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## Seven years of monthly low-degree gravity field models from Swarm GPS data

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The Swarm satellite constellation provides GPS data with sufficient accuracy to observe the large-scale mass transport processes occurring at the Earth's surface since 2013. We illustrate the signal content of the time series of monthly gravity field models. The models are published on quarterly basis and are the result of a combination of the individual models produced by different gravity field estimation approaches, by the Astronomical Institute of the University of Bern, the Astronomical Institute of the Czech Academy of Sciences, the Institute of Geodesy of the Graz University of Technology and the School of Earth Sciences of the Ohio State University. We combine the models at the solution level, using weights derived from a Variance Component Estimation, under the framework of the International Combination Service for Time-variable Gravity Fields (COST-G).

We estimate the monthly quality of the models by comparing with GRACE and GRACE-FO products and illustrate the improvement of the combined model as compared to the individual models. We present the high signal-to-noise ratio of this uninterrupted time series of models, smoothed to 750km radius, over large hydrological basins. Finally, we compare the behavior of degree 2 and 3 coefficients with GRACE/GRACE-FO and SLR.