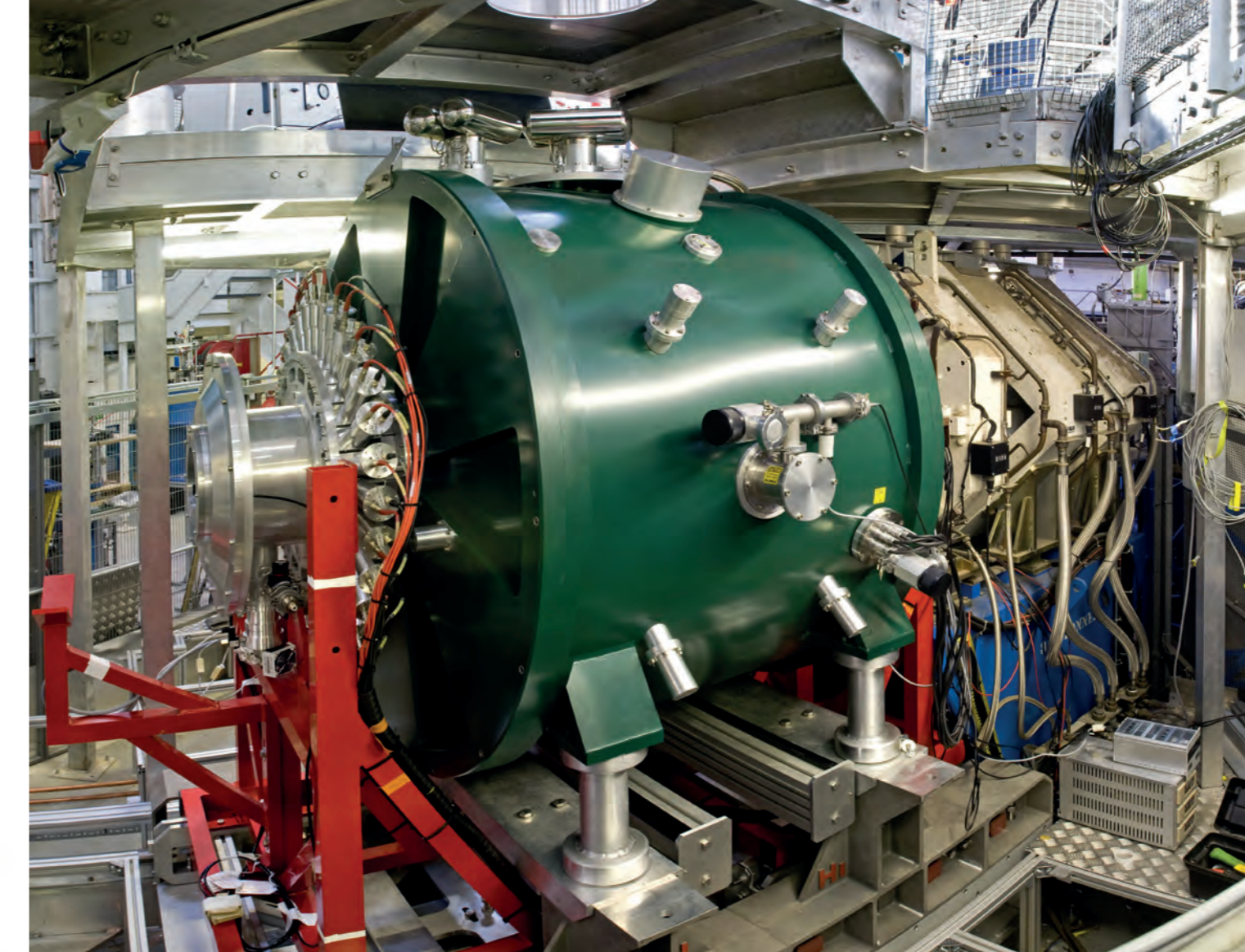


## Objectives

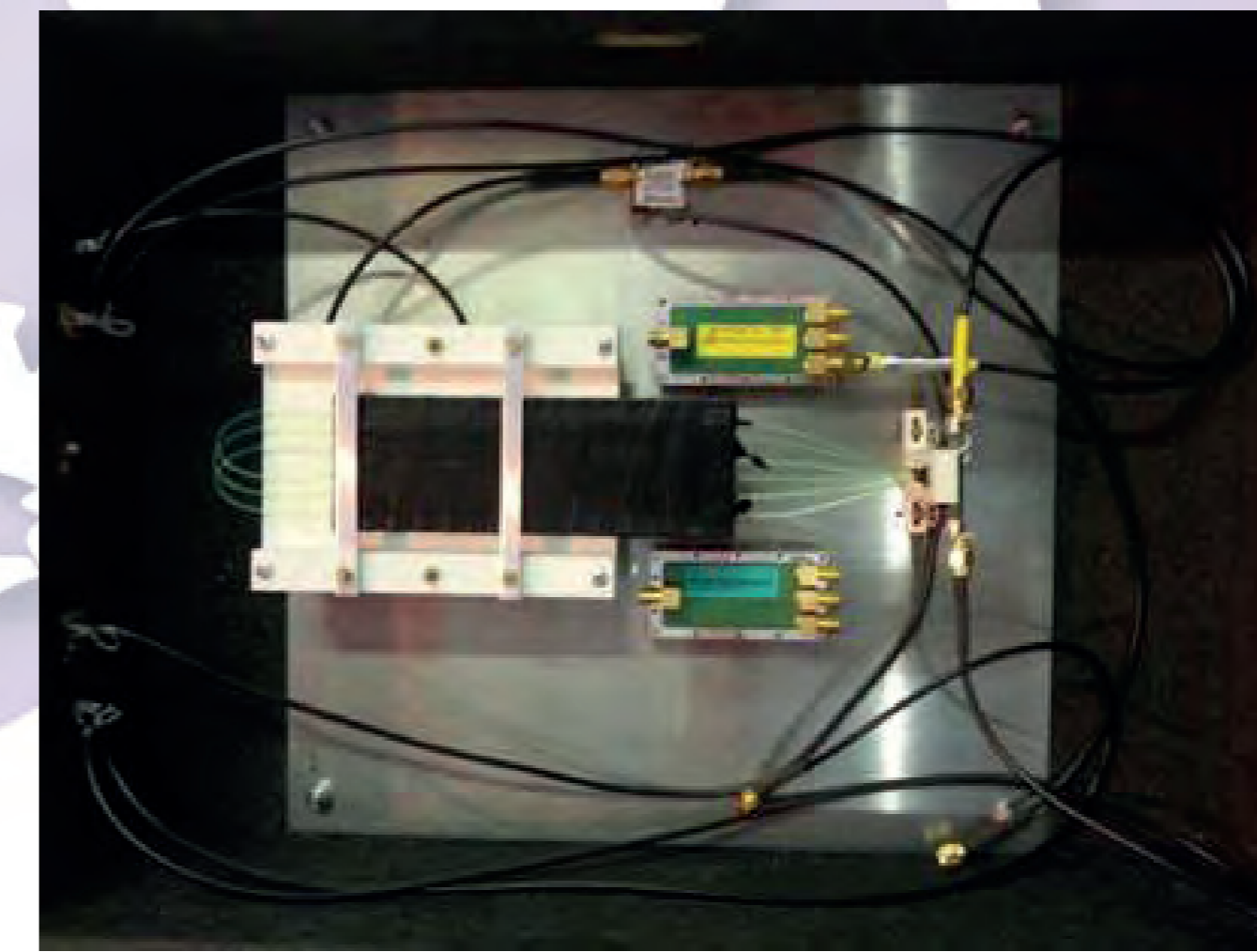
1. To develop new technologies and data treatment for muon spectroscopy
2. Outreach to promote the muon technique

