



Data analysis working group

# Model language – simplified model description

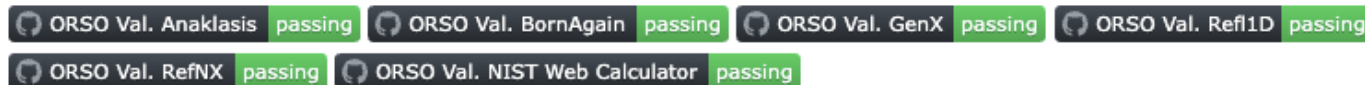
```
sample:
  model:
    origin: guess based on preparation / XRR
    stack: air | 10 ( Si 70 | Fe 70 ) | Si
    materials:
      Fe
        magnetic_moment: 2.2
        sld: 5.02e-6
      Si
        formula: SiN0.01
        rel_density: 0.95
    globals:
      length_unit: angstrom
      m_moment_unit: muB
      roughness: 5
      sld_unit: 1/angstrom^2
    reference: ORSO model language | 1.0 | http://bla.bli
```

# Validation of analysis package calculations

- Checks reflectivity calculation for various test cases
- Improve interoperability by showing how to use various packages to calculate reflectivity
- New polarised datasets added (David Cortie, ANSTO)
  - 100 Å Fe film on MgO aligned with field to give maximum SA, minimal SF (all roughness 3 Å)
  - 100 Å Fe film on MgO aligned at 90 degrees to field to give maximum SF, minimal SA (all roughness 3 Å)

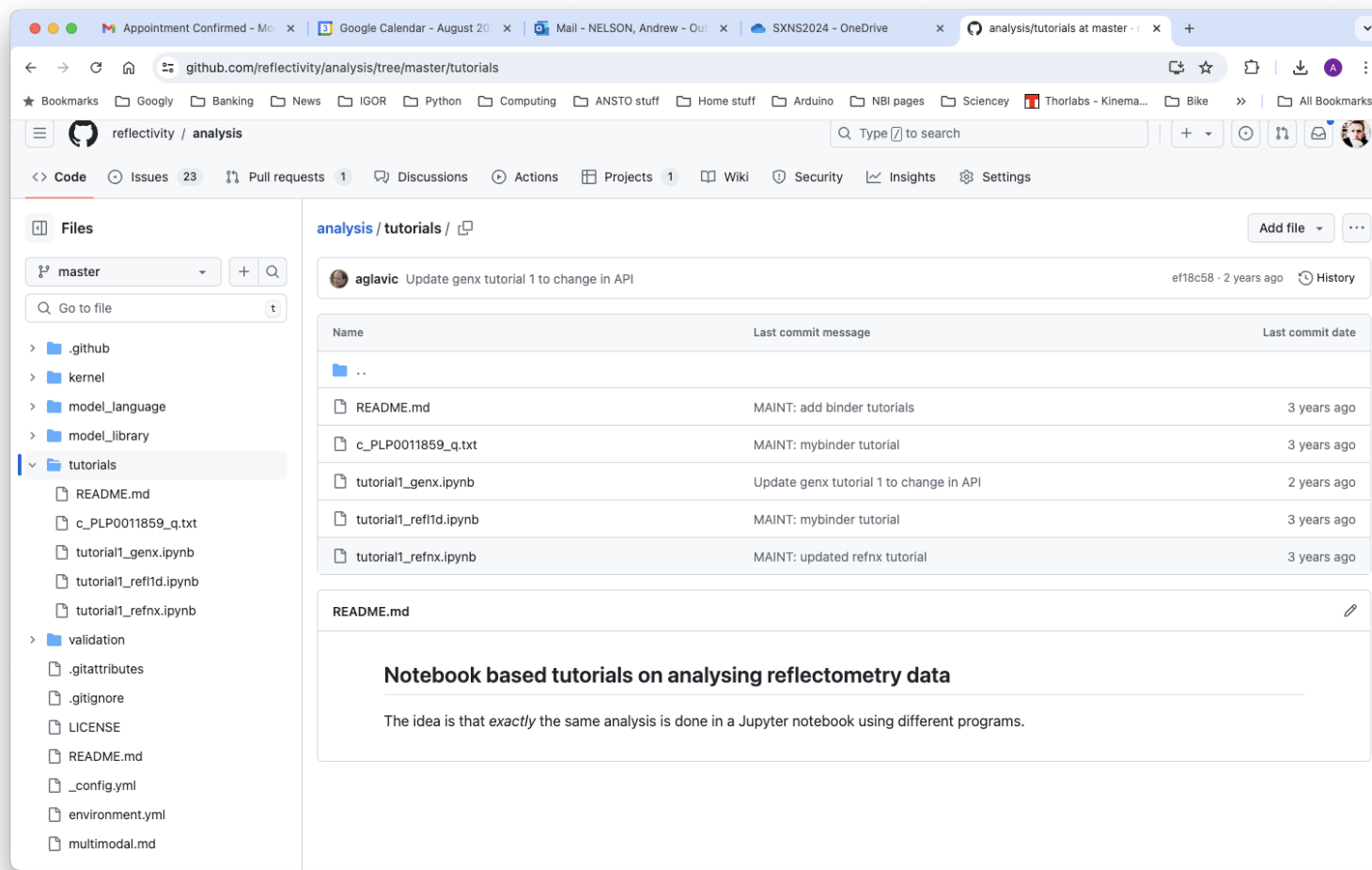
## Analysis for Reflectivity Data

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This is a repository for documents related to the operations of the [ORSO Data Analysis working group](#)

# Simple tutorials



The screenshot shows a web browser displaying the GitHub repository page for `reflectivity/analysis`. The repository is viewed at the `tutorials` directory. The left sidebar shows the file tree with the `tutorials` folder selected. The main content area displays the commit history for the `tutorials` directory, showing a list of files and their commit messages. The `README.md` file is open, showing the title **Notebook based tutorials on analysing reflectometry data** and the text: "The idea is that *exactly* the same analysis is done in a Jupyter notebook using different programs."

Files in the `tutorials` directory:

- `README.md`
- `c_PLP0011859_q.txt`
- `tutorial1_genx.ipynb`
- `tutorial1_ref1d.ipynb`
- `tutorial1_refnx.ipynb`

Commit history table:

Name	Last commit message	Last commit date
..		
README.md	MAINT: add binder tutorials	3 years ago
c_PLP0011859_q.txt	MAINT: mybinder tutorial	3 years ago
tutorial1_genx.ipynb	Update genx tutorial 1 to change in API	2 years ago
tutorial1_ref1d.ipynb	MAINT: mybinder tutorial	3 years ago
tutorial1_refnx.ipynb	MAINT: updated refnx tutorial	3 years ago

README.md content:

### Notebook based tutorials on analysing reflectometry data

The idea is that *exactly* the same analysis is done in a Jupyter notebook using different programs.

# Starting interaction with ISA for codesigning

- Help distribute reflectometry software packages without security / virus warnings
- Easier to install on managed (corporate, lab) computers