

## Special Issue on Through Neutrino Eyes: The Search for New Physics

### Call for Papers

The year 2014 will mark the 60th anniversary since the neutrino detector of Frederick Reines and Clyde L. Cowan, Jr. was turned (neutrino detection in 1956, Nobel Prize for Reines in 1995). After many years, Super-Kamiokande showed in 1998 that neutrinos are massive (Nobel Prize in 2002). The recent measurement of a nonzero 1-3 mixing angle by the Daya Bay, Double Chooz, and RENO experiments bolsters the likelihood that new experiments will be able to measure the mass hierarchy and CP violation, if any, in the leptonic sector. This knowledge will help in understanding the theoretical origin of neutrino mass and mixing. On the other hand, precision measurements of neutrino properties will also permit the use of neutrinos as a tool for probing new physics connected with neutrinos, like dark matter or dark energy. There are a huge number of ongoing and upcoming neutrino experiments worldwide studying these issues.

To celebrate the 60th anniversary of the first neutrino detector, we invite investigators to contribute original research articles as well as review articles for this special issue focusing mainly on physics at underground detectors and its complementary studies at the LHC to uncover the nature of neutrinos as well as physics beyond standard model. Potential topics include, but are not limited to:

- Physics at underground detectors: magnetized (e.g., INO) and nonmagnetized
- Physics with neutrinos at the LHC
- Physics with neutrinos from astrophysical sources
- Testing of fundamental symmetries like CP, CPT with neutrinos
- Detection of nonstandard interactions through neutrinos
- Testing of the nature of neutrinos: Dirac versus Majorana
- Theories and experiments for the origin of neutrino masses and mixing, e.g., using a flavor symmetry
- Physics with sterile neutrinos and its searches
- Indirect detection of dark matter and dark energy through neutrinos

Before submission, authors should carefully read over the journal's Author Guidelines, which are located at <http://www.hindawi.com/journals/ahp/guidelines/>. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ahp/neyes/> according to the following timetable:

Manuscript Due	Friday, 25 April 2014
First Round of Reviews	Friday, 18 July 2014
Publication Date	Friday, 12 September 2014

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