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## **PETRA III operation and studies in 2022**

*Monday, 8 May 2023 16:30 (2 hours)*

The Synchrotron Light Source PETRA III is one of the core facilities at DESY offering each year more than 2000 users unique opportunities for experiments with hard X-rays of a very high brilliance. The light source is operated mainly in two operation modes with 480 and 40 bunches at a beam energy of 6 GeV. The availability and failure statistics is reviewed for the year 2022 in comparison with previous years. Studies at PETRA III are supporting the technical design phase for the planned upgrade PETRA IV. Several diagnostic devices have been tested and the installation of a cavity has been prepared. Furthermore, the operation of PETRA III at 5 GeV has been studied with the goal to reduce the electric power consumption of the accelerator. But a 5 GeV test run for all beam lines at PETRA III showed that this operation mode is impairing the experimental opportunities due to the lower brilliance and photon flux for hard X-rays.

### **Funding Agency**

### **Footnotes**

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Yes

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