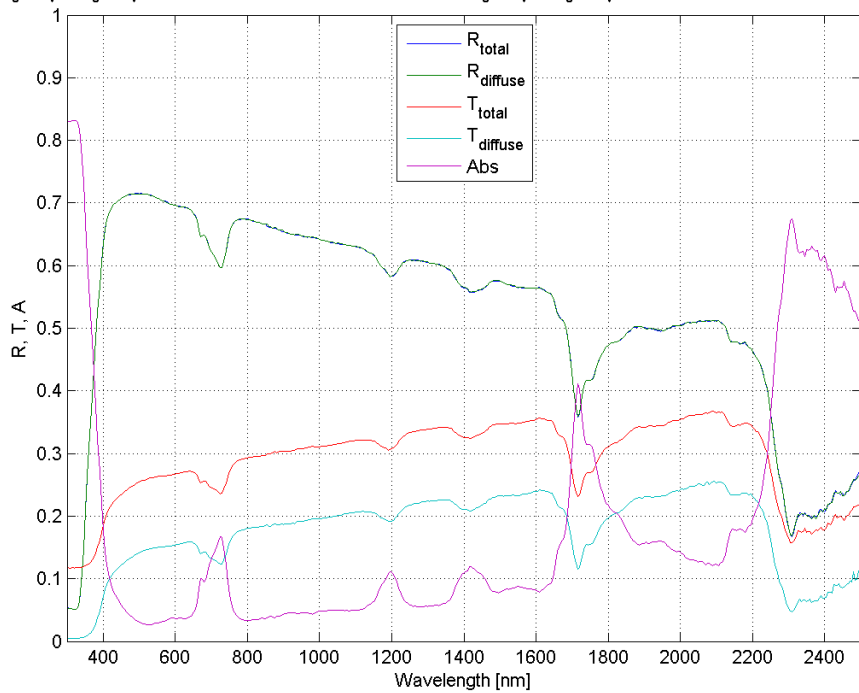
- Analysis of the first 100 submitted samples
 - Comparison with Window 6 model
 - Angle of incidence models
 - Grouping
- Radiosity model for light-transfer in Honeycomb shades
 - Raytracing to study the Lambertian approximation used in radiosity models

General overview of shade screen data



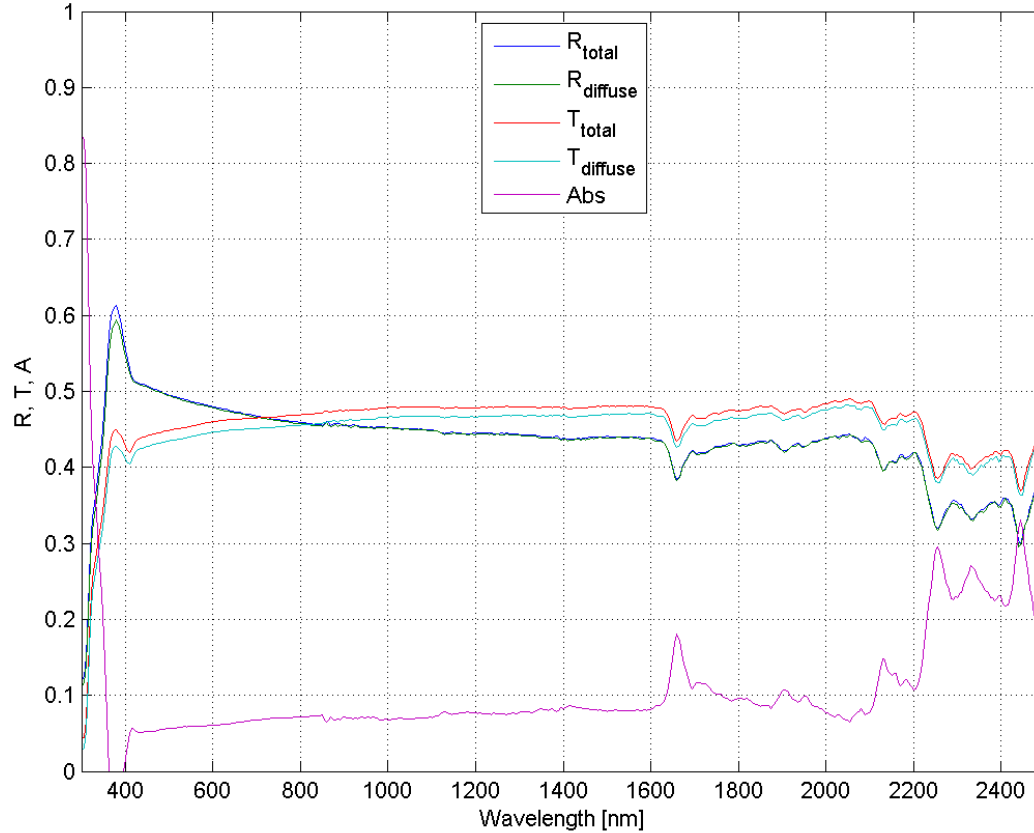
Can we group the shades?

