MagLab-OSF Integration Tools

F. F. Balakirev, C. B. Bailey, L. L. Balakireva, LANL

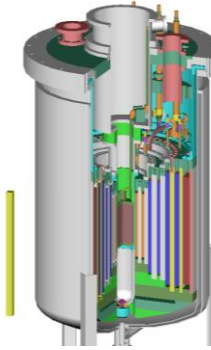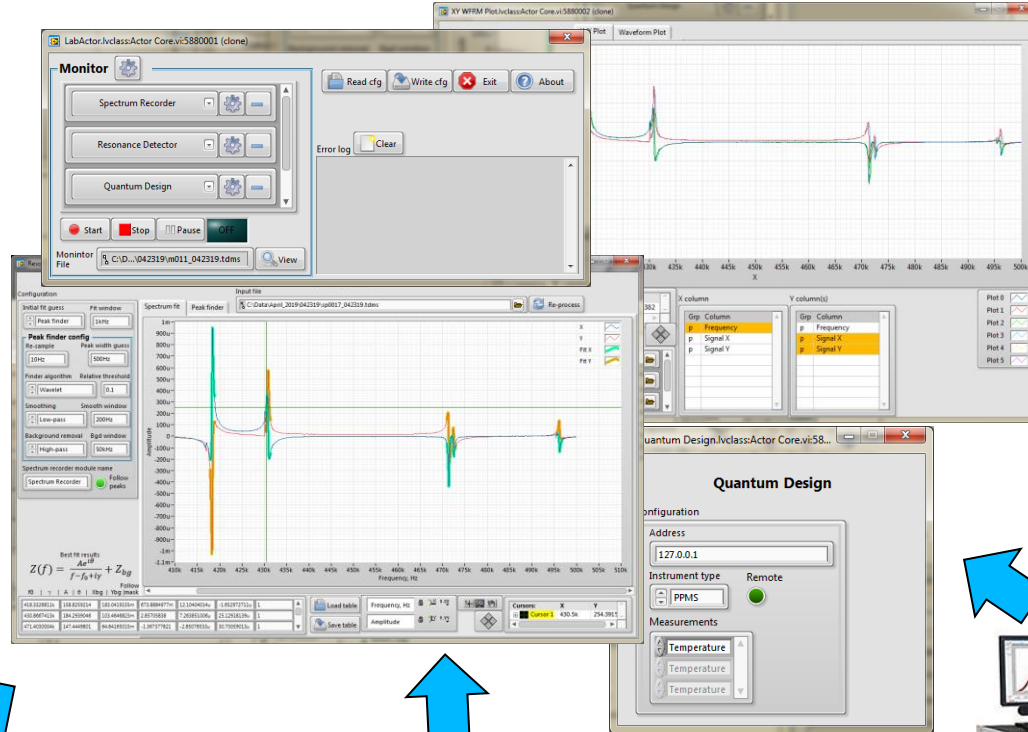# High Magnetic Field Science Toolset

