

# Radiometric Characterization Results for the QuickBird Sensor

Stennis Space Center

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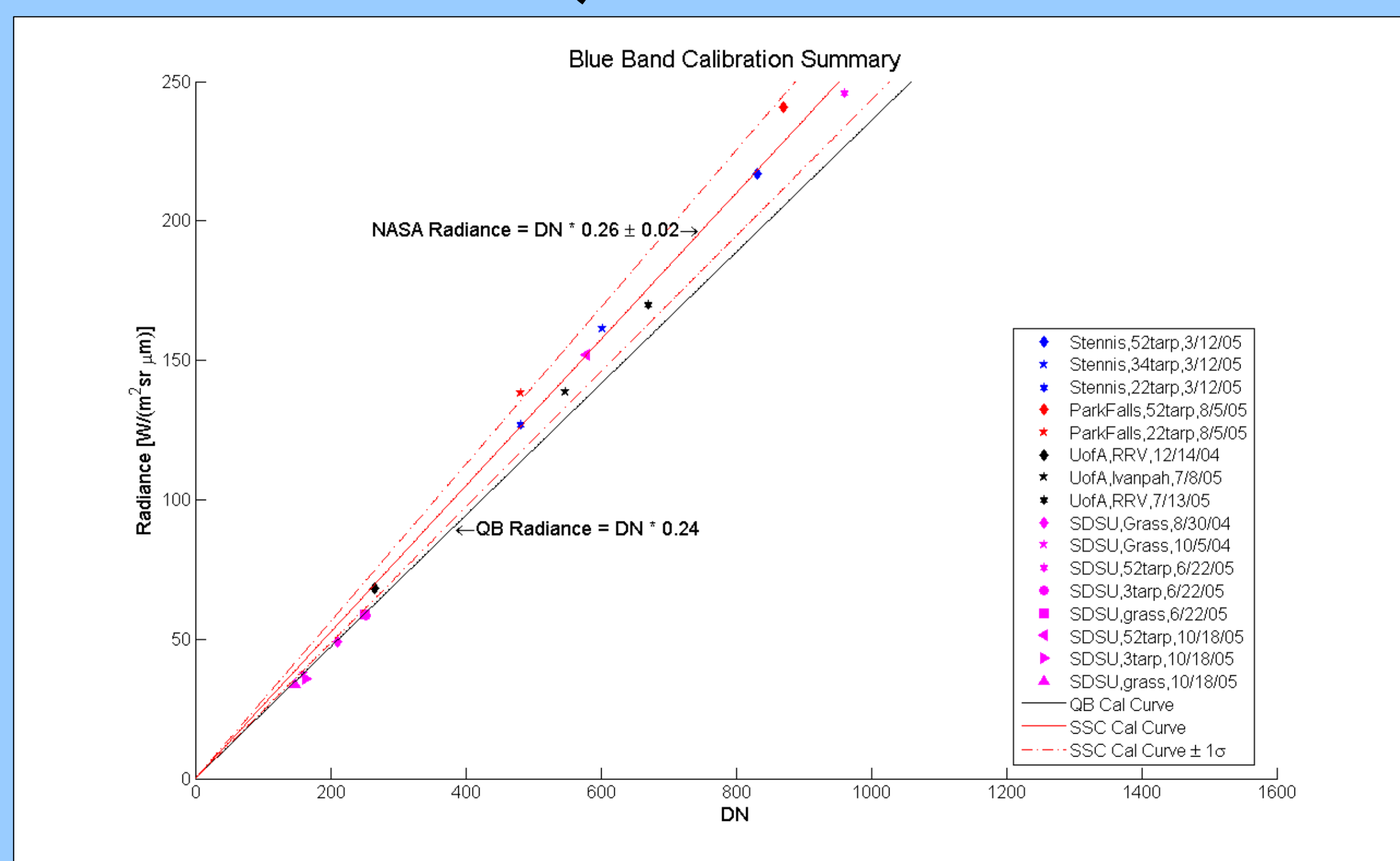
David Aaron, South Dakota State University Satellite Calibration Group & Image Processing Laboratory, Brookings, SD

