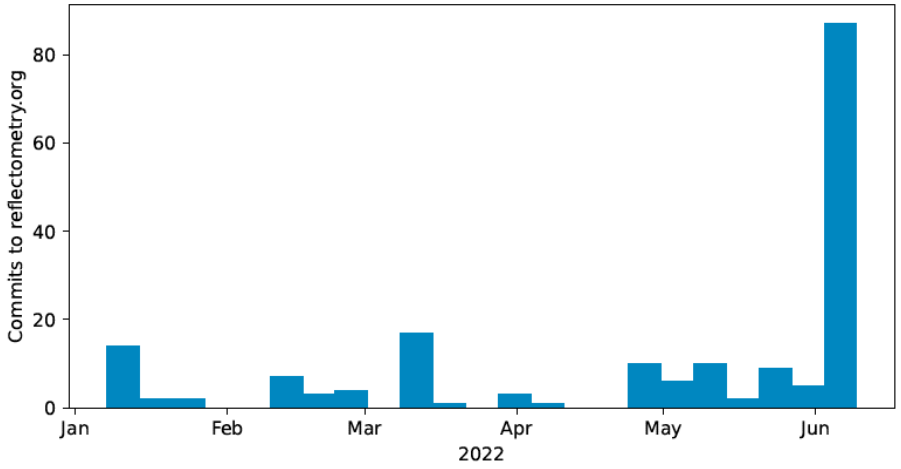
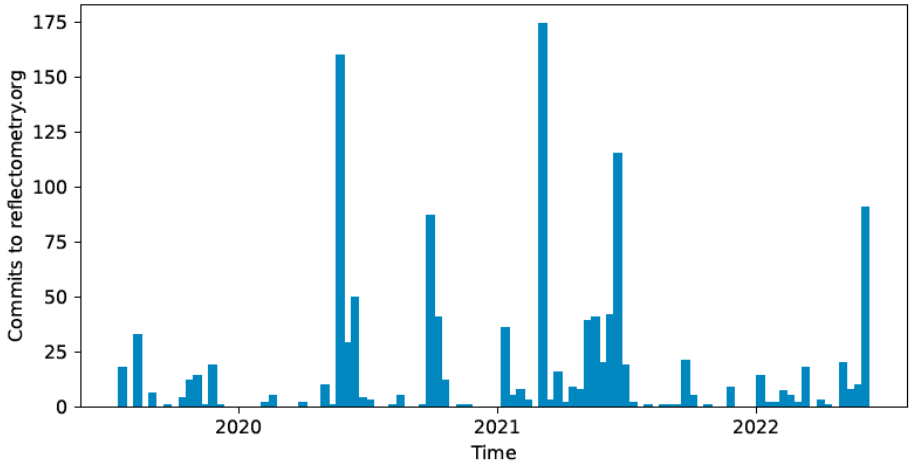
ORSO Meeting Stats

- 66 Registrations (despite very limited advertising)
- Peak attendance of sessions was about 25-30 for some of the plenary sessions
- Active sessions had around 10 attendees – but this was ideal as could be quite productive with that number.
- YouTube videos have already been watched around 40 times (in total)

Web page editing

- A good attendance and made some real progress in teaching people to modify the webpage
- Significant spike in modifications
- Added detail to the information pages and corrected out-of-date content (including identifying circa 100 broken links!)





Vote result

ORSO Voting

Do you approve of the release of orsopy? **Answered:** *18*

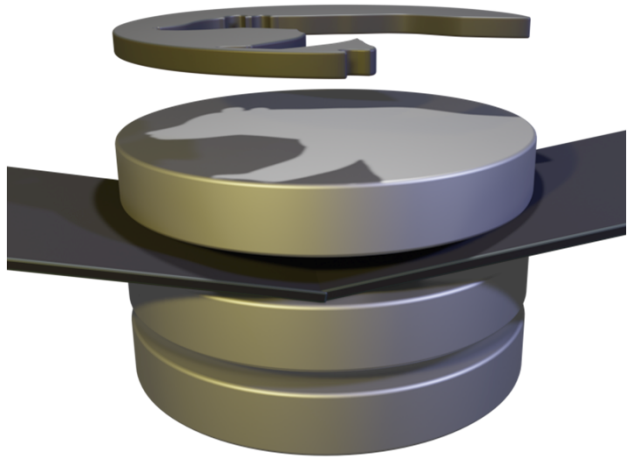
A. Yes: 17 (94.44%)