### Software Development for Muon Data Analysis

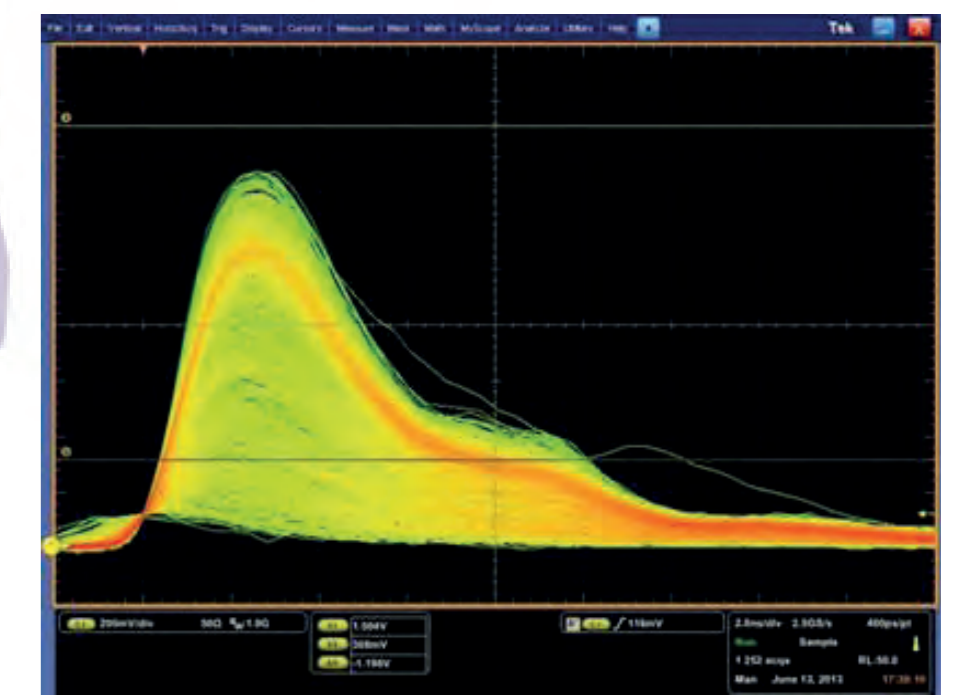
- New routines to improve the efficiency of data analysis
- Linking simulation and analysis codes to help with data interpretation
- New codes:
  - interface for analysing Avoided Level Crossing (ALC) spectra
  - routines for phase-quadrature and rotating reference frame data transforms
  - computational methods based on GPUs to speed up minimisation routines and Fourier transforms for handling large datasets
- Integration of existing simulation codes:
  - 'Quantum' package revised
  - Python algorithms for dipolar field calculations
  - Evaluating integration of Density Functional Theory Codes



ISIS and PSI high field spectrometers



Comparing PMT and APD Deadtimes

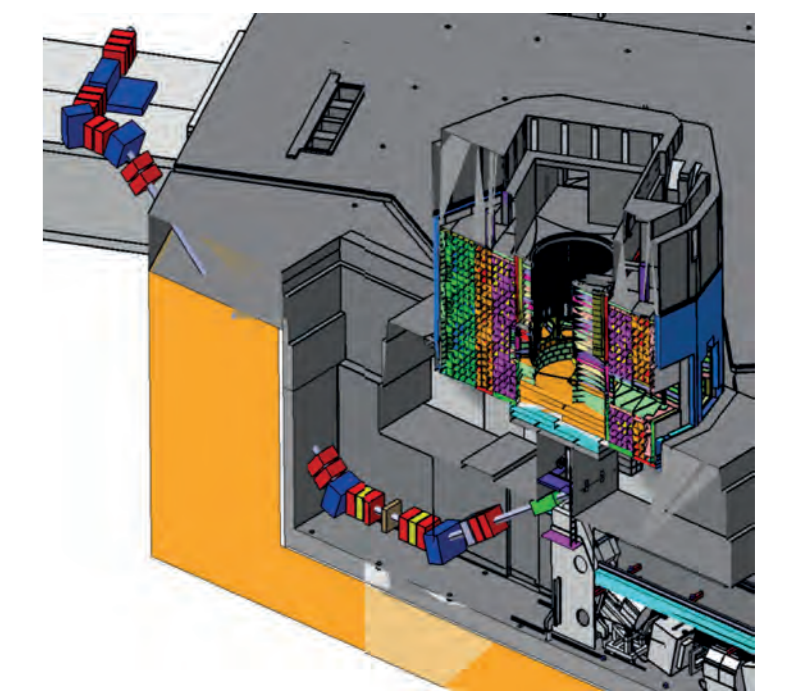


### Concept Studies for Future Muon Sources

- Concept study for a muon micro-beam
- "Future Muon Sources" Workshop



Delegates from the workshop



Future PSI Source

### Detector Technologies for Pulsed Muon Sources

- Developing SiPM technologies for measurements of very high instantaneous data rates, typical at pulsed muon sources
- SiPM test array – evaluating device deadtime



### Outreach: Developing the Muon user community

- Publicity material: applications of  $\mu$ SR in high magnetic fields
- Workshops on "Functional Materials" and "Soft Matter"
- Muonsources.org