Data Acquisition, Annotation, and Presentation Framework

NI LabVIEW Actor Framework (LabActor)
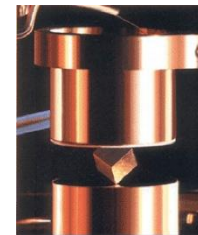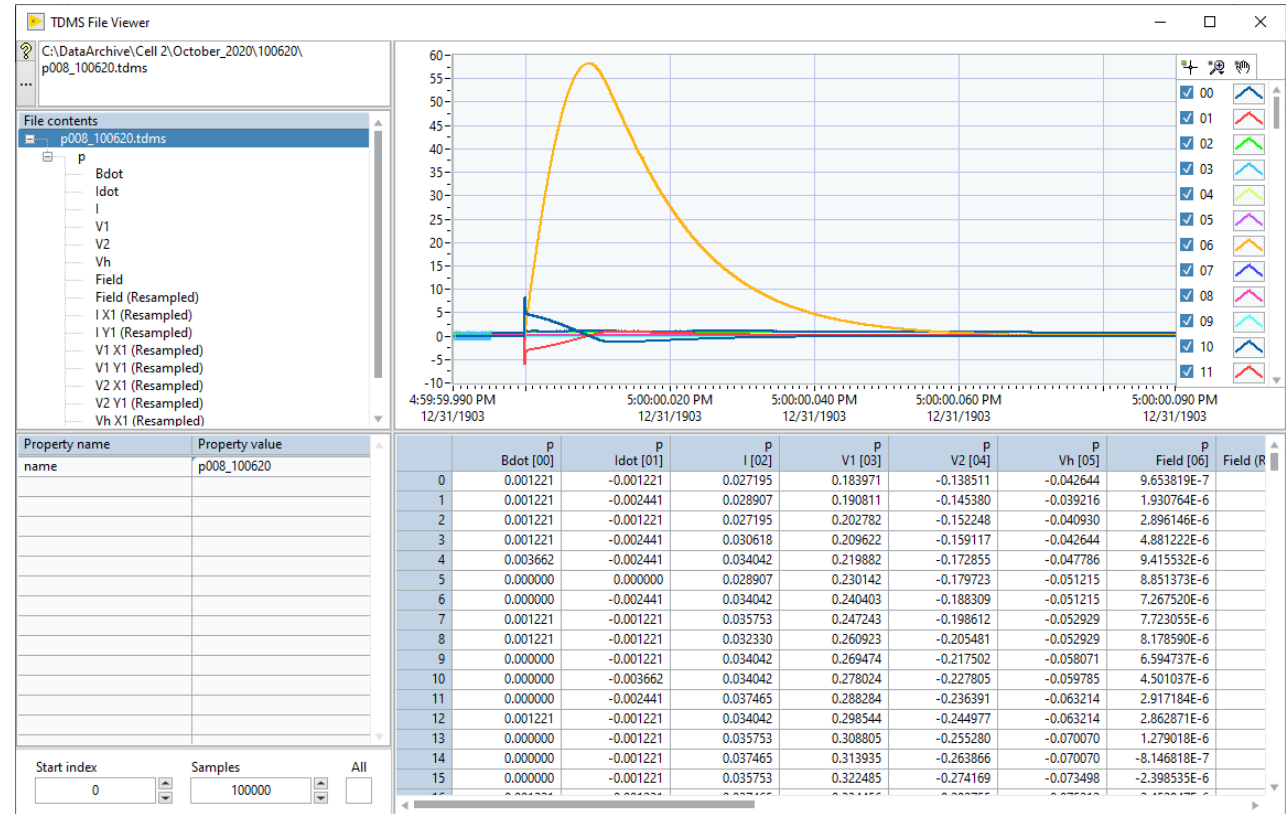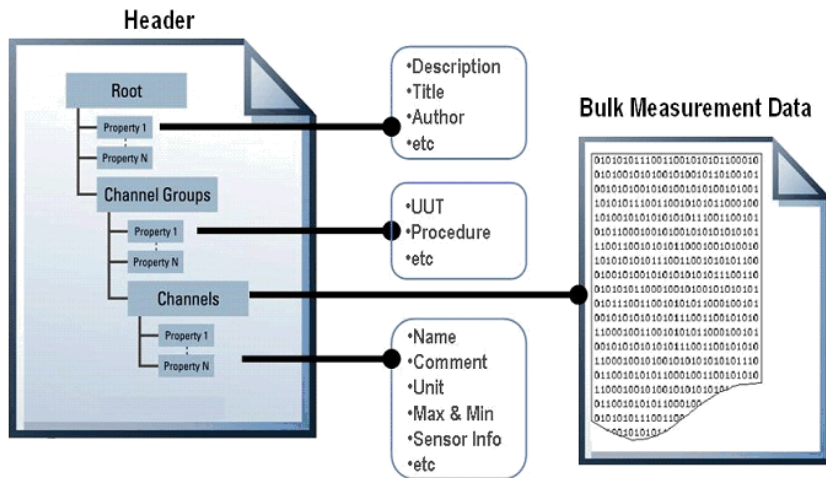https://github.com/ffb-LANL/High-Magnetic-Field-Science-Toolset

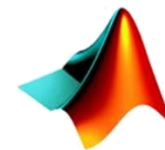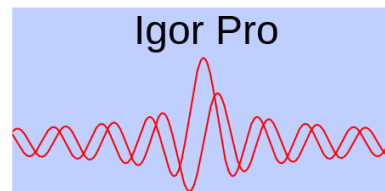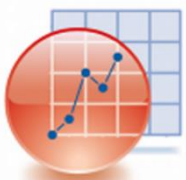# FAIR-Ready Metadata-Rich Data Formats

