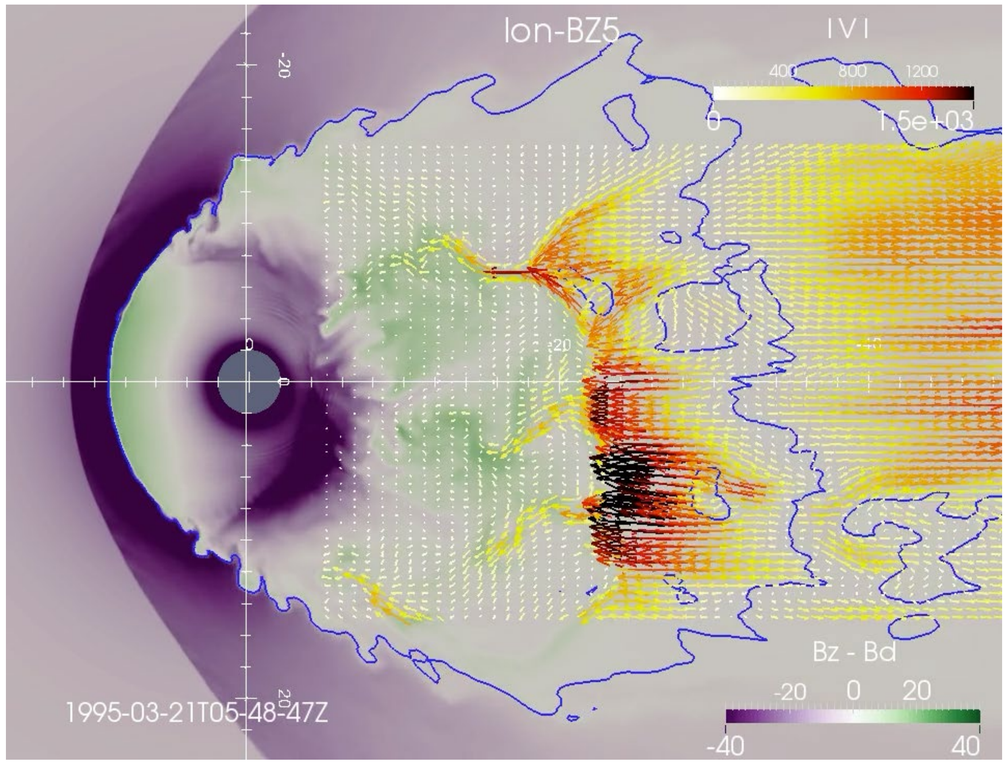
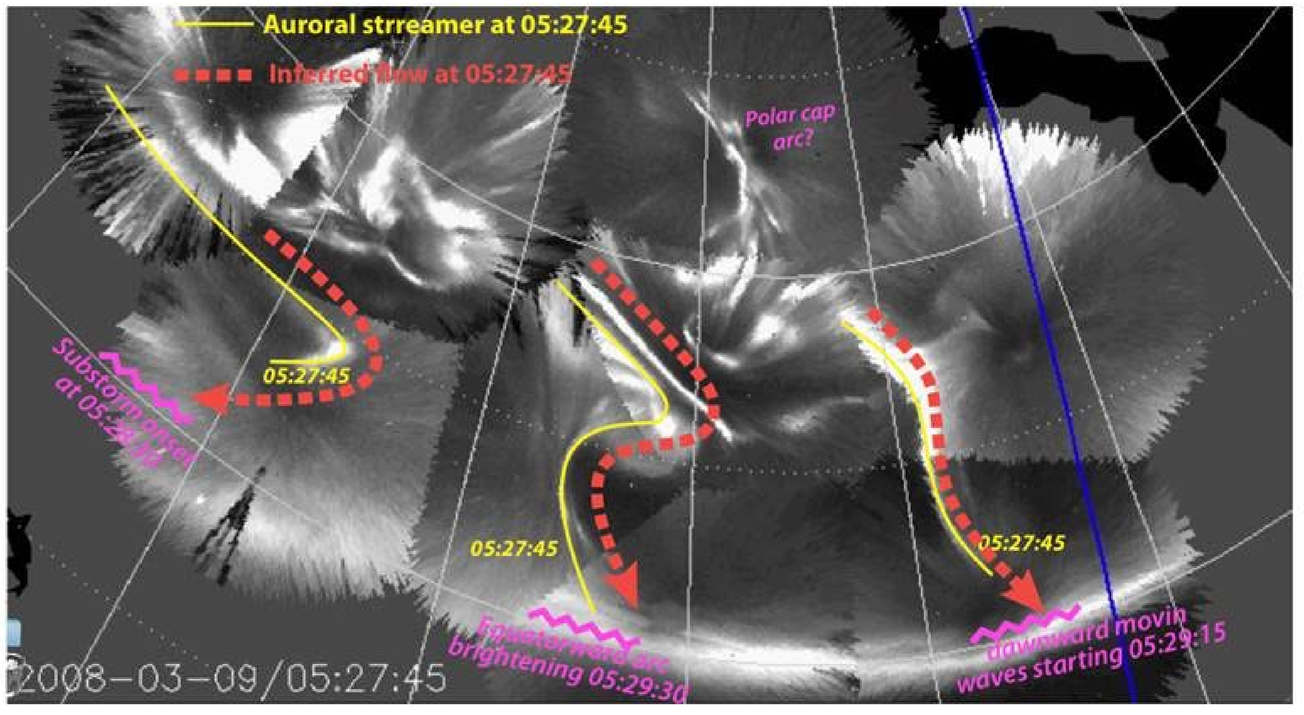


