

**XVII Workshop on Neutrino Telescopes  
Palazzo Franchetti - Venice, 13-17 March 2017**

**Poster Session  
Submission of Abstract**

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Submitter: Name, Affiliation, e-mail **Shao-Feng Ge, MPIK (Germany), gesf02@gmail.com**

Author: **Shao-Feng Ge, Manfred Lindner, Werner Rodejohann**

Title of the Poster:

**Probing New Physics with Atmospheric Neutrino Trident Production**

Abstract Text: (no longer than 800 characters)

Summary: (no longer than 400 characters. Insert a tag, key word, topic, etc.)

We propose to use atmospheric neutrinos as a powerful probe of new physics beyond the Standard Model via neutrino trident production. The final state with double muon tracks simultaneously produced from the same vertex is a distinctive signal at large Cherenkov detectors such as PINGU and ORCA. We calculate the expected event numbers of trident production in the Standard Model. In order to illustrate the potential of this process to probe new physics we obtain the sensitivity of PINGU and ORCA on new vector/scalar bosons with coupling to muon neutrinos.

For details please check: [arXiv:1702.02617](https://arxiv.org/abs/1702.02617)

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Kindly follow the instructions above and send the abstract in a .pdf file to the local organizing committee e-mail address by February 24<sup>th</sup>, 2017.

Response will be sent to the submitter's e-mail address indicated above, by March 3<sup>rd</sup>.

Posters will be exhibited all week long at the workshop site. Discussion will take place on Thursday March 16<sup>th</sup>, during the Poster Party. At least one author must be available for "question-answer" time.

Best 3 posters will be awarded on Friday 17<sup>th</sup>, during the closing plenary session of the workshop.