Technical Data Management Solution
and Hierarchical Data Format 5

Industry-standard **Interoperable** hierarchical data file formats with embedded rich metadata

Interoperability

Hierarchical Data Formats at MagLab

Captured data interspersed with relevant metadata

MagLab User Program Metadata

MagLab User Program Calendar

MagLab User Project Portal

MagLab Project Metadata Hub

MagLab User Program Calendar

Apache Wicket frontend, Jersey (jax-rs) for rest API, SQLite database

MagLab Project Metadata Hub Integration

MagLab Research Software Framework (LabActor)

Apache Wicket frontend, Jersey (jax-rs) for rest API, SQLite database

MagLab Project Metadata Hub Integration

Experiment selection tool

MagLab Research Software Framework (LabActor)

MagLab Project Metadata OSF Syncronization
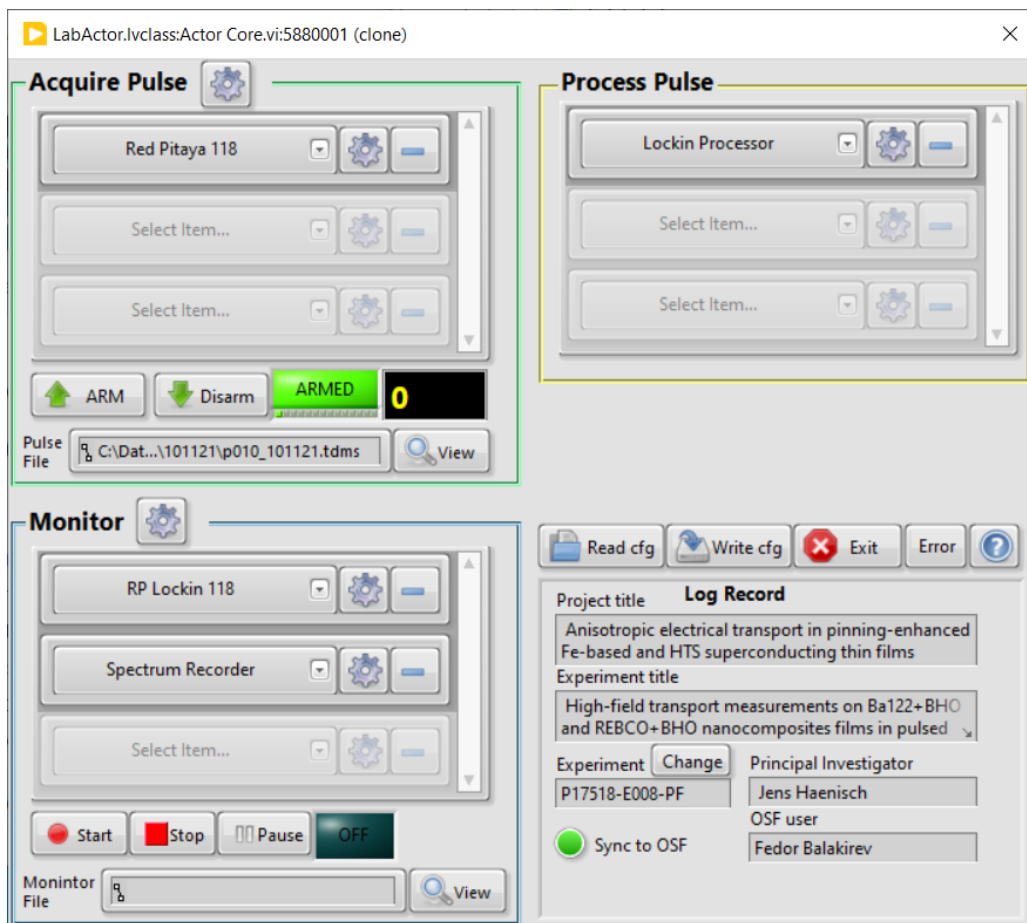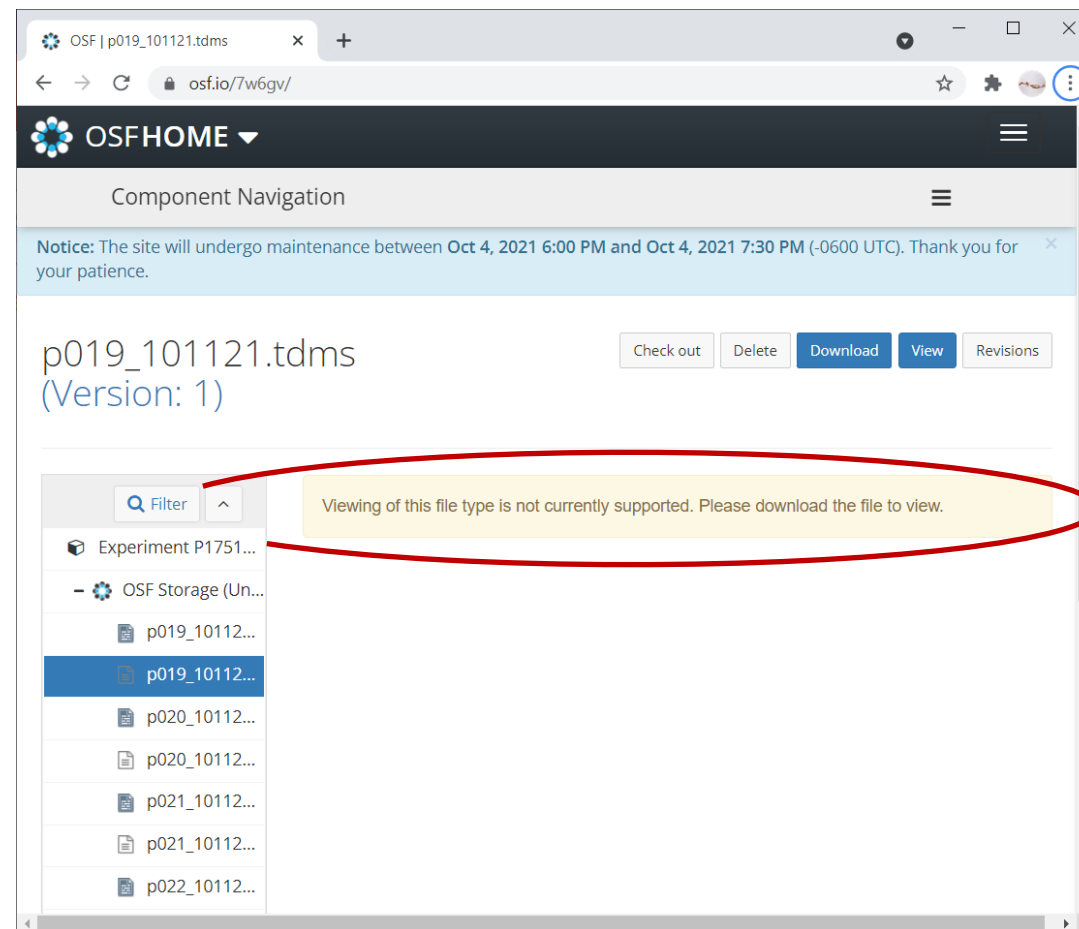

MagLab Research Software Framework (LabActor)

Pre-populated private OSF project workspace

Hierarchical Data Formats and OSF

MagLab Research Software Framework (LabActor)

Captured data upload to linked OSF project
But what's inside? Is it searchable?

Hierarchical Data Formats and OSF Metadata listing

MagLab Research Software Framework (LabActor)

Accompanying metadata listing

Hierarchical Data Formats and OSF
TDMS/HDF5 File Renderer

https://journal.code4lib.org/articles/16223

MagLab OFS Log Book Helper

MagLab Research Software Framework (LabActor)

Pre-populated OSF experiment log book

MagLab-OSF Integration Tools

The tools for users to create OSF projects linked to their MAGLAB project on the User Portal and the official magnet time calendar.

Pre-populate the OSF project description and wiki with the project metadata.

Data recorded during the user experiment can be uploaded to the corresponding OSF project in FAIR-ready formats.

Use OSF to preview the file content and metadata