

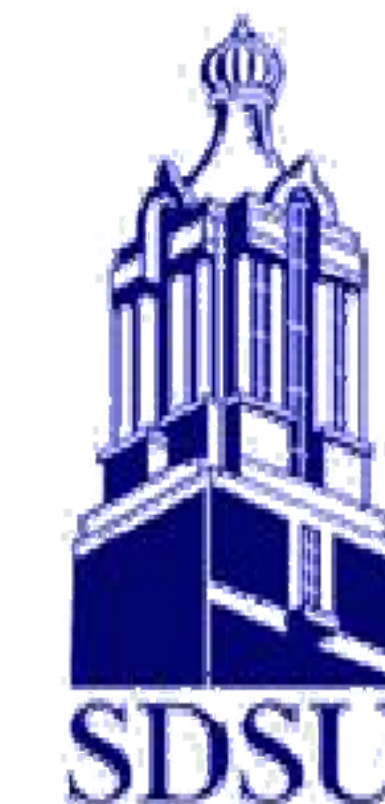
Radiometric Characterization Results for the IKONOS Sensor

Stennis Space Center

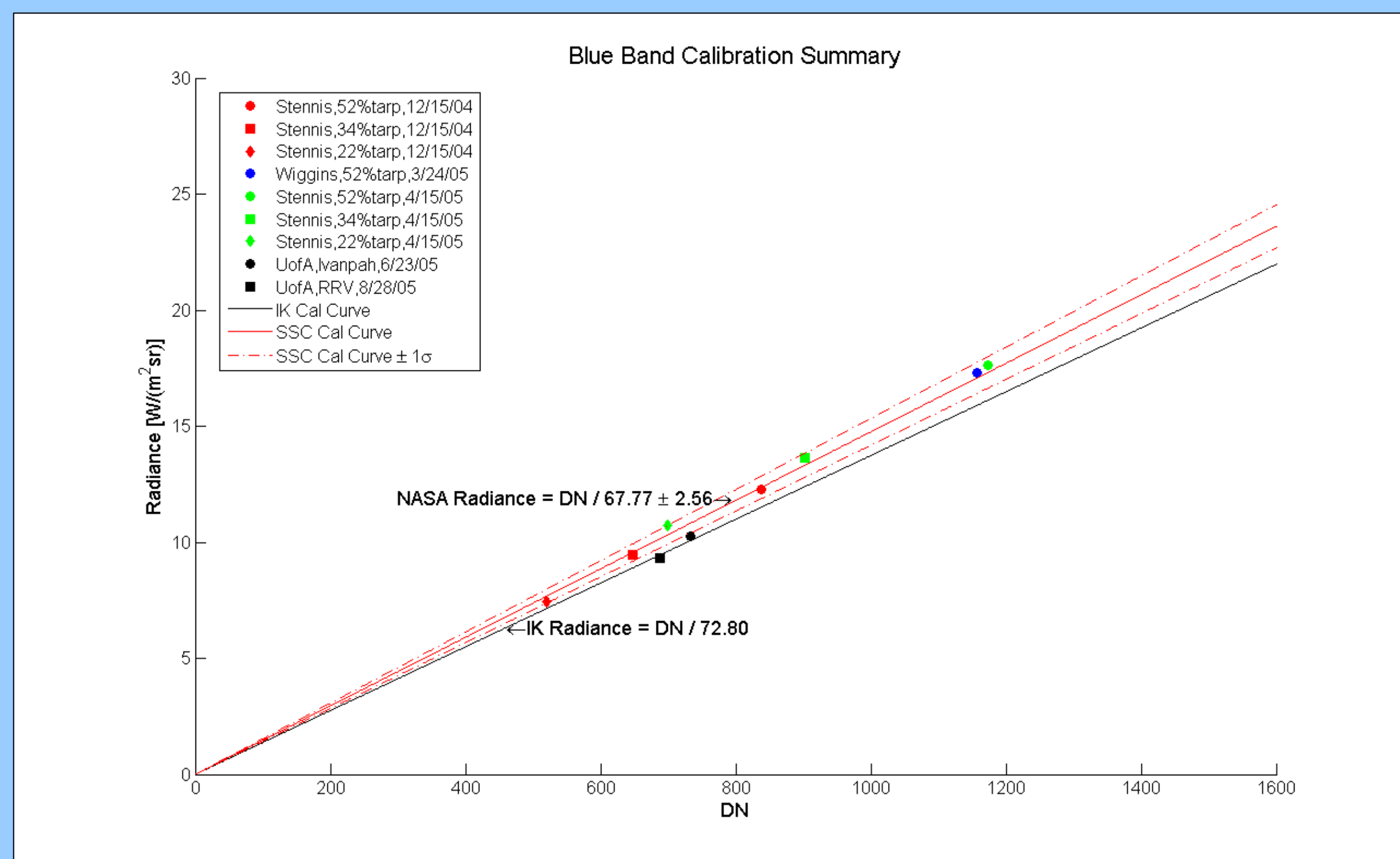
Kara Holekamp, Science Systems and Applications, Inc., Stennis Space Center, MS

