

ARW 2024

Accelerator Reliability Workshop

MAX IV and ESS are Excited and Pleased to Announce their Joint Hosting

Contribution ID: 62

Type: **Oral**

Unknown beam dump investigations at MAX IV

Wednesday, 26 June 2024 08:50 (25 minutes)

MAX IV is a synchrotron radiation facility based on a 3 GeV linear accelerator, which powers a soft and hard x-ray storage ring, as well as a short pulse facility. For these three subsystems, a rigorous downtime record is kept, classified according to a comprehensive list of root causes. Recently, the storage rings at MAX IV have had an increase in downtime events without a clear root cause. This presentation will showcase a variety of externally and internally developed tools deployed at MAX IV, and how they were used to understand previously unknown beam dumps and improve accelerator reliability.

Although several unknown beam dumps have been successfully analyzed, a number of poorly understood events remain. Potential blind spots in the MAX IV investigation techniques, as well as future work to improve downtime analysis will be discussed. With this presentation, we hope to spark a discussion on downtime analysis and classification methods and how we at MAX IV could enhance our current techniques.

This topic is presented on behalf of the Accelerator Operations group at MAX IV.

Primary author: NIEUWENHUIS, Rutger Arend (MAX IV)

Presenter: NIEUWENHUIS, Rutger Arend (MAX IV)

Session Classification: Lessons Learned