



Space and Climate

Round Table Climate Change

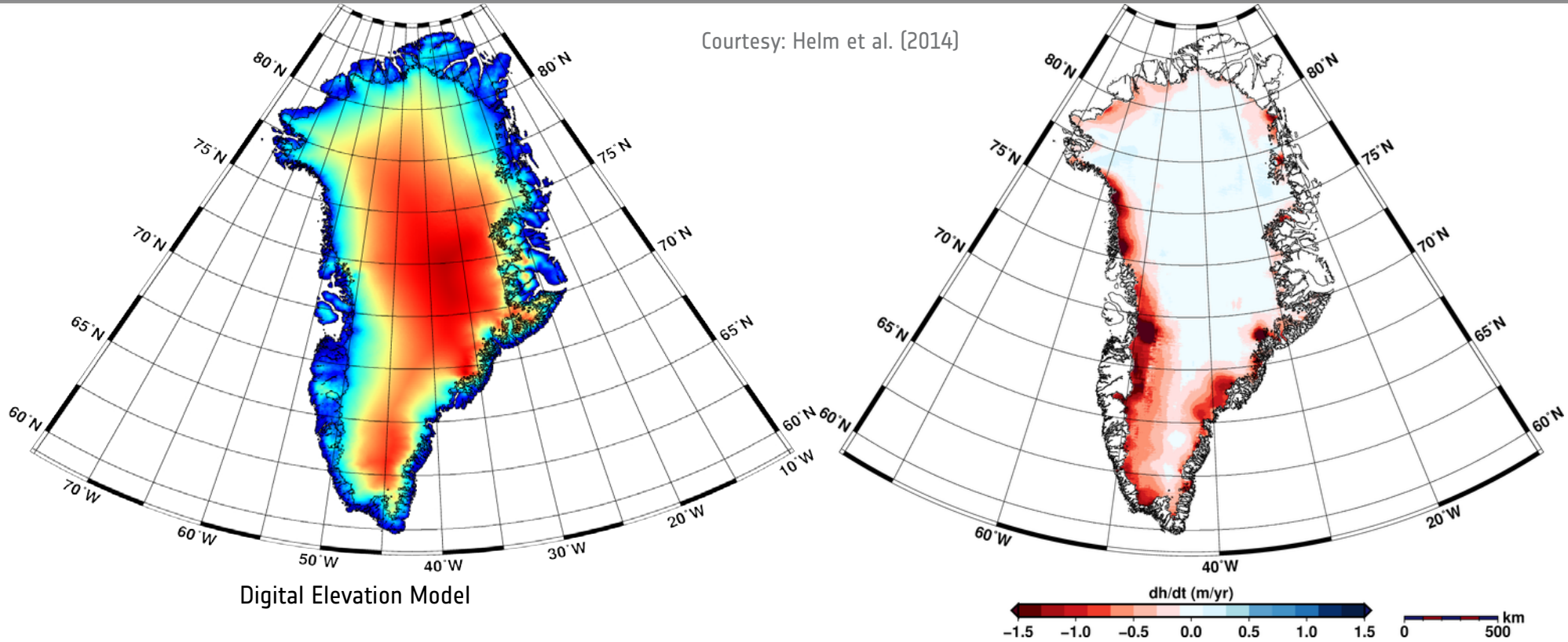
Le Bourget, 17 June 2015

Prof. Volker Liebig, ESA

Director of Earth Observation Programmes

CryoSat: Yearly Ice Loss in Greenland

Courtesy: Helm et al. (2014)



2003-2008	2011-2012
IMBIE	CryoSat
-189 ± 20 km³/yr	-352 ± 29 km³/yr

Ice Sheet Mass Balance Inter-Comparison Exercise (IMBIE)