David Aaron, South Dakota State University Satellite Calibration Group & Image Processing Laboratory, Brookings, SD

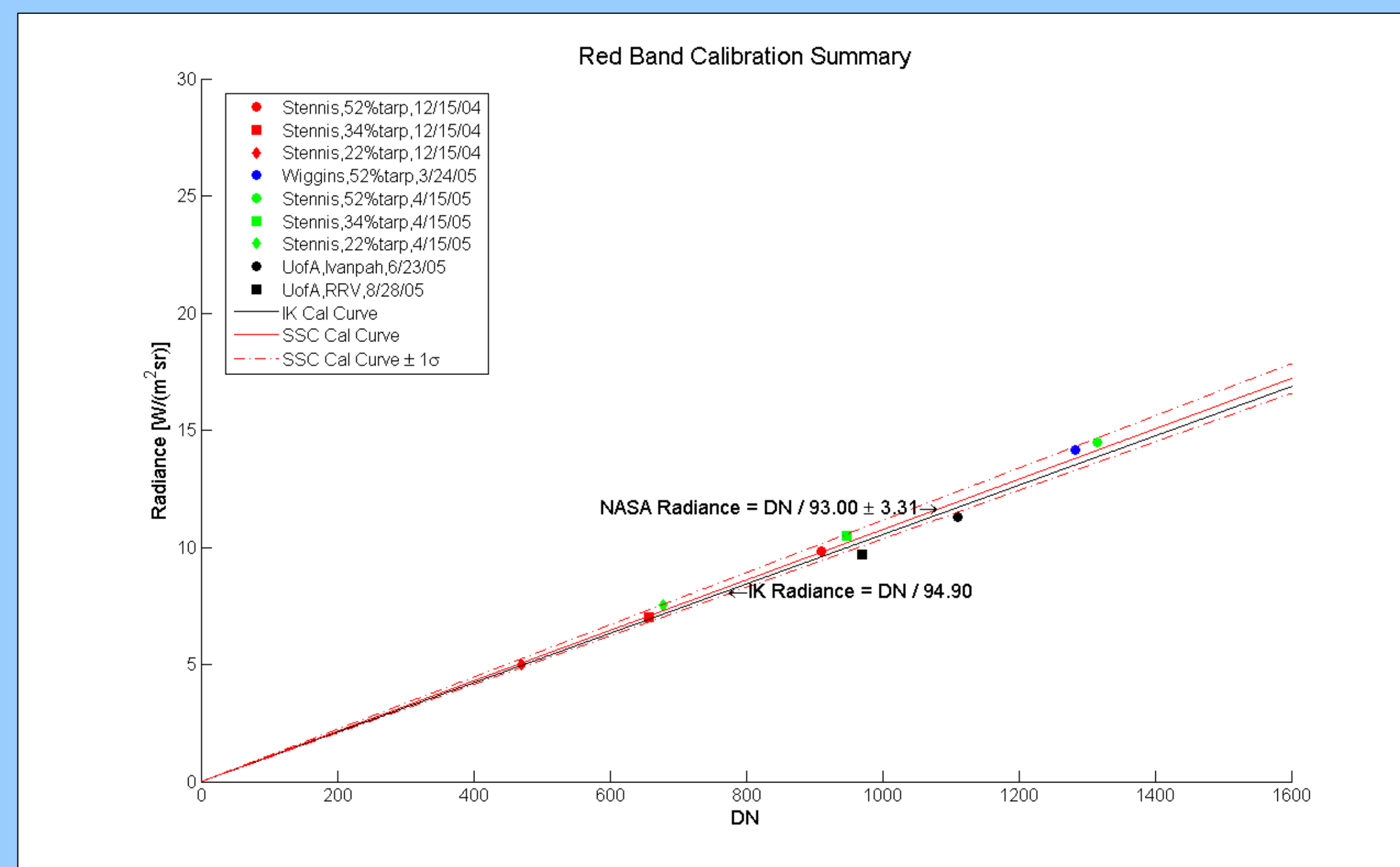
Kurtis Thome, University of Arizona Remote Sensing Group, Tucson, AZ



