Contribution ID : **51** Type : **Poster**

Pydingo, a new GUI software package for simple CT reconstruction

Monday, 4 November 2024 18:15 (20)

The neutron imaging instrument DINGO did use Octopus for CT reconstruction since operational until Ocotpus has withdrawn further support. We tried several new software packages and did end up using Tomopy and the graphical extension Neutompy for a while. Unfortunately, these packages require some skills in python scripting and lacking user friendliness. Because of our diverse customer base, we were looking into a user-friendly GUI providing the functionality of Tomopy and the GPU acceleration of the Astra Toolbox. A new MacOS version without GPU acceleration is available as well.
The new developed Pydingo provides once installed easy access to Tomopy and the Astra Toolbox through its GUI which comes in three different sections. The first section handles the repreparation of the raw data including normalisation and selection of region of interest. A new algorithm for intensity correction and beam hardening is included. In addition, a phase retrieval can be selected. The corrected image output will be handled in a second section calculating the centre of rotation, tilt and final reconstructed slices. The reconstruction algorithm is available for parallel and cone beam geometry. All GUIs are open source and can be extended with additional correction and reconstruction algorithms.

Topics

Neutron Instruments and Techniques

Primary author(s) : GARBE, Ulf (ANSTO); Dr PILLICCIA, Daniele (IDtools)

Presenter(s) : GARBE, Ulf (ANSTO)

Session Classification : Posters