$TT_s|TT_v|TD_s|TD_v = 0.27949|0.26238||0.16581|0.14945$ $RT_s|RT_v|RD_s|RD_v = 0.63263|0.70456||0.63271|0.7$ $TT_s|TT_v|TD_s|TD_v = -3.9808e-005|7.0914e-006||4.8858e-006|-2.0563e-006$ $RT_s|RT_v|RD_s|RD_v = 0.7393|0.81598||0.73842|0.$



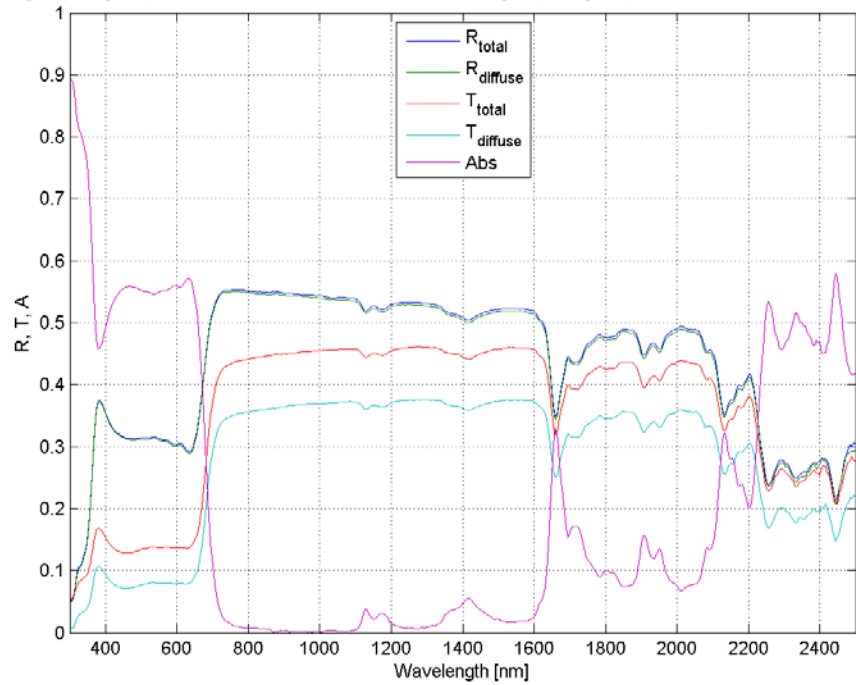
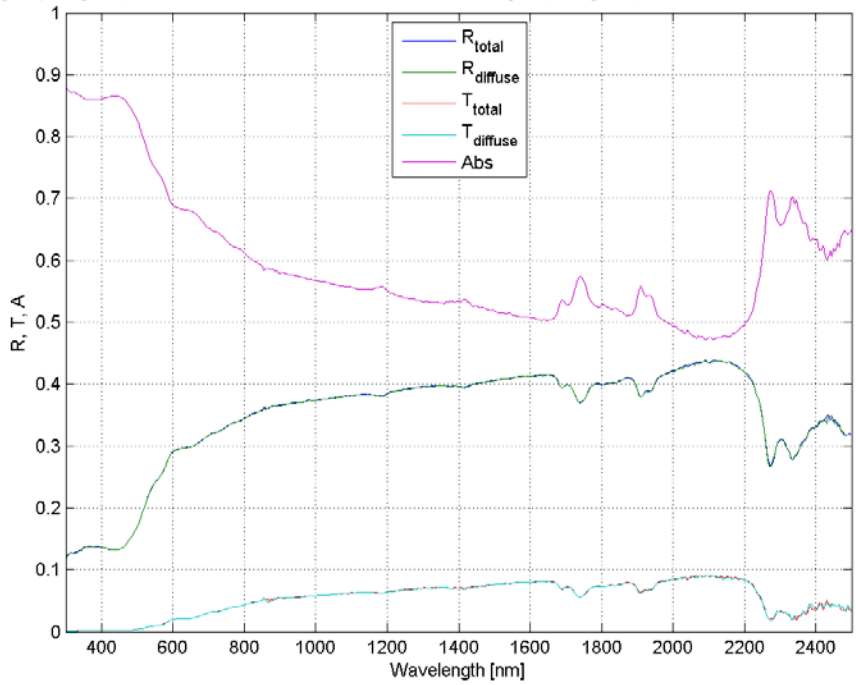
Fluorescence

