Contribution ID: **213** Type: **Sectional**

The development on HYBRILIT of the Machine-learning algorithms for identification and separation of the neutron and gamma-ray signals obtained from the DEMON detector

Friday, September 29, 2017 11:40 AM (15 minutes)

We apply several machine-learning (ML) algorithms for identification and separation of the neutron and gamma-ray signals coming from the DEMON (DEtecteur MOdulaire de Neutrons) detector. The ML-predictions have been contrasted with the results obtained within a standard method based on an integral-area scheme. In the situations where the standard method fails a properly trained ML-algorithm provides more adequate predictions and, therefore, performs much better.

Primary author: Dr PODGAINY, Dmitry (JINR)

Co-authors: Dr STRELTSOV, A.I (Institut für Physik und CINSaT, Universität Kassel, Germany); KOZULIN, E.M. (JINR); Dr STRELTSOVA, Oksana (JINR); Mr BUTENKO, Yurii (JINR)

Presenters: Dr PODGAINY, Dmitry (JINR); Dr STRELTSOVA, Oksana (JINR)

Session Classification: Computations with Hybrid Systems (CPU, GPU, coprocessors)