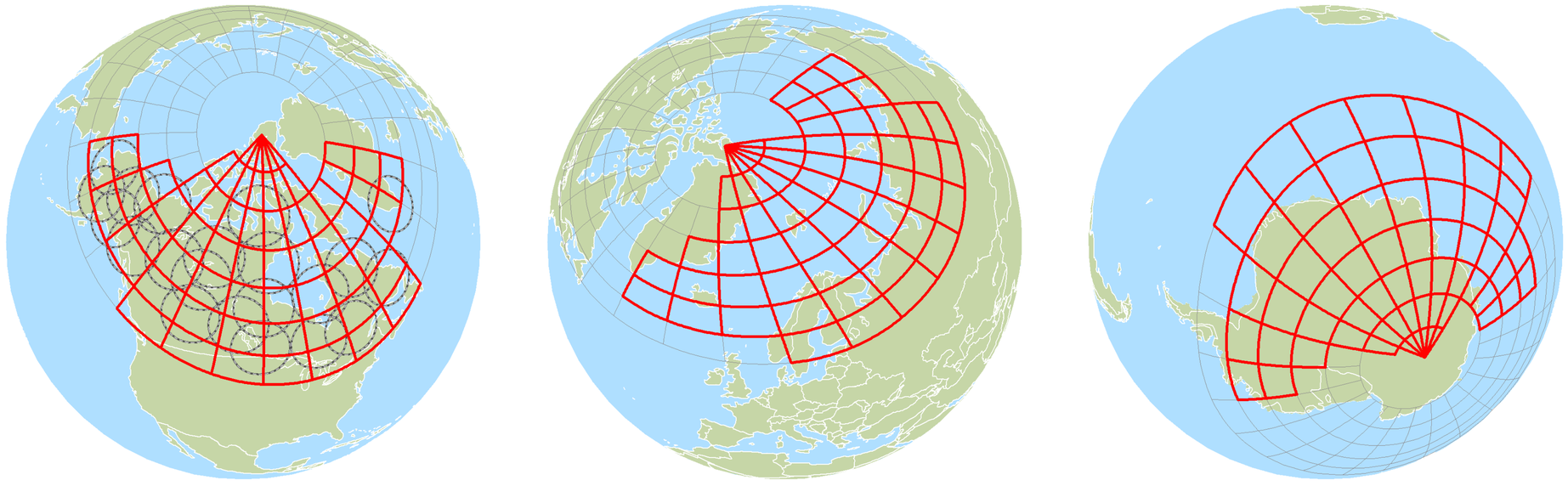

*Michael Wiltberger*




*Ioshi Nishimura*

# The “Missing Middle”

Mesoscales are the understudied & under-sampled link between micro and macro.



