



HighNESS Data Management Plan

Valentina Santoro

HighNESS kick-off Meeting, 26 October 2020

Data Management Plan



- As requested by the call on month 6 of the project (March 2021) we need to formulate a Data Management Plan (DMP), which should address the relevant aspects of making data **FAIR – findable, accessible, interoperable and re-usable**
- The purpose of this document is to support the data management life cycle for all data that will be collected, processed or generated by the project. It provides a description of the data types the project will generate and how the data will be collected and stored and made available for validation, exploitation and re-use by others.
- Through this DMP projects can define certain datasets to remain closed according to the principle "as open as possible, as closed as necessary"

Project Number: 951782

Project Acronym: HighNESS

Project title: Development of High Intensity Neutron Source at the European Spallation Source



DATA MANAGEMENT PLAN

Lots of questions that we need to address already in the template from the EC

What is the purpose of the data collection/generation and its relation to the objectives of the project?

What types and formats of data will the project generate/collect?

Will you re-use any existing data and how?

What is the expected size of the data?

To whom might it be useful ('data utility')?

Types of data



During the project, different types of data will be collected/generated:

- scientific publications (mainly journal articles, conference proceedings),
- grey literature (informally published written material not controlled by scientific publishers, e.g. reports),
- data sets (data underlying publications and/or raw data).
- Scientific Software (we promise Open Source Software)
- A Cloud resource *”to provide data needed to model thermal neutron scattering in MgH₂, intercalated graphite, nano-diamonds, and clathrate hydrates, A cloud resource to allow users to perform McStas simulations of instruments (new and existing) that view the ESS high intensity moderators,”*

Publications



From the proposal *"Publications prepared within HighNESS will be public to the extent possible. The aim is to make all publications and the data collected publicly available (gold open access, OA), unless this is in conflict with privacy issues or potential further exploitation with the project outcomes. All the public deliverables will be accessible from the project web site."*

We already discussed in the WP –leaders meeting we will try to have publications Open Access when not possible we will submit the publications in arXiv

Dataset



We will collect several experimental data:

- For the Neutron scattering data collected at ILL (WP3) we will follow the ILL data policy that the data will become public available after three years, within which the experimental team has exclusive right to use the data and publish results.
- For the prototype measurements, still under discussions how we will deal with the data probably we will release them after the publication

Software will be released In open access form



WP2:

NCrystal will be released through Github (free software with Apache License, C++ and Python) Libraries in appropriate formats: standard ENDF-6, ACE and/or NCrystal own ncmat format.

Hooks for Monte Carlo codes: will be supplied for free software codes (e.g. Geant4, McStas, OpenMC). Still under discussion the proper way to release in the case of licenced codes (e.g. MCNP, PHITS).

WP6: The Software developpe will be added to McStas repository

WP8: Neutron optics simulations will result in public available McStas components

For the NNBAR detector simulation there is already a repository set up both on Github and Gitlab and there are instructions, available to the nnbar-computing list, as well as on Slack on how to clone them.

Conclusions



Data Management Plan due in March 2021

A lot of materials already in the proposal

Discussions on-going in the WP-leaders meeting

Input received by several WPs