Hydrol. Earth Syst. Sci. Discuss., 7, C4716–C4717, 2011
www.hydrol-earth-syst-sci-discuss.net/7/C4716/2011/

Hydrology and Earth System Sciences Discussions

Interactive comment on "Combining satellite radar altimetry, SAR surface soil moisture and GRACE total storage changes for model calibration and validation in a large ungauged catchment" *by* C. Milzow et al.

Anonymous Referee #3

Received and published: 16 January 2011

The increasing development of land surface products from Earth Observation is going in parallel with land surface models trying to make the best possible usage of these dataset. This paper is an example of this tendency, which has been recognized as one of the new frontiers of modern hydrology. The findings of the study are not particularly striking, just to confirm that the tasks themselves were very challenging. The major interest in reading this paper does not rely in showing how good the results were in term of "absolute accuracy" for this particular site, but in producing an idea of "what

is possible to do" at the present stage of development of Earth Observation at global scale. However, in order to give to the reader a clearer focus on this issue, the authors could list which products are available, which are their characteristics and, based on their findings, give a "ranking" list in terms of reliability for hydrological purposes. For example, it is clearly understood that precipitation products are rather problematic, whilst the authors tend to "trust" more to microgravity measurements from GRACE. An additional remark is concerning the choice of SWAT model, which includes many subprocesses which might be irrelevant for the present study; furthermore it is a semi-distributed model which is not ideal when using raster E.O.-based data.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 9123, 2010.