Overarching theme: *to understand structure, energy transport, and dissipation in the coupled geospace system*

*Motivated by RADICALS, TREx, and GDC…*

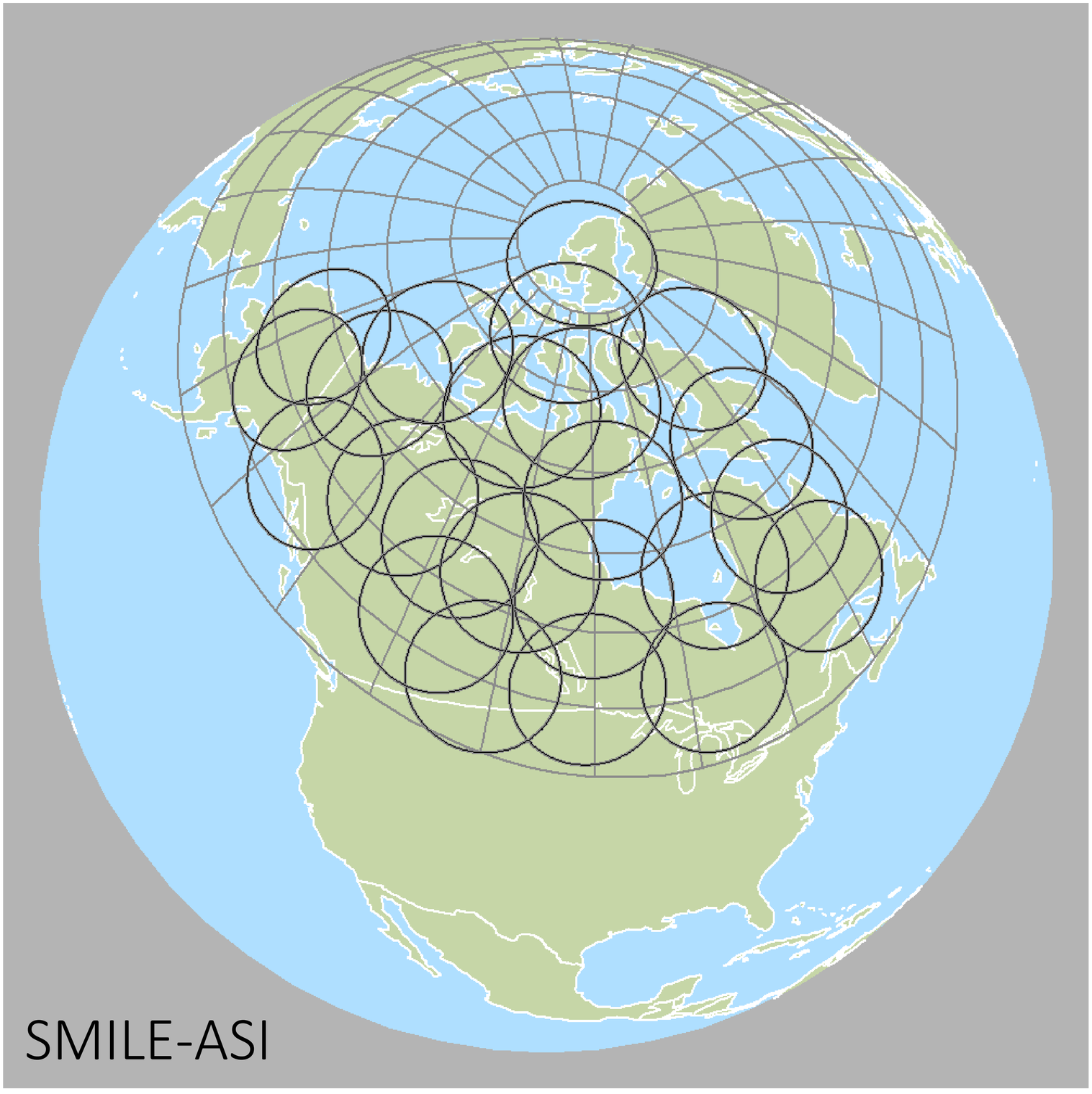
- Origins of Inner Magnetospheric Charged Particles
- Effects of Space Weather on Atmosphere and Climate

