

ISSI WG

*“Designing a low-inclined nanosatellite mission to improve the science return of the ESA Swarm constellation”*

**Preliminary program**

Monday April 10

13:00-13:30 Registration and coffee at ISSI

13:30-14:00 Welcome, goals and organization of the WG (M. Rast, G. Hulot)

14:00-15:00 Current models of the core field, what it is that they still fail to describe? (V. Lesur and C. Finlay)

15:00-16:00 Models of the core field, what is it that we can hope to improve thanks to a low-inclined nanosatellite mission? How should we produce relevant synthetic data? (Open contributions)

16:00-16:15 Coffee break

16:15-16:45 Presentation of the NanoMagSat project (G. Hulot)

16:45-17:30 Discussion to define who does what for the end-to-end simulation as far as the core field is concerned

Tuesday April 11

09:00-10:00 Current models of the lithospheric field, what it is that they still fail to describe? (E. Thébault)

10:00-11:00 Models of the lithospheric field, what is it that we can hope to improve thanks to a low-inclined nanosatellite mission? How should we produce relevant synthetic data? (Open contributions)

11:00-11:15 Coffee break

11:15-12:15 Discussion to define who does what for the end-to-end simulation as far as the lithospheric field is concerned

12:15-13:30 Lunch

13:30-14:30 Current models of the ionospheric field at mid- and equatorial latitudes, what it is that they still fail to describe? (A. Chulliat, P. Alken, C. Stolle)

14:30-15:30 Physical models of the ionosphere and the dynamics they can predict for the ionospheric field at LEO satellite and ground observatory locations (A. Maute)

15:30-16:30 Models of the ionospheric field at mid- and equatorial latitudes, what is it that we can hope to improve thanks to a low-inclined nanosatellite mission? How should we produce relevant synthetic data? (Open contributions)

16:30-16:45 Coffee break

16:45-17:30 Discussion to define who does what for the end-to-end simulation as far as the ionospheric field is concerned

### Wednesday April 12

09:00-10:00 Current models of the oceanic and tidal magnetic fields and mantle conductivity, what is it that they still fail to describe? (A. Kuvshinov and A. Gravyer)

10:00-11:00 Models of the oceanic and tidal magnetic fields and mantle conductivity, what is it that we can hope to improve thanks to a low-inclined nanosatellite mission? How should we produce relevant synthetic data? (Open contributions)

11:00-11:15 Coffee break

11:15-12:15 Discussion to define who does what for the end-to-end simulation as far as oceanic and tidal magnetic fields as well as mantle conductivity recovery are concerned

12:15-13:30 Lunch

13:30-14:30 Current models of the magnetospheric field at mid and equatorial latitudes, what is it that they still fail to describe? (C. Finlay, N. Olsen, V. Lesur)

14:30-15:30 Physical models of the magnetosphere and the dynamics they can predict for the magnetospheric field at LEO satellite and ground observatory locations (L. Rastaetter)

15:30-16:30 Models of the magnetospheric field at mid and equatorial latitudes, what is it that we can hope to improve thanks to a low-inclined nanosatellite mission? How should we produce magnetospheric field synthetic data? (Open contributions)

16:30-16:45 Coffee break

16:45-17:30 Discussion to define who does what for the end-to-end simulation as far as the magnetospheric field is concerned

Thursday April 13

09:00-09:30 Known instrument noise and issues on Swarm satellites, how should these be taken into account in the end-to-end study? (V. Lesur)

09:30-10:00 Expected instrument performance on NanoMagSat, how should these be taken into account in the end-to-end study? (G. Hulot)

10:00-10:30 Expected orbits for Swarm, possible orbits for NanoMagSat (G. Hulot, based on ESA and CNES input)

10:30-10:45 Coffee break

10:45-11:30 Discussion to define mission scenarios for the end-to-end study

11:30-13:00 General discussion: the way forward

13:00 end of meeting