Landsat-MODIS Consistency as an Operational QA of SR

Work Performed under the GFCC Project

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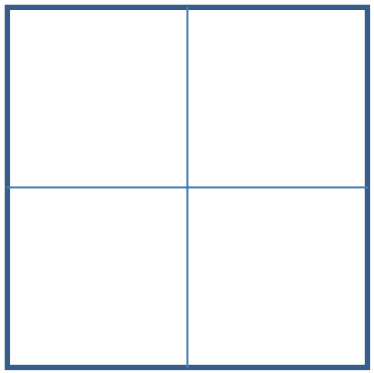
Is Every Image Free of Major Errors?

- Unknown until checked
  - Engineering errors
    - All kinds of pixel level errors
  - Processing errors
    - Incorrect calibration parameters
  - Other image level errors

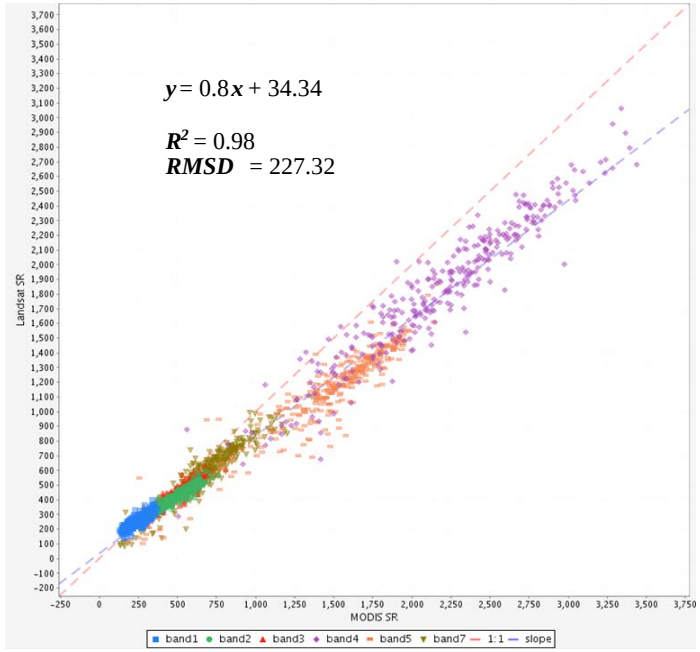
- How
  - MODIS data checked comprehensively
  - Landsat 7 SR comparable to MODIS
    - Similar spectral bands
    - Overpass time ~0.5 h difference

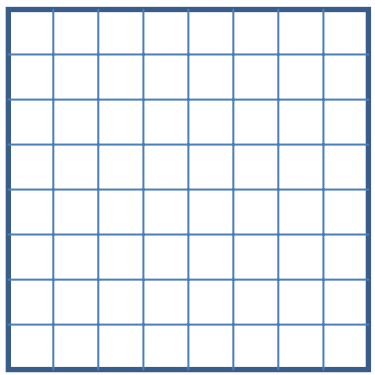
Overall Approach

MODIS SR (500 m)



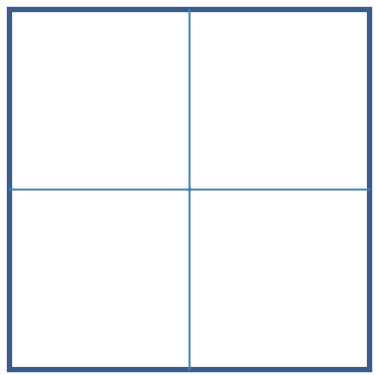
Use comparable samples:
- Homogeneous area
- No cloud





