Contribution ID: **103** Type: **Poster**

An ontology for Photon and Neutron Experimental Techniques (PaNET)

In Germany alone, approximately 5500 scientists generate 28 petabytes of data each year using Photons and Neutrons Experimental Techniques (PaNET). Such a large volume of data needs to be catalogued in a meaningful way to ensure Findable, Accessible, Interoperable and Reusable (FAIR) data [1]. To adhere to the FAIR data principle, an ontology of Photon and Neutron (PaN) experimental techniques (PaNET) has been developed over the years. The ontology includes terminologies related to different PaNETs and groups them according to functional dependence, experimental probe, purpose, and experimental physical process. The goal of this ontology is to facilitate consistent PaNET terminologies by providing global persistent identifiers, community-agreed labels and synonyms, and human-readable definitions, annotations and references [2]. The current state of the developed ontology includes several tags, which can be found online [3]. Further contributions to expand the ontology are planned in this work. These contributions are expected to complement and further develop the current state of ontology.

[1] URL:https://doi.org/10.5281/zenodo.8040606
[2] URL:https://doi.org/10.5281/zenodo.4806026
[3] URL: https://expands-eu.github.io/ExPaNDS-experimental-techniques-ontology/webvowl/index.html

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Session Classification: Poster