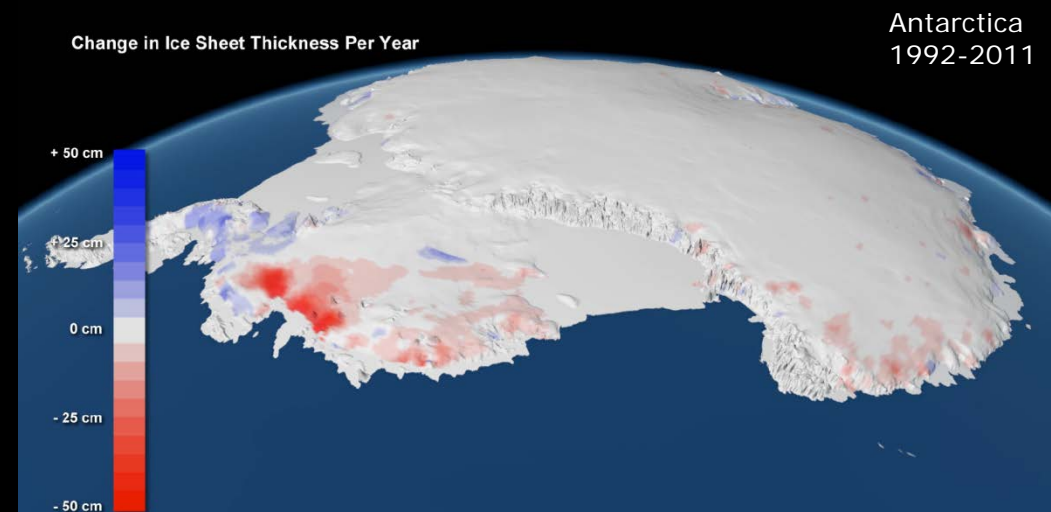
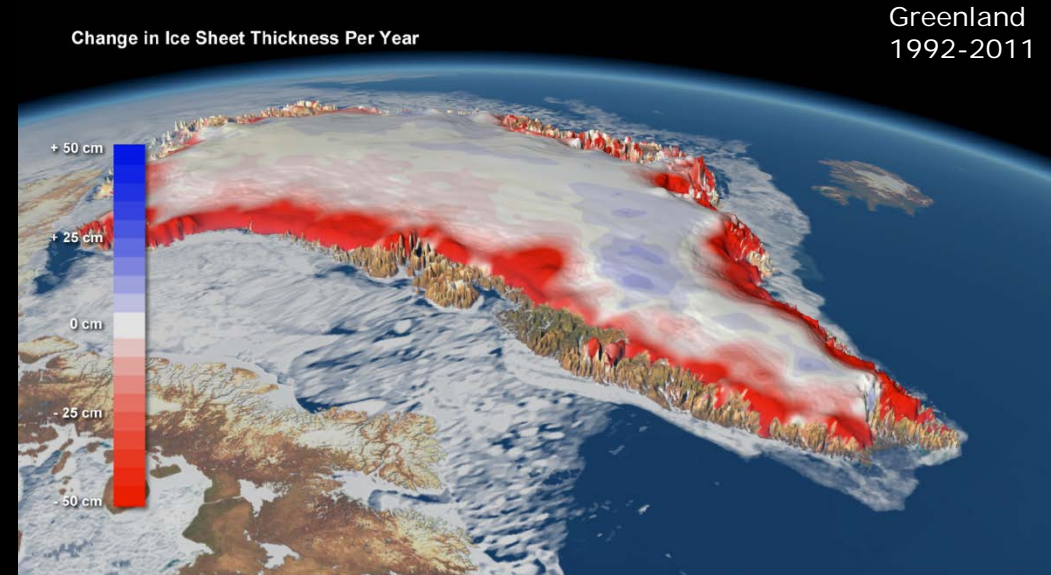


General Features:

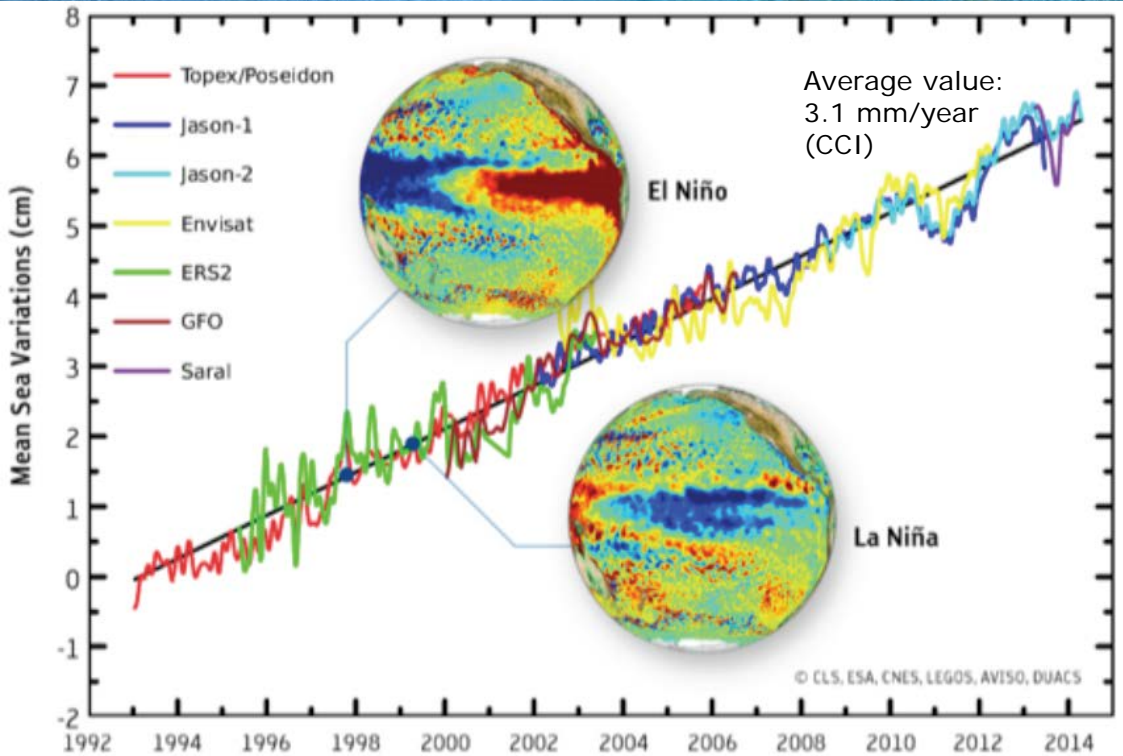
- 54 years of data, 47 scientists
- 10 satellites
- cooperation with NASA

