Geophysical Research Abstracts
Vol. 15, EGU2013-4319, 2013
EGU General Assembly 2013

Today radar altimetry to prepare SWOT

adrien Paris (1,2), Stephane Calmant (1), Walter Collischonn (2), Rodrigo Paiva (2), Marie-Paule Bonnet (3), Joecila Santos da Silva (4), and Frederique Seyler (5)

(1) LEGOS/OMP/IRD Toulouse, France, (2) IPH/UFRGS, Porto Alegre, Brazil, (3) GET/OMP/IRD Toulouse, France, (4) CESTU/UEA, Manaus, Brazil, (5) Espace/IRD, Cayenne, Fr. Guyana

We present a study conducted in the Amazon basin to compute distributed discharge with ENVISAT and JASON-2 altimetry in the one hand and the rain/discharge MGB model in the other hand. The MGB model is run over the 1998-2008 period with TRMM rain input. The altimetry data of $\sim$500 series throughout the basin are used to determine rating curves that enable to tune the model parameters such as the depth and slope of small contributors still un-monitored, or the variations in Manning coefficient; and to make discharge series exceeding the time window of the model runs.
With this case study, we show that the measurements collected today by conventional altimetry missions can be used to prepare SWOT in two directions: get geophysical values that will be necessary for the discharge algorithms of SWOT and compute discharge time series which will constitute an archive to be continued by SWOT.