B. No: 1 (5.56%)

- There was additionally 1 vote (yes) received by email.
- The motion is therefore passed!
- We would still be happy to receive feedback for future releases

ORSO GA 2022: SLD database session

- Presented the updated website interface with all features\
- Collected feedback from the participants
  - Generally positive, interface is mature enough for general use
  - Small improvements of workflow/interface have been proposed
  - It is a useful tool already used by researchers and students in their daily work
- Entered 25 new materials into the database
  ➔ 309 materials available for use
- After final debugs we will publish the page



Teaching material

Three groups worked on new teaching material for reflectometry.org/learn these focused on:

- Improving the Born approximation discussion
- Adding a section to cover the description of refractive indices and how these are found for neutron and X-rays
- Greater discussion of the optimisation processes.

These improvements have been opened as new branches in the Github repo and in the coming weeks (after a vacation probably). ARM will be working to blend these into the existing material.

Priors and probabilities:

We had a fantastic discussion on the priors and probabilities paper, with lots of valuable feedback from those involved. In the coming weeks a new draft will be shared with all attendees for comment. If you could not attend the event but are interested in being involved, please email andrew.mccluskey@ess.eu to be added to the follow up.

Talk: Andrew

The file formats working group projects:

.ort file format definitions & orsopy

- version 1.0 ready for release
- result: pro 19, contra 1 => accepted
- feedback (sample history, reserve key words, information about stitching ....) to be discussed for future versions

-> Please implement, use and report.

simple model language

- YAML structured hierarchy allowing for simple (1 line) to complex models
- can be integrated into .ort header
- still under development
- relies on external data base (e.g. ORSO SLD data base)

-> Please contribute!

***HDF5 data file**

- for storing multidimensional data sets, complex resolution functions, ...
- discussion on dictionary and information organisation started

-> Please contribute!

Thursday Plenary Session

- Hayden Robertson presented his open source package for analysing ellipsometry data *refellips* (without propriety GUI's!). Interfaces with refnx and allows multi-technique refinements
- Alessandro Greco presented his machine learning based approach for model refinement *mlreflect*. This uses neural networks to very quickly get refined models for simple systems.

ORSO Open Reflectometry Standards Organisation

ORSO Data Analysis Working group Summary Friday 10th of June

Chair: Was Andrew Nelson - Special thanks to him for his dedication due to the odd hours he has had to keep to do this!

The initial session had three themes:

- Validation codes and cases for testing NR/PNR in software to make sure they are giving equivalent correct answers:
  – Offer from someone to take on the GenX PNR validation (David Cortie/Artur Glavic)

- Standard Samples discussion:
  - Explanation of the ISIS standards box and a discussion of various materials for making NR standards that are robust and inert.
  - Fruitful discussion on PNR standards for testing PNR/PA and polarisation in general. Agreement that we should collaborate further on this!

- Systematic errors in XRR measurements:
  - Andrew Caruana introduced the further work he and his collaborators have been doing on XRR measurements and minimising/dealing with the systematic errors inherent in them. This was considered extremely interesting and valuable by the group.
  - Andrew and company have agreed to start an ORSO Wiki to transfer some of the knowledge. But it's very much a work in progress as it's hard going.

The second session had Wojciech Potrzebowski introducing the work done by the CanSAS community on handling resolution functions and a discussion on how to use this with reflectivity data. IT appears there is a lot of scope for this.
  - Andrew Nelson has a kernel for doing Monte Carlo simulations for resolution functions that would be very useful for this.

Thanks for your Input!