ESA Climate Change Initiative (CCI) project GHG-CCI

- A project to deliver the Essential Climate Variable (ECV) „Greenhouse Gases“ (GHG) -

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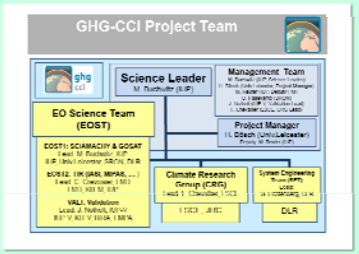
and the GHG-CCI team

GHG-CCI project team



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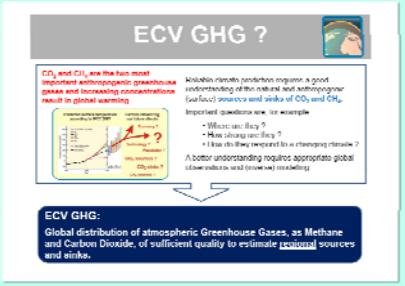
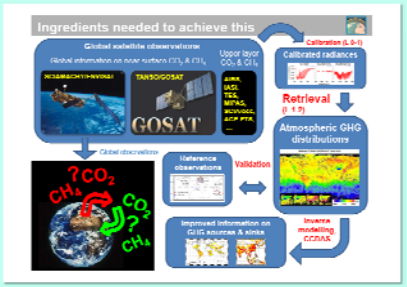
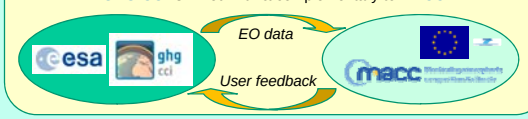
GHG-CCI project overview

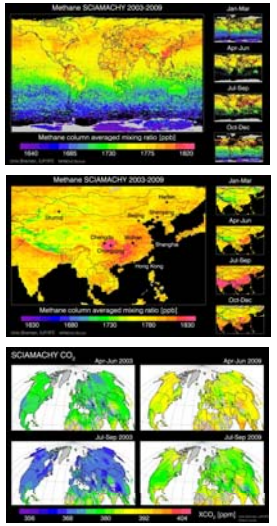




- **GHG-CCI Goal:** To deliver global atmospheric CO_2 and CH_4 information needed for a better understanding of regional GHG surface fluxes (sources & sinks)
- **Core products:** XCO_2 and XCH_4 from SCIAMACHY/ENVISAT & TANSO-FTS/GOSAT
- **Approach:** Several algorithms to be improved & evaluated during 2-year “Round Robin” phase
- **ECV generation:** In year 3 using selected best algorithm(s)
- **Activities:** User requirements definition, algorithm improvements, calibration improvements, validation, other sensors (e.g., IASI, MIPAS, ...)

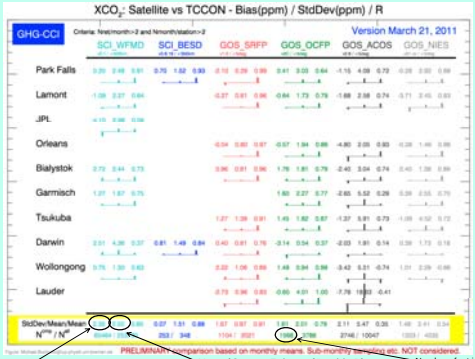
GHG-CCI is linked with & complementary to **MACC**





First comparisons: Satellite vs TCCON

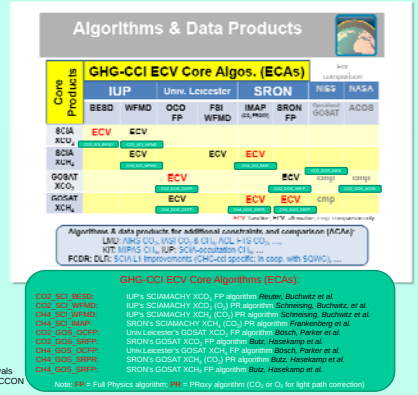
XCO_2

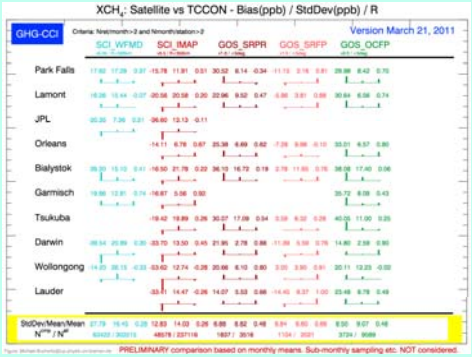


StdDev of Bias = Estimate of “relative accuracy”

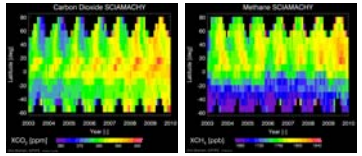
Mean of Scatter = Estimate of “precision” for monthly / regional scale (~700-1000 km) AFTER division by approx. SQRT(N^obs/10)

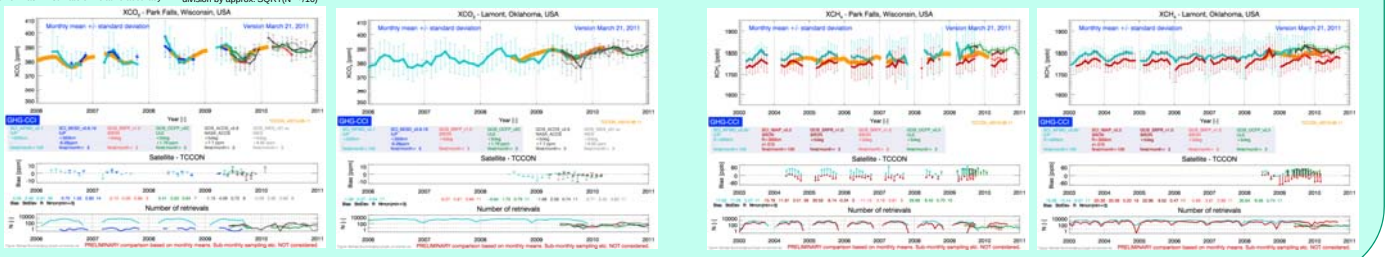
Number of retrievals compared with TCCON





XCH_4





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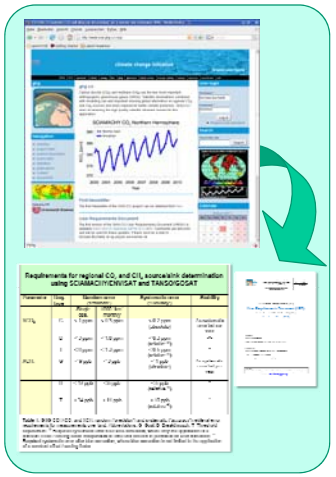

Acknowledgements:

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GOSAT teams @ MOE, JAXA & NIES: www.jaxa.jp/projects/gosat www.gosat.nies.go.jp

NASA ACOS / OCO team: oco.jpl.nasa.gov disk.sci.gsfc.nasa.gov/gesNews/acos-team-release...

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