*THEMIS-ASI has possibly three years left*

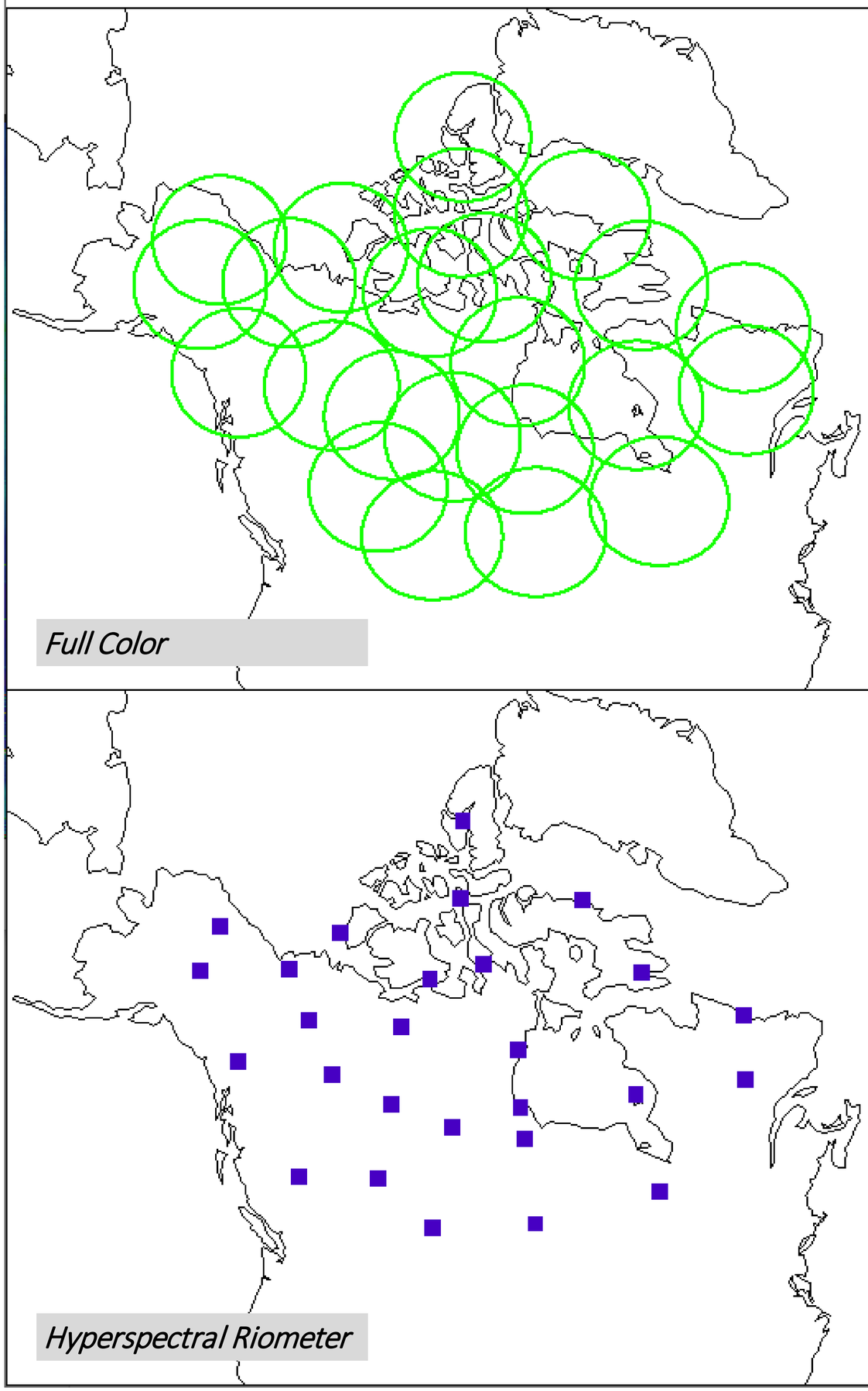
*We are going to replace it with SMILE-ASI*

