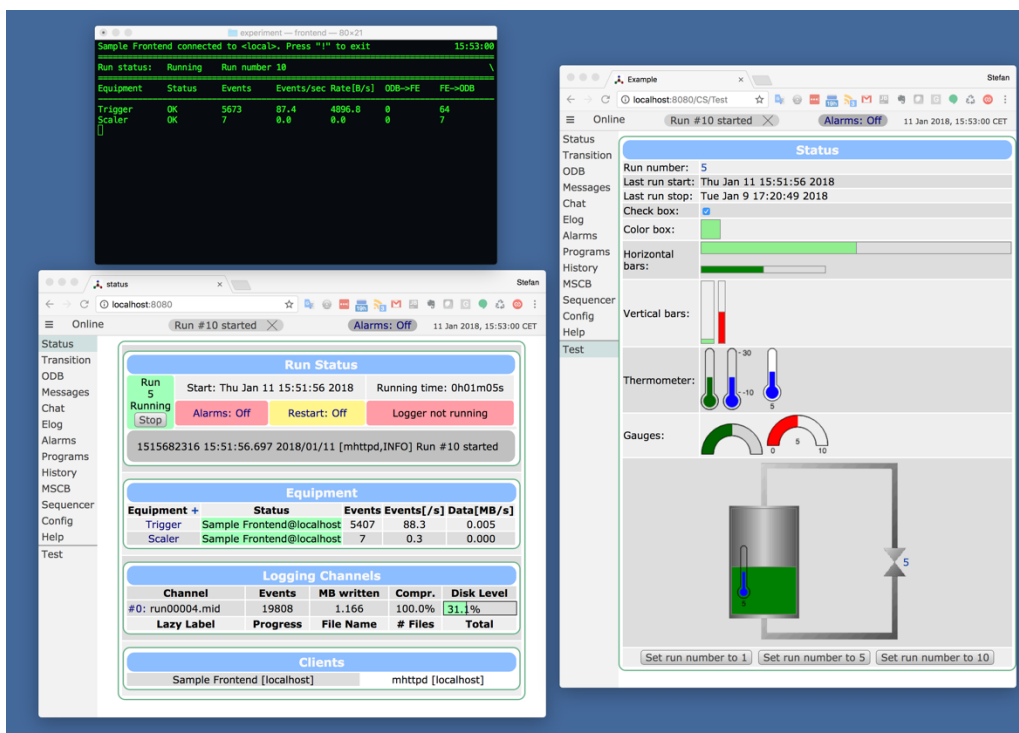# The MIDAS Data Acquisition System for Test Beams

Abstract

The Maximum Integrated Data Acquisition System (MIDAS) has been used in many test beam experiments over the last years. It has been developed in a collaboration between PSI, Switzerland and TRIUMF, Canada, and is constantly updated and extended after its initial revision more than 20 years ago. This tutorial gives a basic overview of the MIDAS components and concepts and their application to test beams. It covers event-based data acquisition, slow control of beam lines and other experiment components, data visualization and its web-based user interface. Various short demonstrations show various MIDAS components and example programs.

Participant Preparation

As a preparation for this tutorial, participants can visit the MIDAS documentation at

https://midas.triumf.ca/MidasWiki/index.php/Midas_documentation

In addition, participants are encouraged to install the MIDAS system and additional components prior to the tutorial. This is not required, since all programs will be demonstrated on a central computer, but it gives the participants the opportunity to test the example programs on their own laptop. Although Windows is in principle supported by MIDAS, then example programs are targeted to Linux and MacOSX only. They require a C++ 11 compiler.

MIDAS installation: https://midas.triumf.ca/MidasWiki/index.php/Quickstart_Linux

ROOT installation: https://root.cern.ch/downloading-root

ROOTANA installation:
https://midas.triumf.ca/MidasWiki/index.php/Quickstart_Linux#ROOTANA_Package_Installation

Slides and example programs for this tutorial: https://goo.gl/NNMu8q