MTG-IRS L2 data:

What is the best way to disseminate this to users ?



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MTG-IRS L2 data transmission:

Decreasing optimality of product use...

Option 1:	Option 2:	Option 3:	Option 4:	Option 5:
Disseminate retrieval	Disseminate scaled	Disseminate retrieval	Disseminate retrieval	Disseminate retrieval
on native grid with	projected states	on native grid with	on native grid and	on a reduced grid /
scene dependent	(SPS), unit error	climatological error	allow user to diagnose	layering with full
error covariance /	covariance but scene	covariance / averaging	covariance locally (i.e.	covariance data
averaging kernels	dependent Jacobians	kernels	no metadata	
			disseminated)	

Increasing dissemination data volumes...

What is the best approach / compromise for potential users of IRS L2 data (forecasters / assimilation) ?

New EUMETSAT L2 product being tested at ECMWF:



Increasing dissemination data volumes...

What is the best approach / compromise for potential users of IRS L2 data (forecasters / assimilation) ?

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Model T profile





















Scene dependent mapping from profile > PC space

 Retrievals for T, log(q) and log(o3) disseminated in PC space together with scene dependent observation operators and static eigenvector data base to create the observation operator H to be used in data assimilation (total dissemination 3x15 + 3x15x25 ~ 1000 numbers per scene).



Project status:

- Iterating with EUMETSAT to refine data format and QC flag provision
- Establishing appropriate QC information / metadata
- Initial evaluation of PC errror characteristics

Next:

- Iterate on data evaluation
- Begin 4D-Var trials of PC retrievals
- Document results / proof of concept

Geophysical retrievals are provided for monitoring purposes

- PC scores do not reveal whether there is cold/warm, dry/moist bias in the retrievals, statistics for geophysical retrievals can help to design better quality control.
- Retrievals in PC space have been normalised by the retrieval error, i.e. expected OmB sdev is 1.

