

Charge for BIFROST analyser conceptual design review, 30th May 2018

Review panel: Ken Andersen (chair), Arno Hiess, Klaus Habicht

During the detailed design phase, the last scientific design issue having a large impact on the detailed engineering design of the Bifrost instrument as a whole, is the issue of the secondary spectrometer geometry. The design of the analyzers are crucial for the energy and Q-resolution of the entire instrument. Furthermore, the design of the secondary spectrometer tank depends heavily on the performance choices for both analyzers and cross talk shielding. Therefore, making those design choices and validating them with external and internal review is a top priority for the project.

The main points of evaluation are:

- 1) Is the individual analyzer geometry sound; choices for vertical coverage, placement of blades, curvature, distances etc.
- 2) Is the performance of the analyzers as expected?
- 3) Is the arrangement of the analyzers and corresponding crosstalk shielding sound? Is it sufficient for background purposes?
- 4) Is the choice of analyzer mounting well suited for reducing background?