**Title of Presentation:** Magnetic frustration…

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**Abstract:**

Magnetic frustration, as a result of competition between interactions that cannot be satisfied simultaneously, remains a topic of considerable interest in condensed matter science, which can lead to intriguing quantum ground states such as spin ice and spin liquid and provides an excellent testing ground for theories. Herein we study the new frustrated members, SrTb2O4 and SrTm2O4, in the system of SrRE2O4 (RE = rare earth) compounds. By polarized and unpolarized neutron scattering, we solve an incommensurately-modulated spin structure and observe an in-plane magnetic anisotropy for SrTb2O4, whereas, in SrTm2O4, we did not observe any magnetic order, providing a critical step toward a complete understanding of the related magnetic interactions and frustrations.

**References:**

[1] J.-J. Wen, W. Tian, V. O. Garlea, *et al*., *Phys. Rev. B* **91**, 054424 (2015).

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