6301 $TT_s|TT_v||TD_s|TD_v = 0.46252|0.45511||0.44945|0.44122$ $RT_s|RT_v||RD_s|RD_v = 0.46526|0.48594||0.46333|0.48444$ $A_s|$

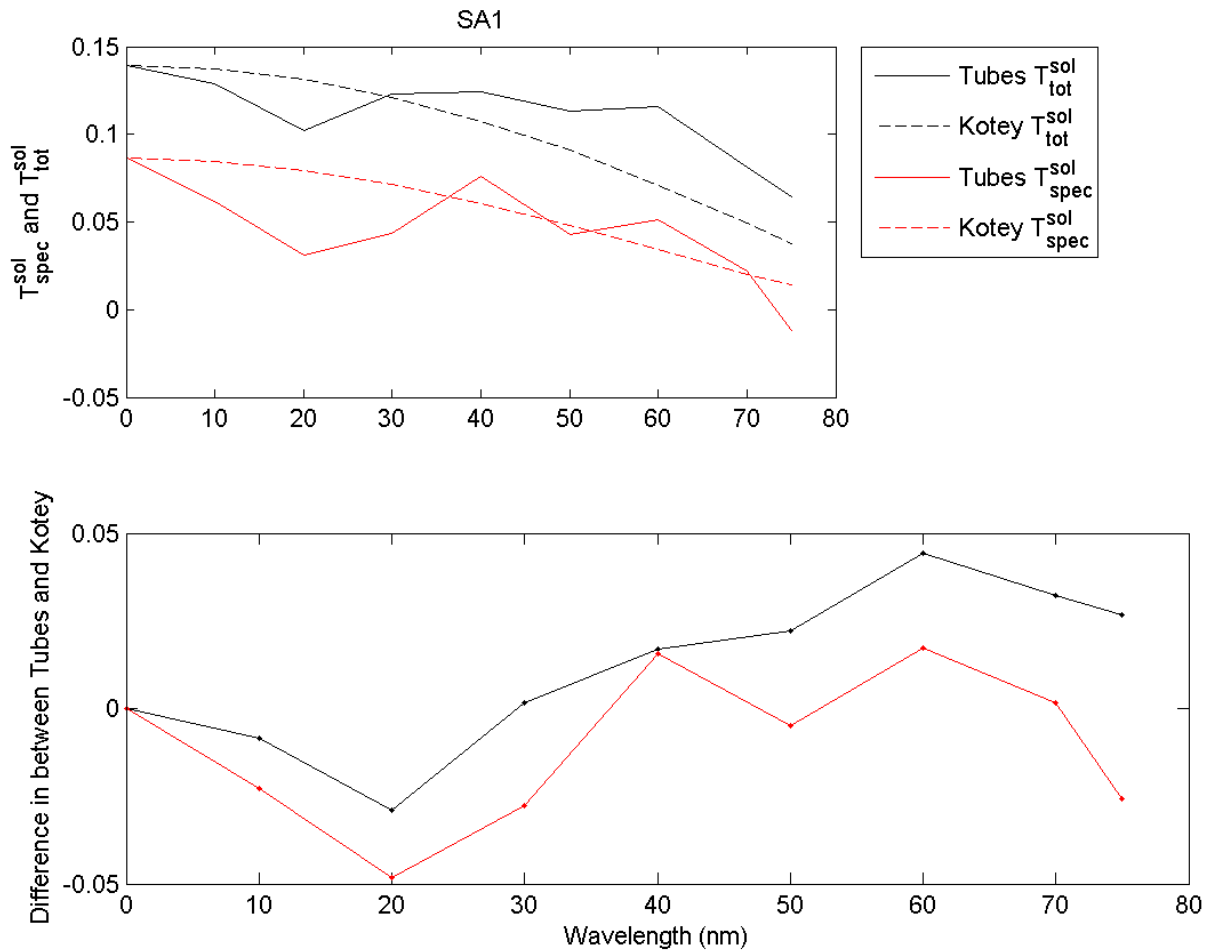


Visual blinds

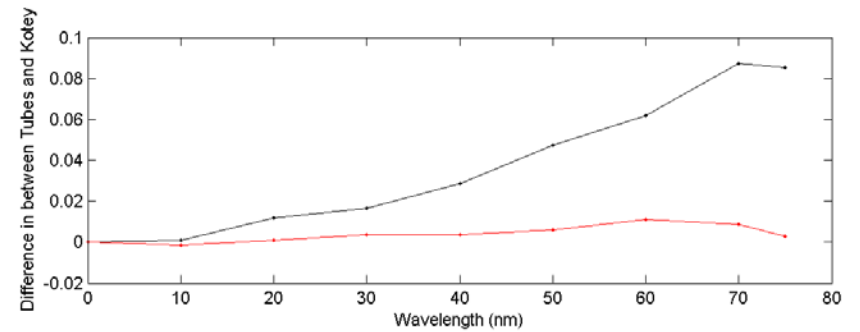
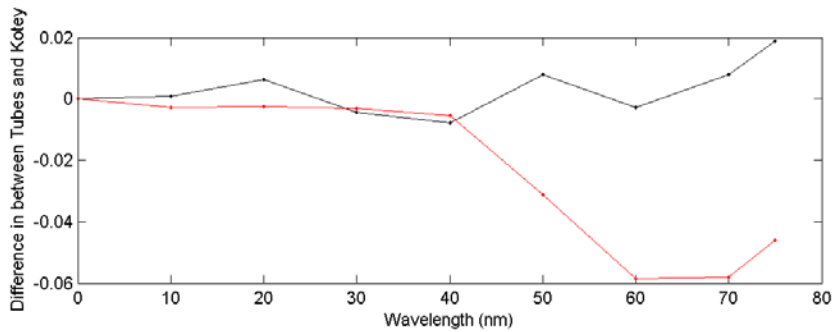
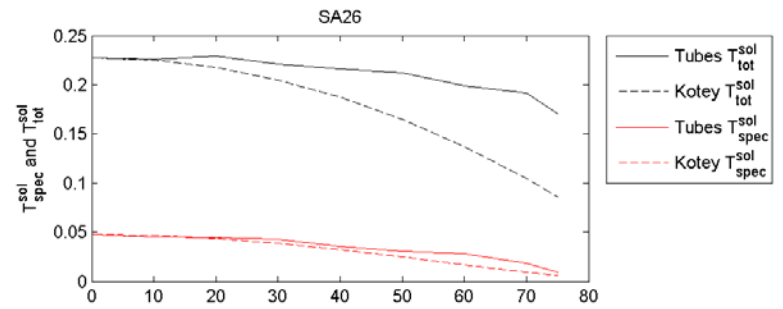