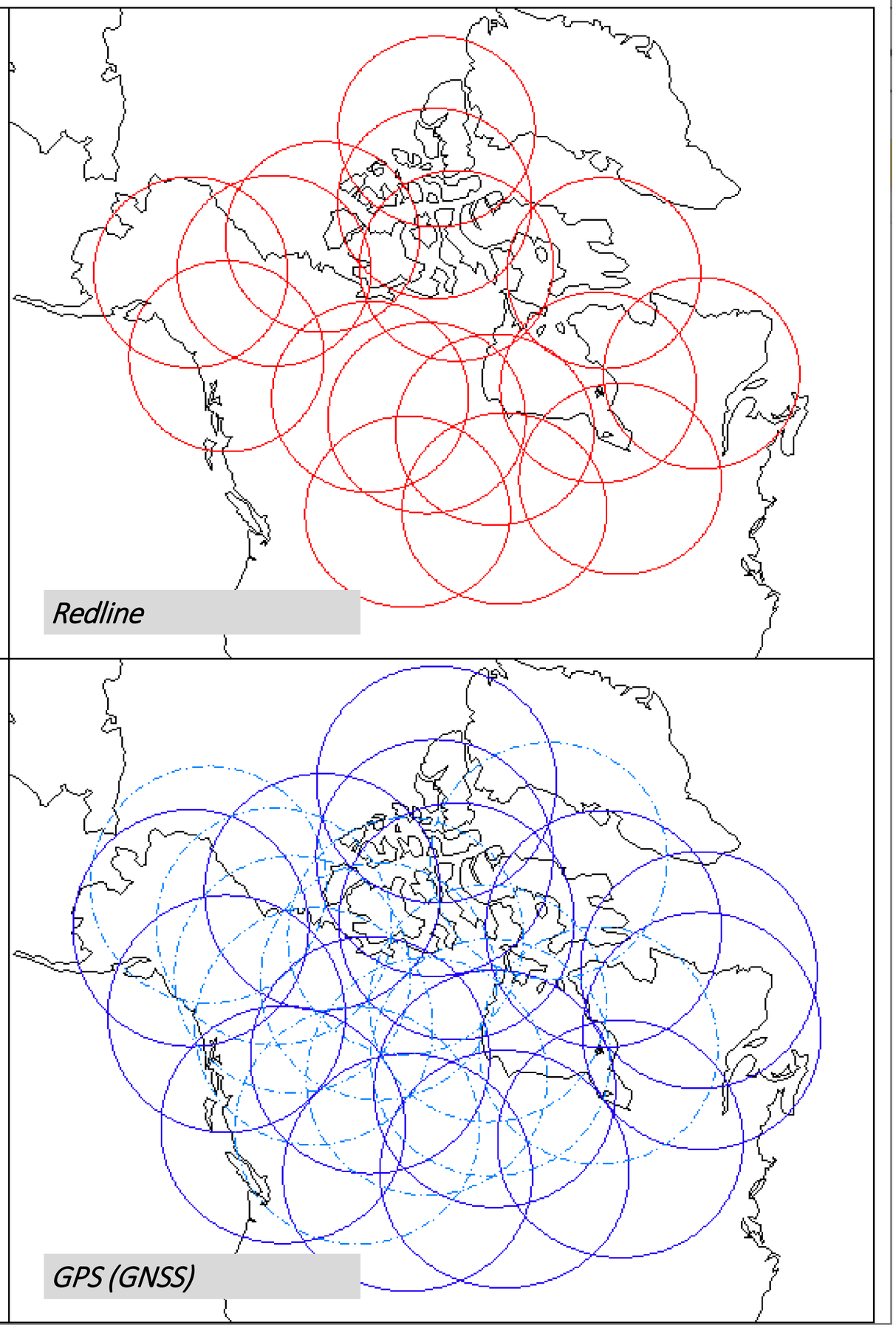
- *full color (greenline)*
- *equivalent to THEMIS-ASI `white light' data product*

