

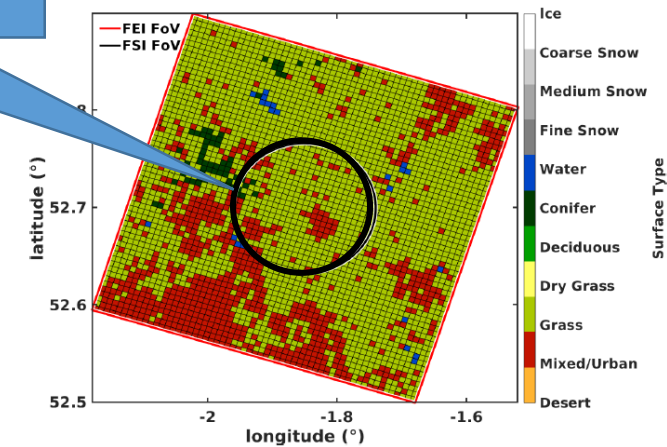
The FORUM End-to-End Simulator project: exploring the potentialities of EE9 mission

L. Sgheri on behalf of the FORUME E2ES project team



- The FORUM End-to-End simulator (E2ES) is a chain of codes developed to demonstrate the potentialities of FORUM in operative conditions.
- The E2ES can simulate situations that a single code cannot achieve such as:
 - ◇ Pointing errors
 - ◇ Non-Gaussian instrument errors
 - ◇ Non-homogeneous field of view
- The E2ES can retrieve:
 - ◇ Atmospheric parameters (clear sky), (validated with klima)
 - ◇ Cloud parameters (cloudy sky), (validated with SACR)


Heterogeneity in the FORUM FSI FoV (black circle) surface emissivity. Data based on MODIS L2 products



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- In the poster you find results on (more in the paper linked by the QR-code ):
 - Response to the contamination of the FoV by a cirrus cloud
results compliant with goals up to 10% contamination
 - Response to a soil heterogeneity, temperature and emissivity (part water, part snow)
results close to weighted averages
 - Response to full atmospheric variability (taken from MODIS L2 products)
results in the values range used to generate the scene
- But also issues that need further specific studies:
 - Emissivity and surface temperature joint retrieval
retrieved values show a large negative correlation.

Large negative correlation between retrieved t_{skin} and emissivity (as a function of emissivity w_n) for two cases: retrieval over water (green) and over desert (purple)