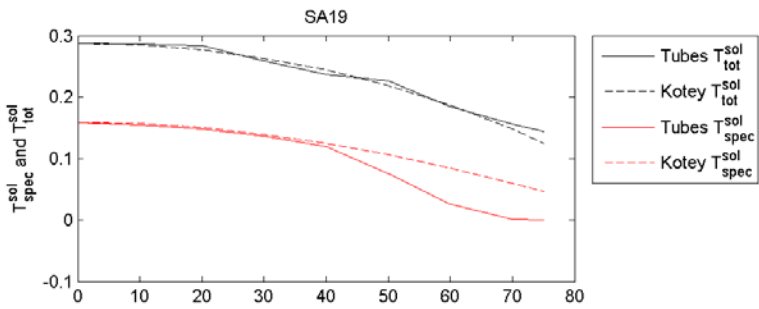
$T_{s|TT_v}|TD_s|TD_v = 0.037974|0.011642||0.037817|0.011579$ $RT_s|RT_v||RD_s|RD_v = 0.30936|0.24337||0.30904|0.24337$ $TT_s|TT_v}|TD_s|TD_v = 0.31664|0.13788||0.24334|0.080052$ $RT_s|RT_v||RD_s|RD_v = 0.43896|0.31066||0.43599|0.3084$ $A_s|A_v|A = 0.037974|0.011642||0.037817|0.011579$