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

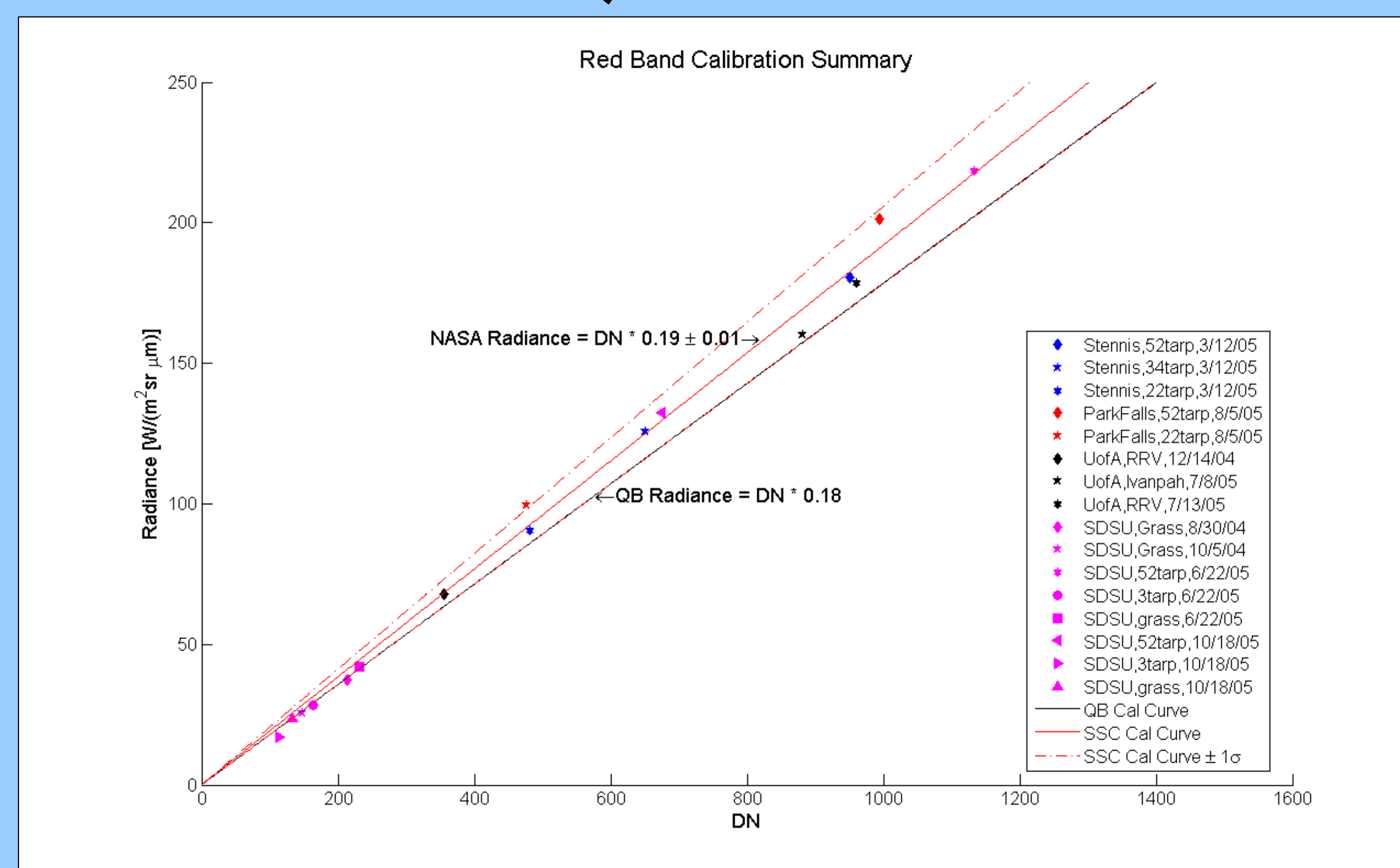
THE UNIVERSITY OF ARIZONA



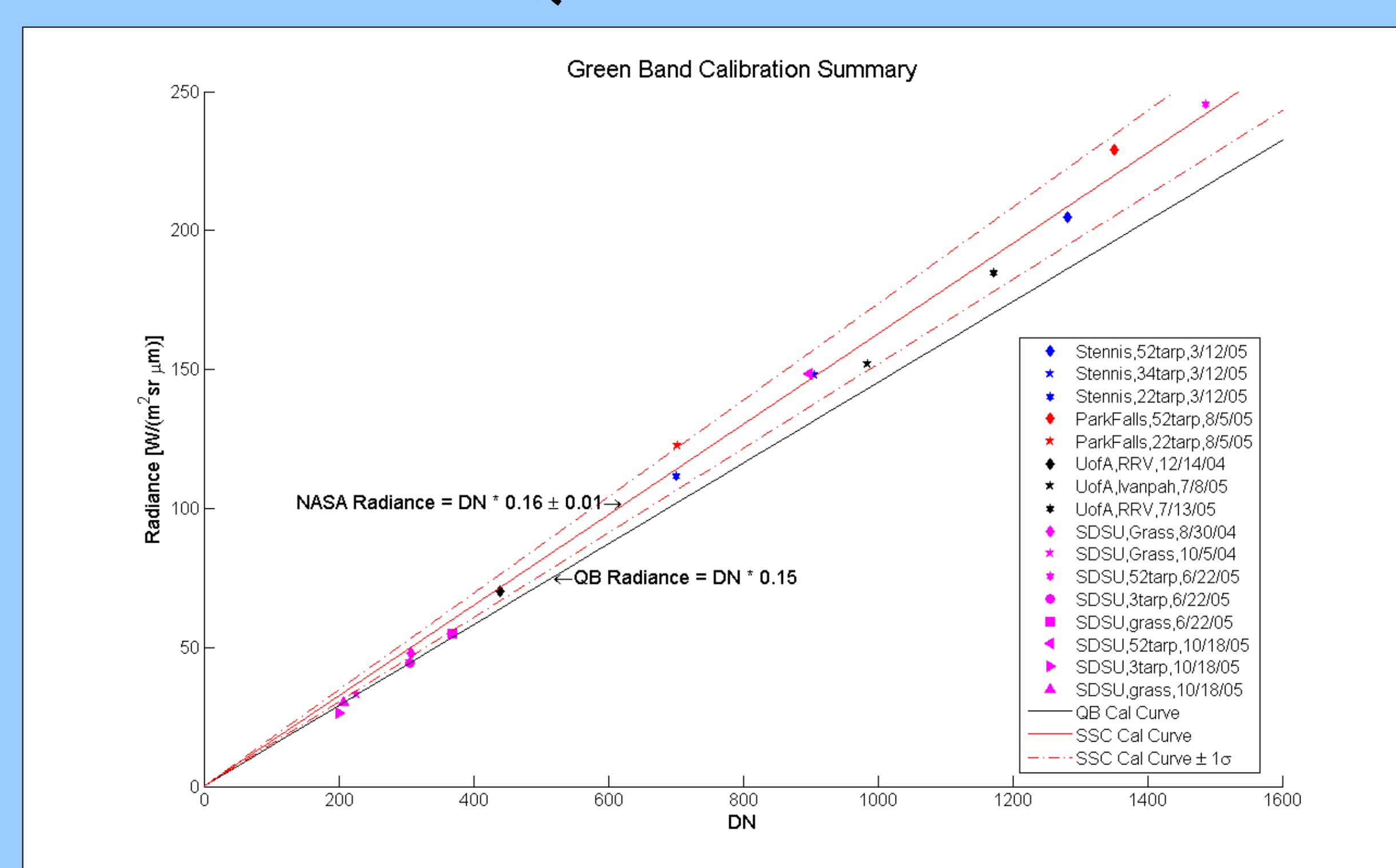
## 2004/2005 QuickBird Blue Band



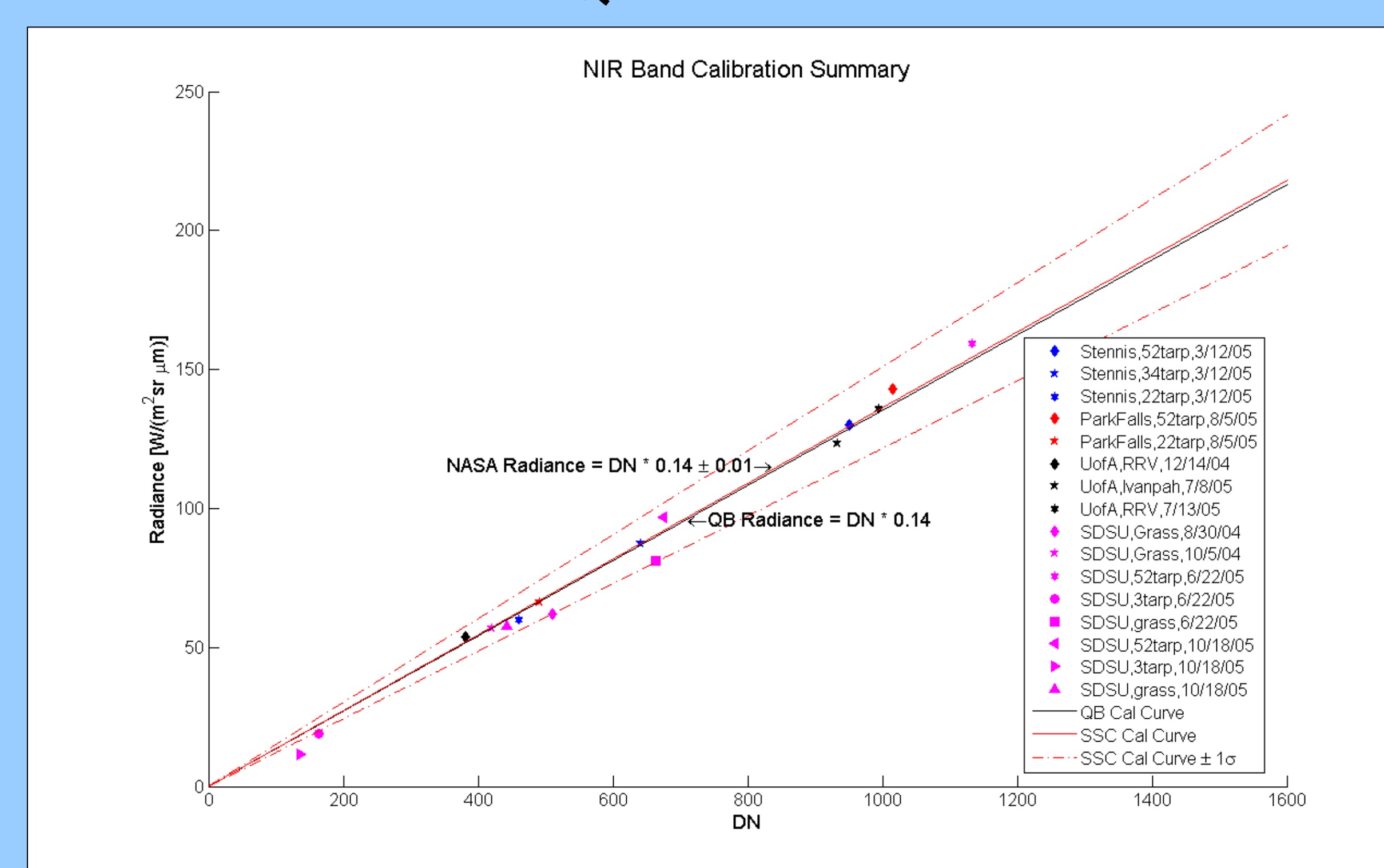
## 2004/2005 QuickBird Red Band



## 2004/2005 QuickBird Green Band



## 2004/2005 QuickBird NIR Band



## 2004/2005 QuickBird Results

	Bandwidth FWHM (μm)	NASA Team Estimate (W/m <sup>2</sup> sr μm DN)	QuickBird Provided (W/m <sup>2</sup> sr μm DN)	Percent Difference
1	0.445 - 0.510	0.26 ± 0.02	0.236	9.2%
2	0.500 - 0.595	0.16 ± 0.01	0.145	9.4%
3	0.620 - 0.690	0.19 ± 0.01	0.179	5.8%
4	0.755 - 0.875	0.14 ± 0.01	0.135	3.6%

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

## QuickBird Temporal Results

Band	NASA Estimate 2003	NASA Estimate 2004	NASA Estimate 2004/2005
Blue	0.26 ± 0.01	0.26 ± 0.03	0.26 ± 0.02
Green	0.16 ± 0.01	0.16 ± 0.02	0.16 ± 0.01
Red	0.19 ± 0.01	0.19 ± 0.02	0.19 ± 0.01
NIR	0.14 ± 0.02	0.13 ± 0.02	0.14 ± 0.01