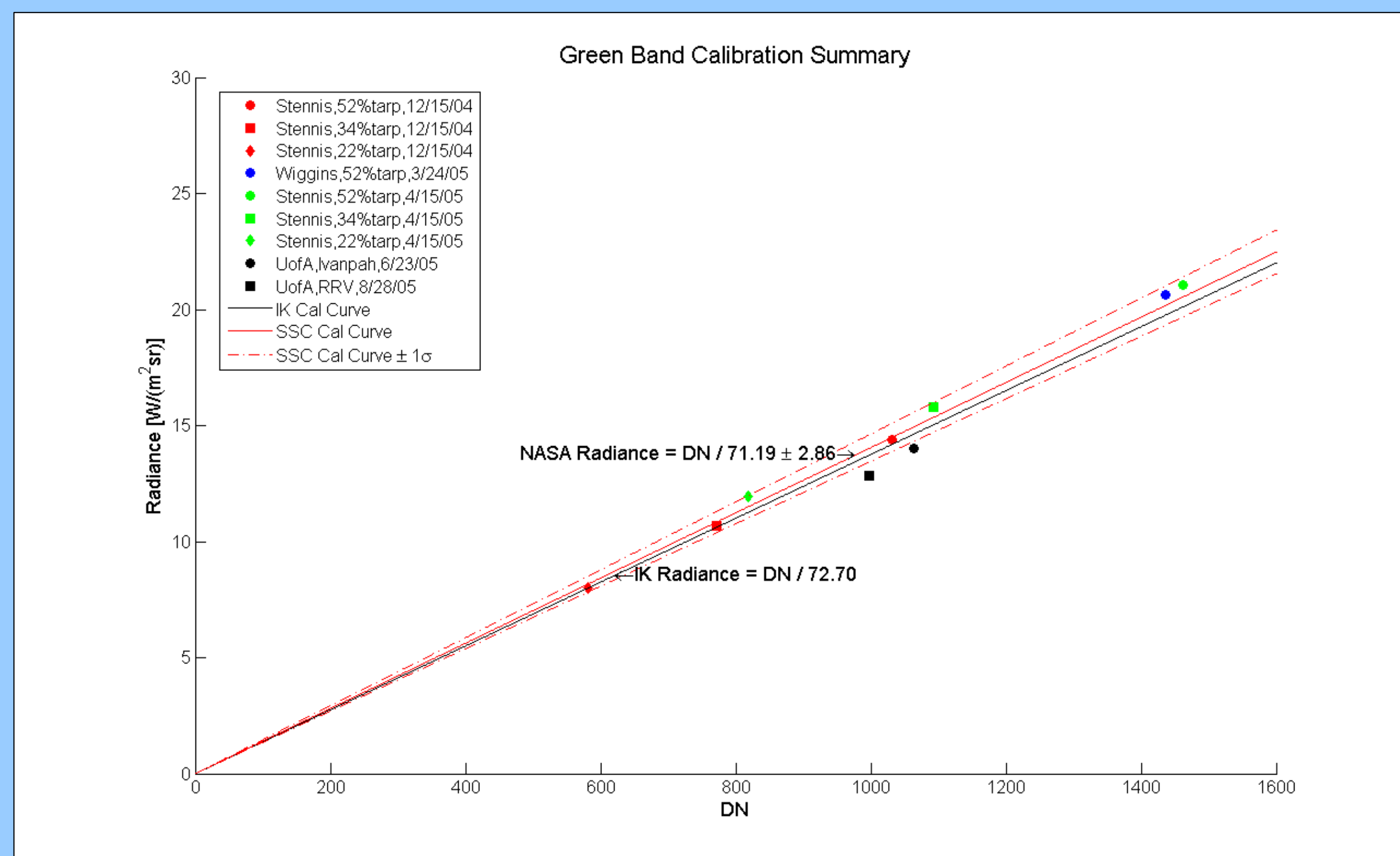
2004/2005 IKONOS Blue Band



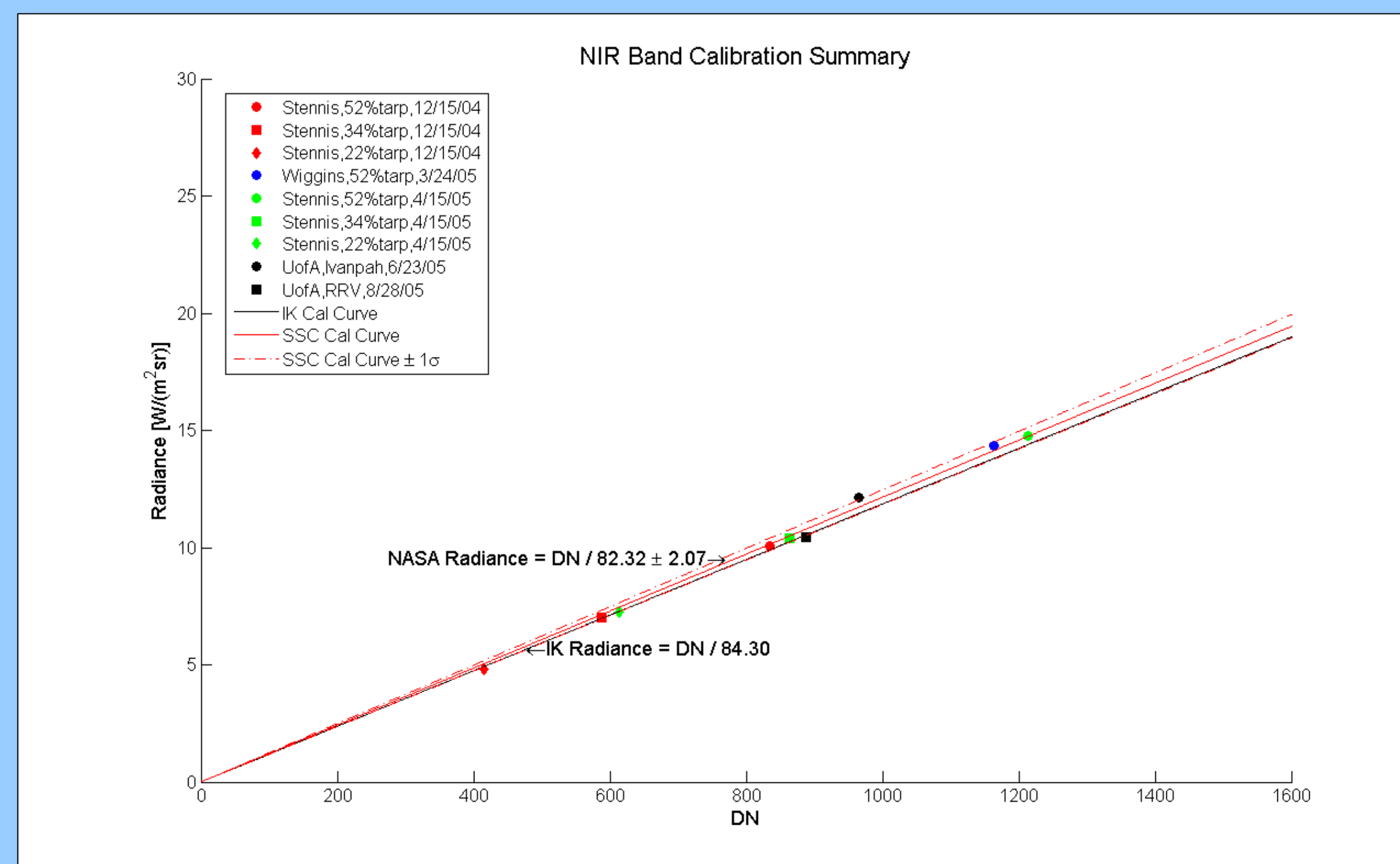
2004/2005 IKONOS Red Band



2004/2005 IKONOS Green Band



2004/2005 IKONOS NIR Band



2004/2005 IKONOS Results

	Bandwidth FWHM (μm)	NASA Team Estimate [DN/(W/m ² sr)]	IKONOS Provided [DN/(W/m ² sr)]	Percent Difference
1	0.450 - 0.520	67.8 \pm 2.6	72.8	-7.4%
2	0.510 - 0.600	71.2 \pm 2.9	72.7	-2.1%
3	0.630 - 0.700	93.0 \pm 3.3	94.9	-2.0%
4	0.760 - 0.850	82.3 \pm 2.1	84.3	-2.4%

Percent difference is calculated by $(1 - \text{IKONOS}/\text{NASA Mean})$

IKONOS Temporal Results

Band	NASA Estimate 2000*	NASA Estimate 2000 Scaled	NASA Estimate 2001	NASA Estimate 2002	NASA Estimate 2004/2005
Blue	64.2 \pm 4.3	73.9 \pm 4.9	73.2 \pm 4.7	71.0 \pm 4.7	67.8 \pm 2.6
Green	65.4 \pm 4.2	73.3 \pm 4.7	76.6 \pm 3.8	73.4 \pm 5.0	71.2 \pm 2.9
Red	88.1 \pm 7.0	99.5 \pm 7.9	101.8 \pm 5.3	97.5 \pm 7.7	93.0 \pm 3.3
NIR	73.7 \pm 3.8	83.3 \pm 4.3	85.9 \pm 4.2	82.7 \pm 5.8	82.3 \pm 2.1