Anticipated Quality Problems

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• Four step algorithm
  – Get list of tiles with unacceptable QA values
  – Tile samples
  – Pixel samples in selected tiles
  – Determine *possible* cause of problem

• TBD’s
  – Number of tiles, number of pixels
Problem Sources and Results

• Sensor
  – Clouds, Cross-Talk, …
  – Regular Patterns (stripes, clouds, ...)
  – Visual detection
Problem Sources and Results

• Transmission
  – Depends on protocol used (TCP - no problem)
  – Possible: Systematic loss of data with period close to latency
  – Only between satellite and ground
  – Visual or automated detection
Problem Sources and Results

• Science and Software
  – Closely related
  – Benchmark comparison
  – Shows as good input - bad output
  – Can be random
Problem Sources and Results

• Data Production
  – Scheduler problems
  – Tiles missing or mismatched
  – Regular pattern that propagate thru products
Problem Sources and Results

• Archive
  – Corrupted data, incorrect formats
  – Random in nature
  – Easily traceable
Problem Sources and Results

• Input Data
  – Data out-of-bounds, …
  – Costly to check
  – Problems can show randomly
Problem Sources and Results

• Ancillary Data
  – Static (mostly)
  – Correctness verifiable beforehand
  – If corrupted => archive problem
Conclusions

- Hard to determine specific sources
- Rather determine subset of possibilities
- Visual analysis may be most efficient
- Error tracking database