Working Title: Neutrino Geoscience

Common thread: Urey number and its importance to Earths energy budget

White paper chapters – lead author in bold:

1. Bulk composition of Earth and the process of planet formation – **Rick Carlson**, Matt Jackson
2. Distribution of Th and U in Earth’s interior – **Ved Lekic**, Rick Carlson
3. Distribution of heat production and its effect on mantle convection. What is needed to drive convection in a 10 TW Earth? **Dave Stegman**, Emma Rainey, Hernlund
4. Geodynamo power, heat flux across the CMB, link to Earth’s thermal evolution **Leah Ziegler**, John Hernlund, Dave Stegman, Jackie Li
5. Light elements in the core and consequences – **Jackie Li**, Leah Ziegler, Sanshiro Enomoto
6. Optimizing a geoneutrino experiment. Distinguishing a layered from homogeneous mantle – **Abby Kavner**, Emma Rainey, Steve Dye, Ved Lekic

Target journal: G-cubed

3-4 pages per chapter

2 display items per chapter

unlimited refs

Deadlines:

1 September – 1st draft of each chapter sent to chapter authors

15 October – completed chapters sent to Carlson for merging/editing to be reviewed by all authors

1 December – Edited complete paper