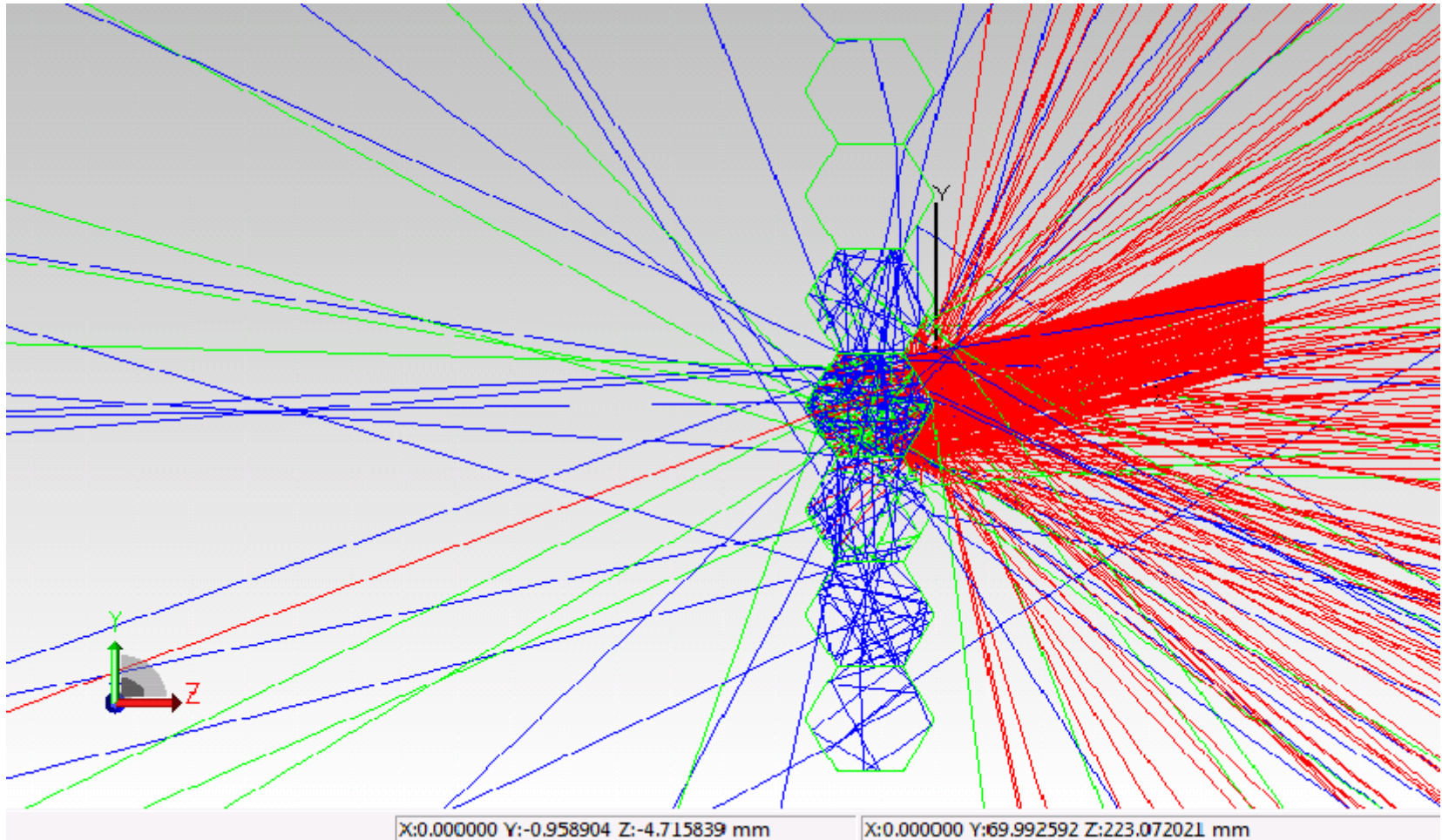
Angle of incidence



More angle-tubes



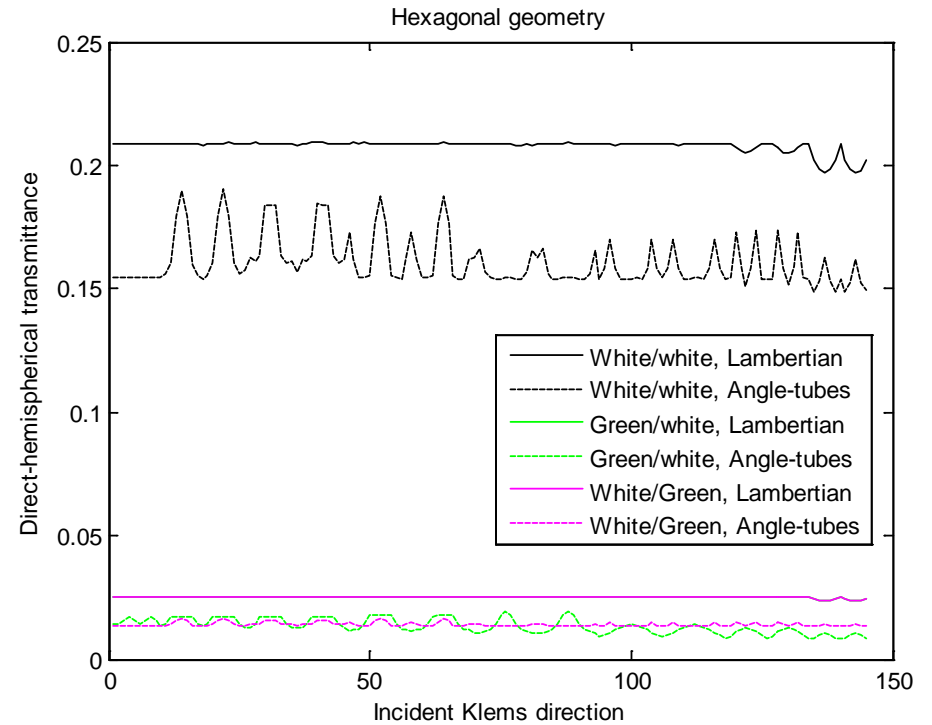
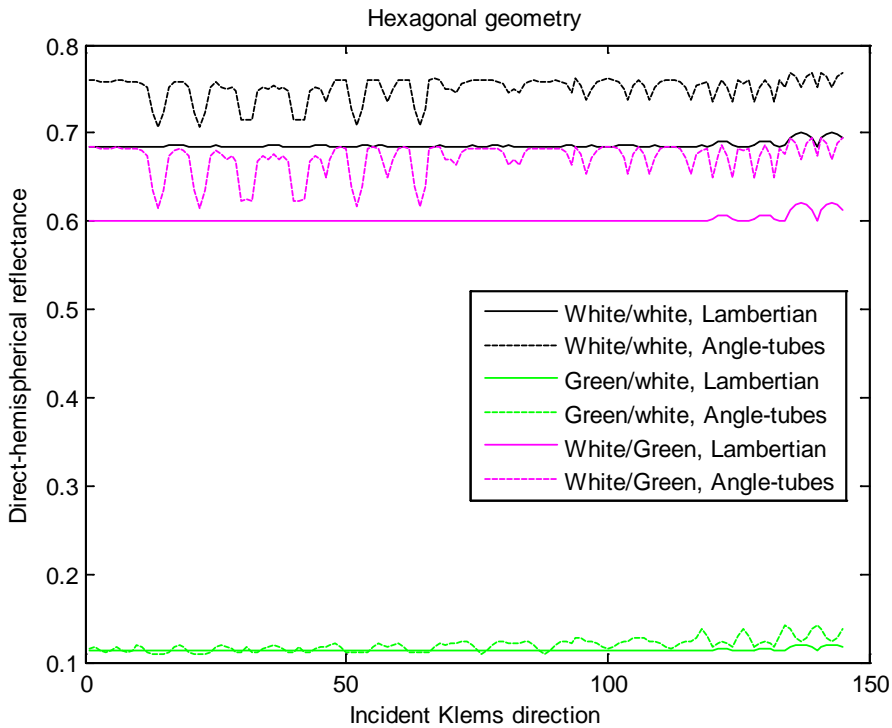
Honeycombs



Aiming for radiosity model

- Raytracing used to see effect of different approximations
- Start with a scattering model that varies with both outgoing and incident angle
- Outgoing reduced to specular+Lambertian
- Outgoing reduced to Lambertian
- Incident reduced to Lambertian

Early results



ILC preparation

