CCI_clouds

What's
• Multi-decadal coherent global data records for GCOS cloud property ECVs including uncertainty estimates based on inter-calibrated radiances from:
  - AVHRR, MODIS, AATSR observations (CC4CL): 30+ yr
  - Combined AATSR+MERIS measurements (FAME-C) : 10 yr
Cloud_cci
Operational climate monitoring

As for other ECV’s, for Cloud properties is a demand for providing regular CDR updates fulfilling the concept of operational climate monitoring

<table>
<thead>
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<th>Concept of operational climate monitoring</th>
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<td><strong>FCDR_a</strong></td>
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<td><strong>TCDR_b</strong></td>
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R. Roebeling, modified
Cloud properties from “heritage sensors / channels” AVHRR, MODIS, AATSR observations (CC4CL):

Processing not finished, but the current results along with the achieved additional improvements demonstrate their improved quality.

Maturity acc. to SMM in the order of 3-4 expected by end of project

-> can be considered as ready for operational

Context for operational environment:

EUMETSAT CM SAF CDOP-3 (2017-2022) planning:

WP on future TCDR releases of cloud properties (>2022), CM SAF will assess and consider the Cloud_cci achievements
What needs further R&D?

Cloud properties from “heritage sensors / channels” AVHRR, MODIS, AATSR observations (CC4CL):
Adaptation to future sensors (e.g. SLSTR)

Cloud properties from combined AATSR+MERIS measurements (FAME-C)
O2A retrieval
Adaptation and transfer to future sensors (e.g. SLSTR, OLCI)
further reprocessing in CDR generation framework is necessary

Both: for the earlier satellite measurements the decadal stability will remain a major issue which only can be solved with a high quality FCDR of AVHRR radiances, inter-calibrated with MODIS, (A)ATSR, SLSTR et al.