Water quality validation: new mission needs

gaps to be filled

~~New~~ mission ~~needs~~

to support water quality applications

Communication with stakeholders

- Improved interaction with the communities we want using our satellite data

For missions:

- Stakeholders (should) define mission objectives
- Objectives need to be cleanly translated into science products, then precisely translated into radiometric & observatory engineering capabilities

For stakeholders:

- What is good enough? What do you really need? Uncertainty requirements translate directly into radiometric & observatory engineering capabilities.

"Sometimes RGB is good enough …"

Communication with stakeholders

- Mutual appreciation of the satellite consumer's market that has emerged
- Sustainable mission applications & Early Adopters programs
- Sustainable training programs
- Accessible & open data
- Compromise & mutual appreciation for the need to do so

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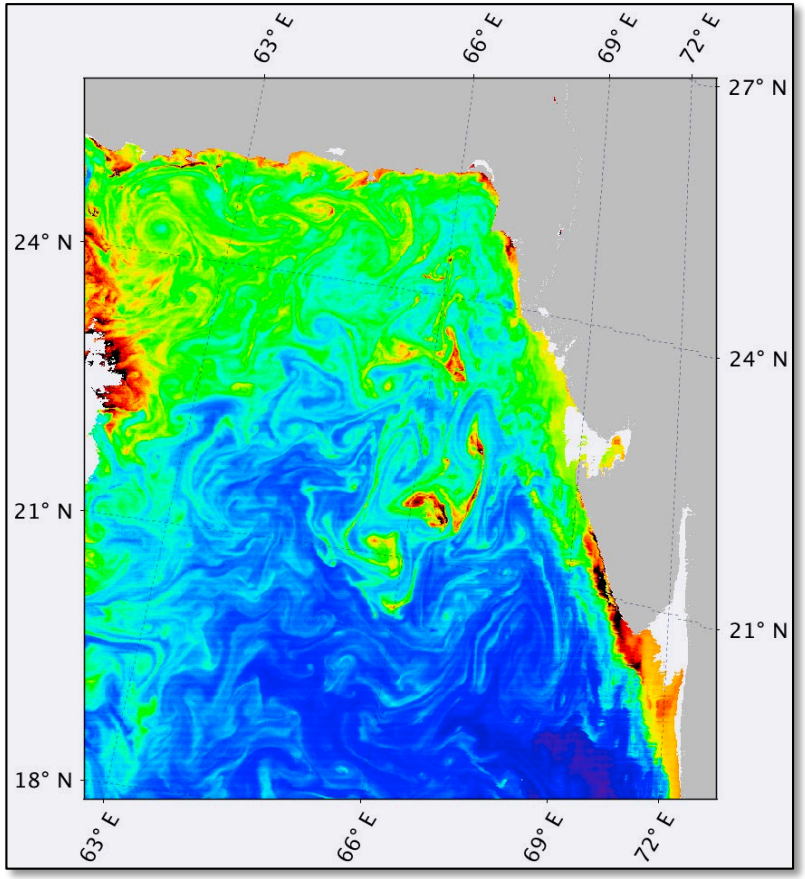
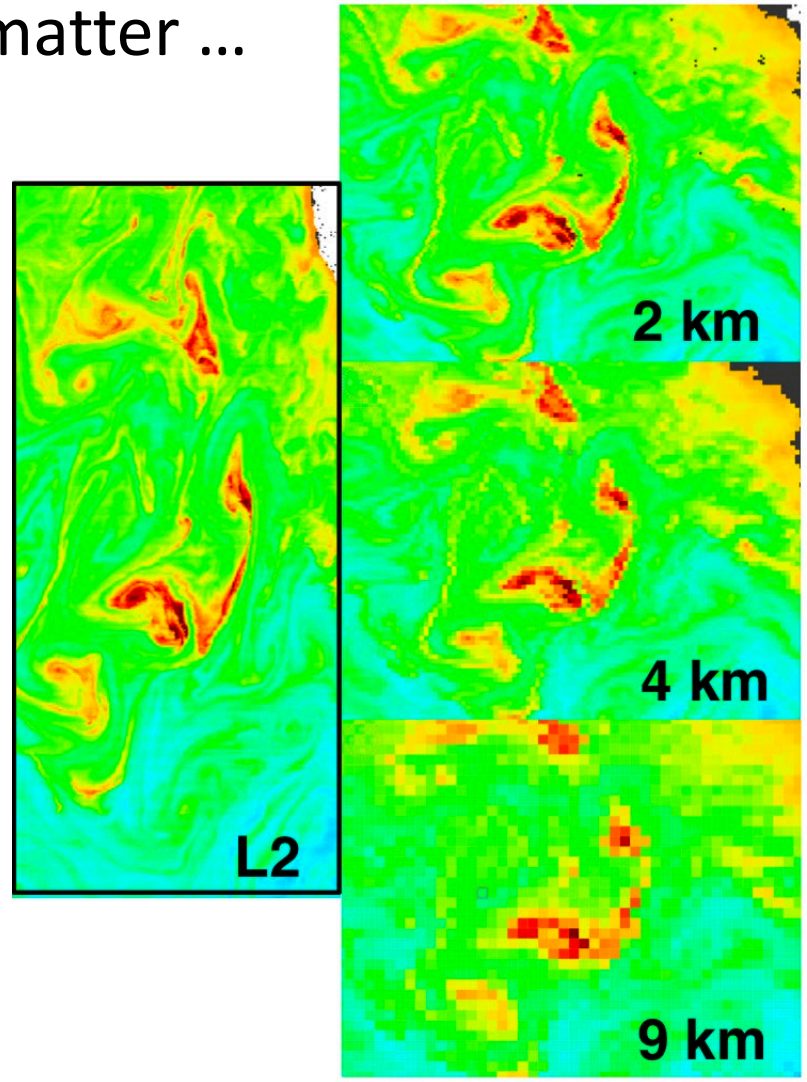
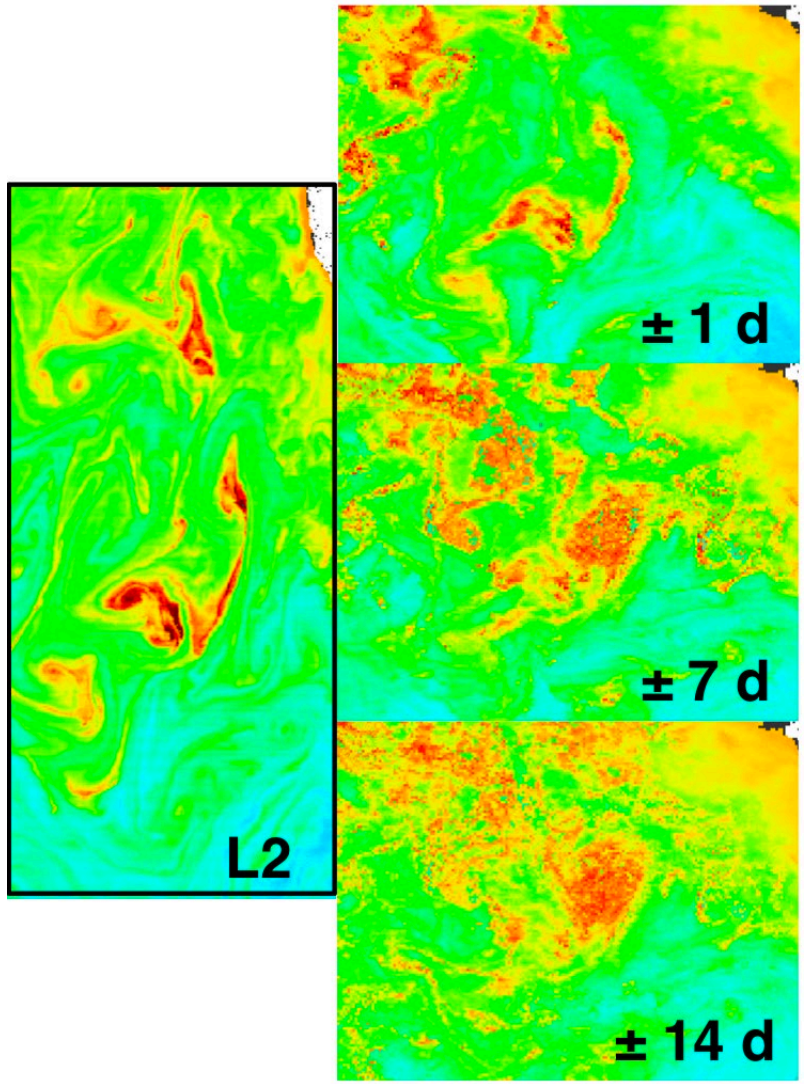
choices in compositing matter …







Datasets

- Many missions carry success-defining uncertainty requirements
- Assessment of core remotely-sensed products requires high quality truth
  - "direct validation"
  1) Adherence to community-defined protocols
  2) Inclusion of uncertainties + metadata
  3) High volume, particularly just after launch, particularly radiometry
- Assessment of data product algorithms requires "complete" data sets
  - "proxy validation"
  - #1 and #2 above plus
  4) Co-located data for algorithm development & verification

Datasets

- Knowledge (e.g., SOPs) sharing to support field work

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