Venus magnetic environment: Lessons from Venus Express to BepiColombo flybys

Y. Narita¹ and T.-L. Zhang^{1,2}

- 1. Space Research Institute, Austrian Academy of Sciences, Graz, Austria
- 2. CAS Key Laboratory of Geospace Environment, University of Science and Technology of China, Hefei, China

Venus Express magnetometer investigations (2006-2014) brought us a new insight on Venus induced magnetosphere. The main results include the detailed magnetosphere structure of Venus (bow shock, field-line draping, low-altitude field behaviors, tail flapping and twist), wave dynamics (proton cyclotron waves, foreshock waves, magnetosheath turbulence), and solar cycle dependence. Those lessons from Venus Express magnetic field studies are used as a basis for the scientific expectation for the upcoming BepiColombo Venus flybys in 2020 and 2021.