Abstract Submitted
for the TS4CF08 Meeting of
The American Physical Society

Evolution of Magnetism in $Sr_{2-x}La_xFeO_4$ system of compounds at low temperature KARUNAKAR KOTHAPALLI, New Mexico State University, ABDEL ALSMADI, The Hashemite University, H. KAWANAKA, National Institute of Advanced Industrial Science and Technology, HEINZ NAKOTTE, New Mexico State University — We report on the evolution of magnetism at low temperature in two compounds of the $Sr_{2-x}La_xFeO_4$ system. Our studies confirmed the room temperature structures of both the compounds that crystallize in the tetragonal K_2NiF_4 structure with I4/mmm space group. Both the compounds have antiferromagnetic ordering temperatures above 100K. Low temperature neutron diffraction were taken on the Single Crystal Diffractometer at Los Alamos Neutron Science Center and Intensed Pulsed Neutron Source(IPNS) to gain more insight into the evolution of magnetism below 30K and the nature of transitions evidenced in the previous studies.

Karunakar Kothapalli
New Mexico State University

Date submitted: 22 Sep 2008 Electronic form version 1.4