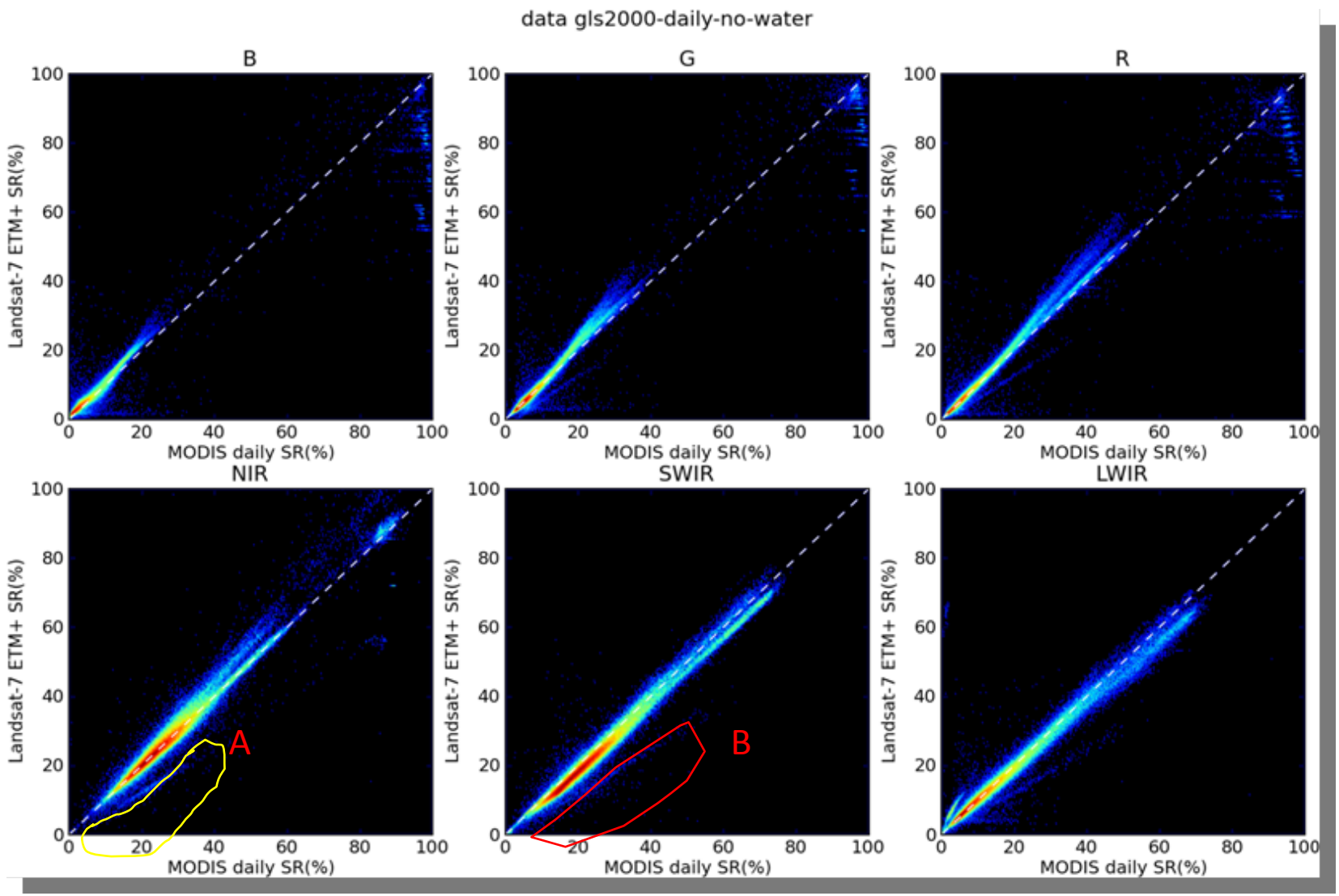
Landsat SR (30 m)

Spatial aggreg.