Results:

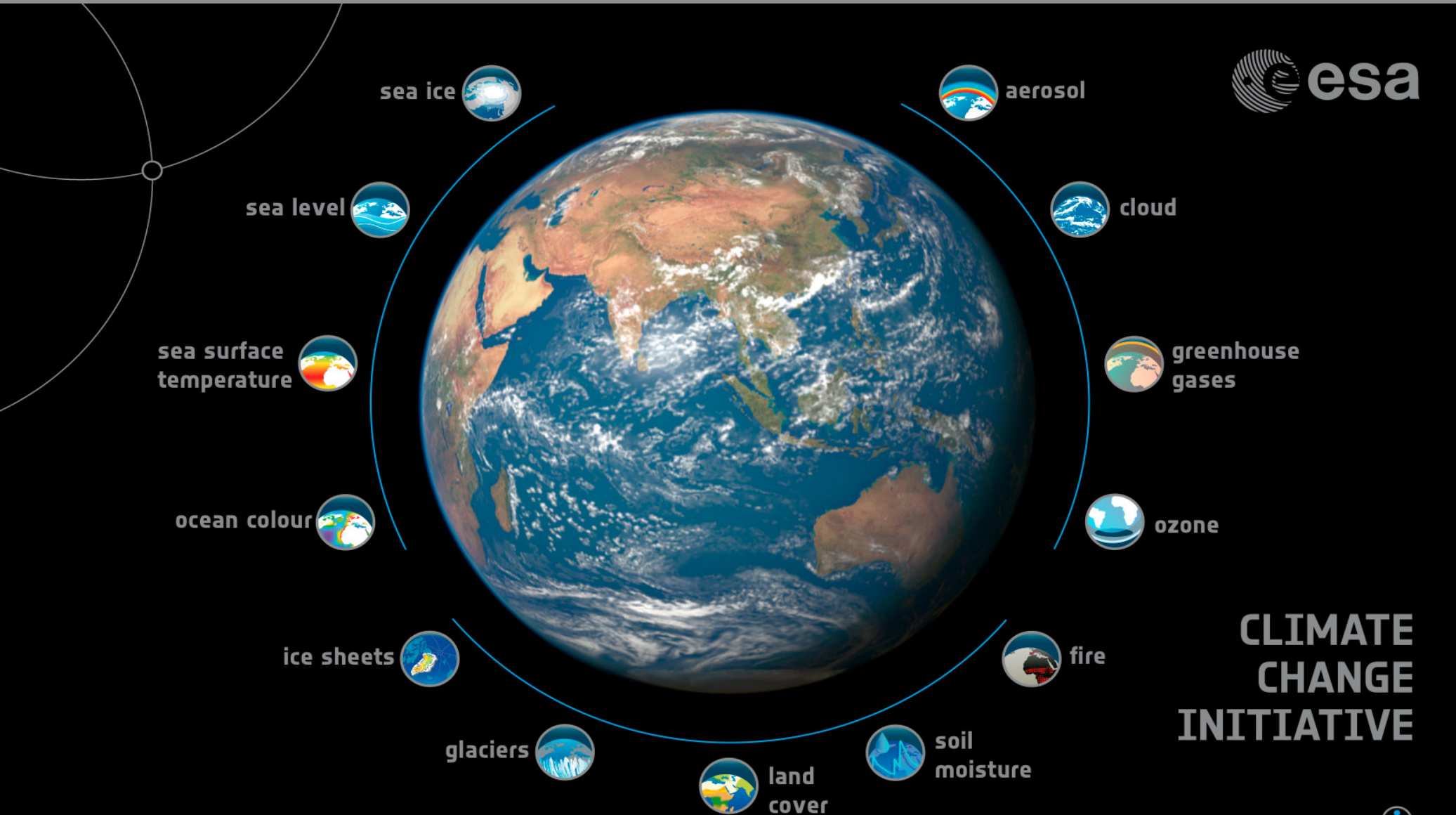
- 11 +/- 3.8 mm sea level rise from melting ice since 1992
- Antarctic ice loss 3 times higher than in the 90s



Rising Sea Levels



CCI: Essential Climate Variables



**CLIMATE
CHANGE
INITIATIVE**