**Remote sensing of earthquakes, lightning and radiation belts (Oral and poster sessions)**

The highlights of the session were talks by De Santis et al. on Earthquake Precursors, and one by Conti et al. on an upcoming Chinese-Italian satellite that is designed to follow-up the CNES Demeter satellite. The earthquake precursor talk reported on the results of a retrospective multi-parameter (Magnetometer + electron density) analysis of both the 12 largest earthquakes in the 2014-2016 time frame, and a separate analysis of 980 Earthquakes with magnitudes > 5.5. The latter analysis found that precursory anomalies were most commonly observed between 10 to 20 days prior to the earthquake. The analysis of the largest earthquakes found that all earthquakes with magnitudes => 7 had precursory magnetic or electron density anomalies. I endorse further studies of Earthquake precursors using Swarm data that explicitly takes advantage of the constellation nature of Swarm. I also endorse close collaboration between Swarm and other satellite missions designed to study Earthquake precursors.

Other interesting talks and posters were presented on the topics of magnetic and electrical remote sensing of lightning, sprites, and Schumann resonances associated with thunderstorm activity.

None of the talks or posters explicitly took advantage of the constellation nature of Swarm, so changes to the Swarm constellation like changing the separation of the lower satellites would not have made any difference to the science presented in this session. However, as an expert in the lithospheric magnetic field, I endorse the idea of bringing the lower two satellites closer together so as to sense even shorter wavelengths in the lithospheric field. I think this should be done BEFORE re-boosting the lower two satellites. I also endorse the idea of a much longer mission, at least to the next solar maximum. BUT I think that ESA should conduct an analysis of the degradation expected in the star cameras before going ahead with this plan. The star cameras on CHAMP at the end of its 10 year mission were showing signs of age, and this degradation adversely affected the quality of the data from the vector magnetometers.