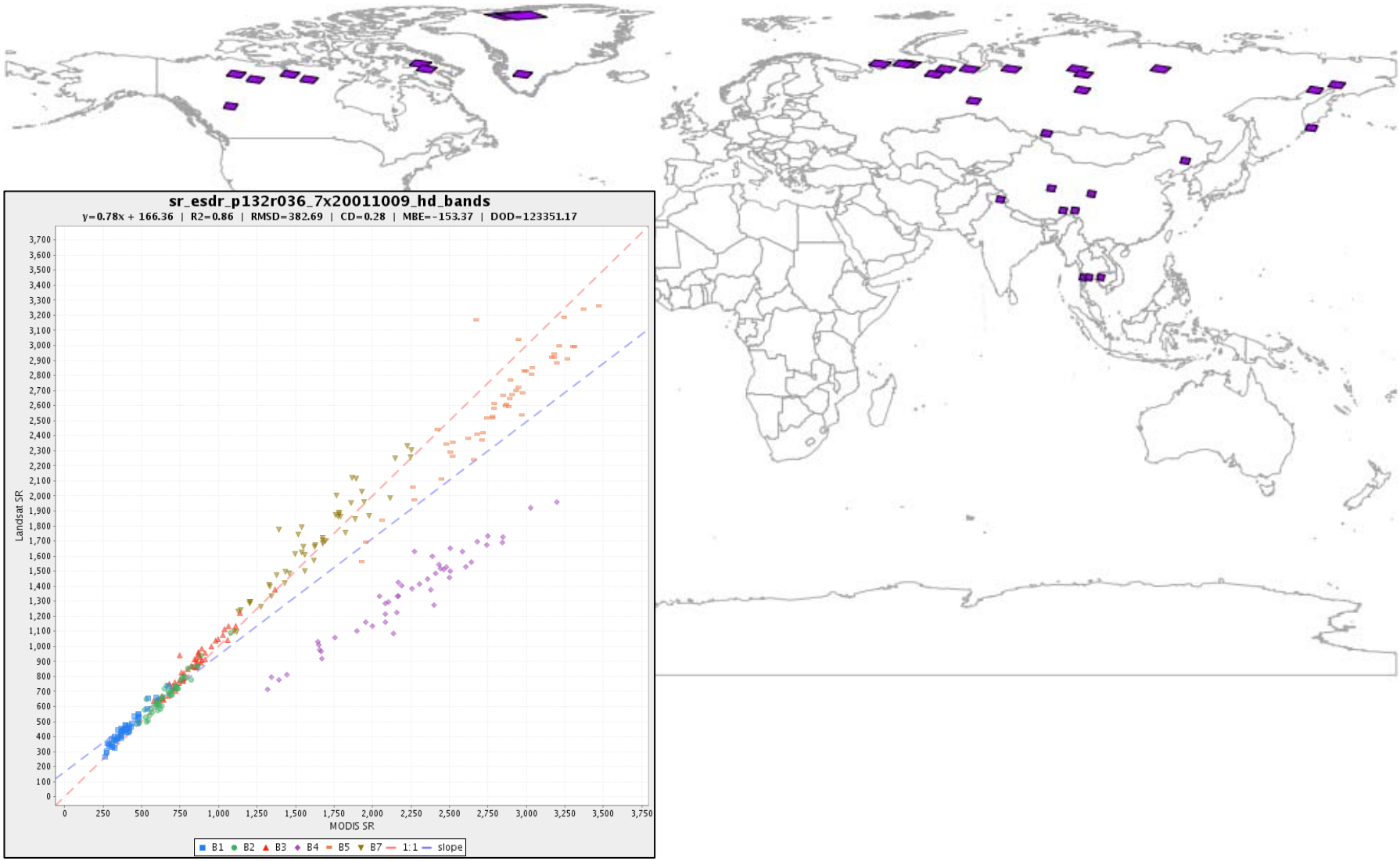


Landsat SR (500 m)

