Terra/Aqua band 1 and 2 calibration evaluation over Libyan desert site

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Terra band 1 and band 2
directional surface reflectance
Terra band 1 and band 2 surface reflectance normalized for BRDF at nadir view and solar zenith angle of 45 degrees.
Terra NDVI computed from band 1 and band 2 surface reflectance normalized for BRDF at nadir view and solar zenith angle of 45 degrees.
Aqua band 1 and band 2 surface reflectance normalized for BRDF at nadir view and solar zenith angle of 45 degrees.
Aqua NDVI computed from band 1 and band 2 surface reflectance normalized for BRDF at nadir view and solar zenith angle of 45 degrees.
Comparison of Terra and Aqua
NDVI

Diff=0.003

Diff=0.007
Comparison of Terra and Aqua band1

- 1.2%
- 3%
Comparison of Terra and Aqua band2

0.6%

1.6%
Band 1 smooth data

"lybiadesert-band1-terra.txt" using (1/365+2000):(2/0.386)
"lybiadesert-band1-aqua.txt" using (1/365+2000):(2/0.386)
Band 2 smooth data
Conclusion

• The systematic difference are making Aqua and Terra less and less comparable and needs to be investigated further.