Contribution ID: **51** Type: **Short talk**

# Investigation of magnetic ground states of pyrochlore iridate and hafnate by polarized neutron scattering

*Tuesday, 16 June 2015 11:40 (20 minutes)*

Pyrochlore iridates and hafnates A2B2O7 (A= rare earth ion, B=Ir, Hf), in which both the A site and the B site consists of corner-shared tetrahedral, are of particular interest due to the presence of both strong spin-orbital coupling and geometrical frustration. Recently, we have successfully synthesized high quality powder samples of Nd2Ir2O7 and Nd2Hf2O7 which high quality powder samples have been synthesized by solid-state reaction. By employing polarized neutron spectrometer DNS, we have investigated these two compounds magnetic ground states. Both two samples show k=0 antiferromagnetic long-range ordering but with different ordering temperature which may be caused by the magnetic ordering of Ir4+ ions.

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**Session Classification:** Quantum phenomena

**Track Classification:** Quantum phenomena