



Assimilation of simulated SWOT data

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This abstract is about the Surface Water and Ocean Topography (SWOT) mission carried out jointly by NASA and CNES which will be launched in 2020 (<http://swot.jpl.nasa.gov/>). It will be a Ka-band Interferometric Synthetic Aperture Radar (InSAR) and will provide water surface heights of the rivers, estuaries, lakes and oceans with a higher precision than a classic altimeter. To better understand the possibilities that SWOT will offer for e.g. studies of river and estuaries dynamic, we have created a simulator of its final products (water surface heights). One of our purposes is to see if SWOT will be able to complete some lack of information e.g. the bathymetry. Here we will present our results for the Amazon River (from the mouth to Obidos). Our “truth” to simulate SWOT data will be based on the Ore-Hybam data. Then we will corrupt some inputs in the T-UGOm model (a tide model developed at LEGOS by F. Lyard) and assimilate the SWOT data. Finally we will compare the results.