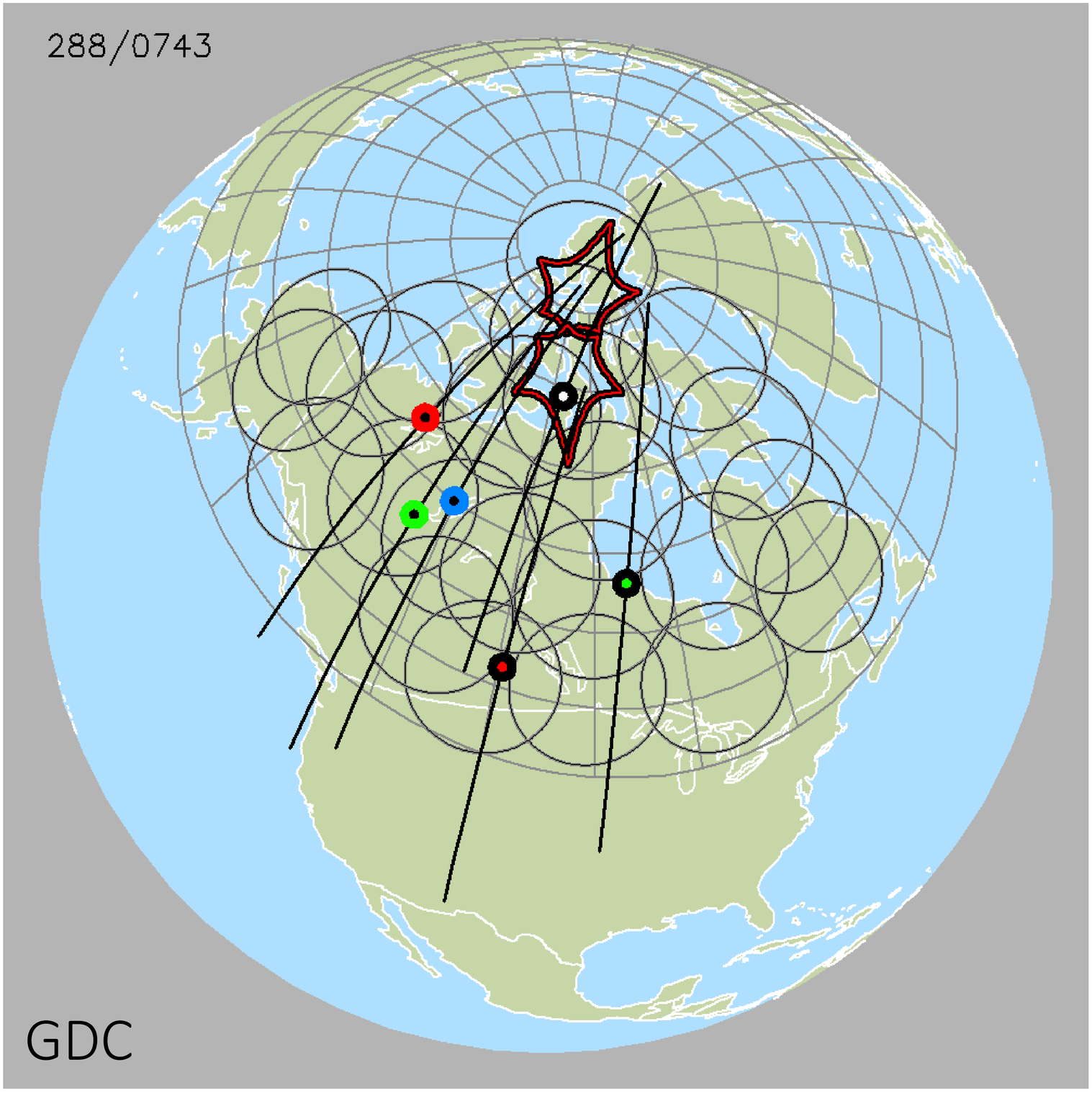
*Leverage for Canada the opportunity that is GDC*


SMILE-ASI

IDL 0




288/0743
GDC

This matters because we are entering the era of the system of systems. Canadian ground-based observations are unique in their ability to capture the mesoscale dynamics by which kinetic scale processes are spun up to have global, space weather, consequences.

Wouldn’t it be fabulous if the Canadian Space Agency were to commit to populating this viewing area with multi-parameter observations of aurora, convection, and magnetic fields, that researchers proposing missions to other agencies could count on? What we mean is that at present, writing Canadian observations into mission plans brings risk, because there is simply no promise that they will be there. A promise from Canada would mean researchers could propose absent that risk.