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Towards CHAOS-5 - How can Swarm contribute?

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The launch of ESA's satellite trio Swarm in November 2013 opens an exciting new chapter in the observation and monitoring of Earth's magnetic field from space. We report preliminary results from an extension of the CHAOS series of geomagnetic field models to include both scalar and vector field observations from the three Swarm satellites, along with the most recent quasi-definitive ground observatory data. The fit of this new update CHAOS field model to the Swarm observations will be presented in detail providing useful insight the initial Swarm data. Enhancements of the CHAOS modelling scheme include a 1 minute time resolution for the RC index and anisotropic weighting of vector field data depending on quasi-dipole latitude. We shall also report on the perspective given by the initial Swarm data on rapid field changes currently taking place in the Atlantic sector.