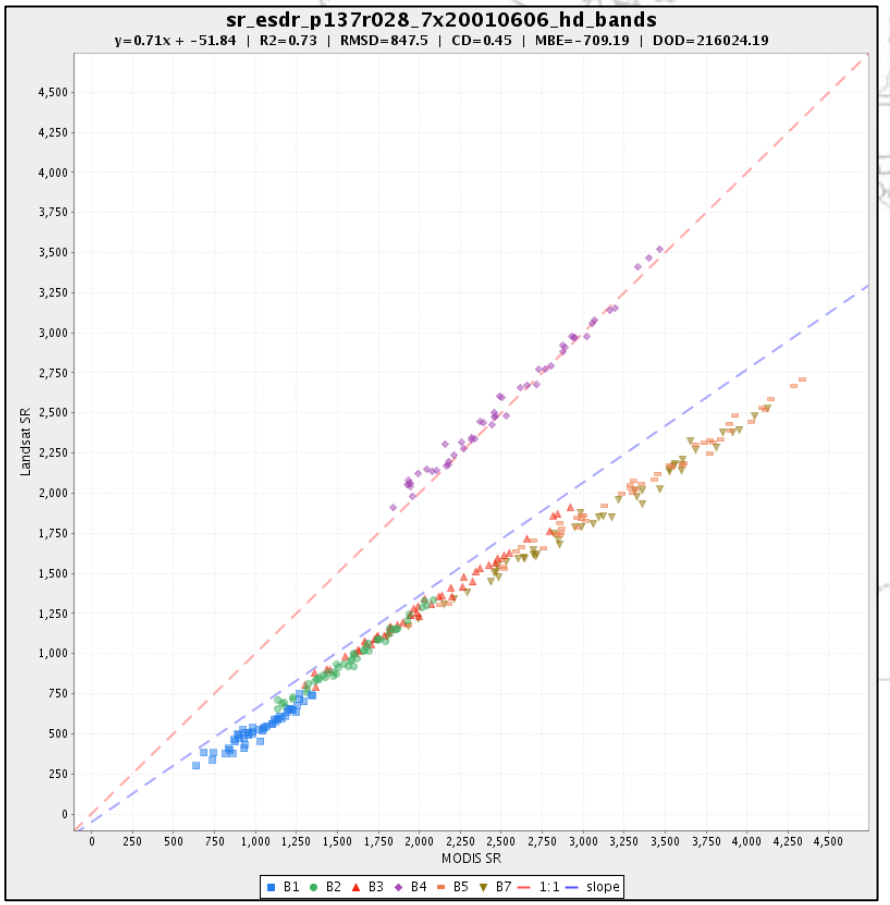
Application to GLS 2000



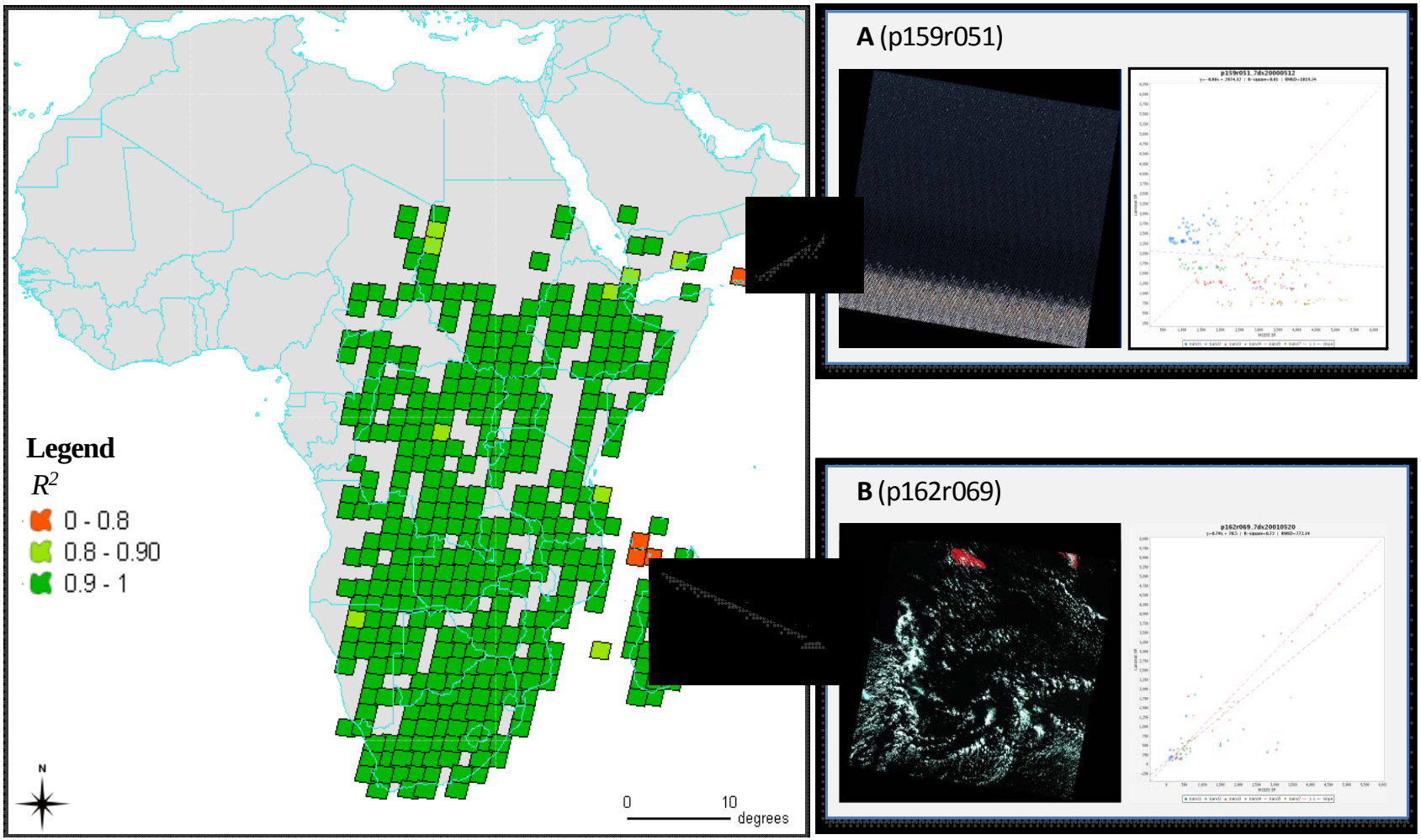
Example for pattern A



Example for pattern B



Corrupted Image Identified



Applicability

- Landsat 7-MODIS
  - ASTER
- Landsat 5 and other Landsat class instruments
  - Temporal difference