

Interactive comment on “Hydrometeorological and gravity signals at the Argentine-German Geodetic Observatory (AGGO) in La Plata” by Michal Mikolaj et al.

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My comments are limited to minor corrections, as shown in the annotated manuscript. The data set looks to be complete and useful, and the descriptions are comprehensive.

Please ignore Fig. 1, a track changes version has been uploaded as supplement.

Please also note the supplement to this comment:

<https://www.earth-syst-sci-data-discuss.net/essd-2018-156/essd-2018-156-RC3-supplement.pdf>

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Discussion paper



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Hydrometeorological and gravity signals at the Argentine-German Geodetic Observatory (AGGO) in La Plata

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Abstract. The Argentine-German Geodetic Observatory (AGGO) is one of the very few sites in the southern hemisphere equipped with a comprehensive cutting-edge geodetic instrumentation. The employed observation techniques are used for a wide range of geophysical applications. The pre-defined multi-compartmental data set provides gravity time series and selected gravity models together with the hydrometeorological monitoring data of the observatory. These parameters are of great interest to the scientific community, e.g., for achieving accurate realization of terrestrial and celestial reference frames. Moreover, the availability of the hydrometeorological products is beneficial to inhabitants of the region as they allow for monitoring of environmental changes and natural hazards including extreme events. The hydrological data set is composed of time series of groundwater level, modelled and observed soil moisture content, soil temperature, and physical soil properties and aquifer properties. The meteorological time series include air temperature, humidity, pressure, wind speed, solar radiation, precipitation, and derived reference evapotranspiration. These data products are extended by gravity models of hydrological, oceanic, La Plata Estuary, and atmospheric effects. The quality of the provided meteorological time series is tested via comparison to the two closest WMO sites where data is available only in an inferior temporal resolution. The hydrological series are validated by comparing the respective forward-modelled gravity effects to independent gravity observations reduced up to a signal corresponding to local water storage variation. Most of the time series cover the time span between April 2016 and November 2018 with either no, or only few missing data points. The data set is available at <https://doi.org/10.5880/GFZ.5.4.2018.001> (Mikolaj et al., 2018).

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Fig. 1.