

WAO'18: Workshop on Accelerator Operations



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Integration of Operators into the Maintenance of the Insertion Device at the PSI

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In addition to shift work in the control room, the operators perform secondary activities in various specialist groups during their normal working hours.

Secondary occupation in the division Insertion Device

Outside of shift work, we are involved in the maintenance of the insertion device of SLS and SwissFEL. These maintenance can only take place in the machine shutdown, which becomes a problem of manpower allocation.

The service, which is determined by fixed maintenance intervals, includes the lubrication of the guide rails, the drive spindles and oil changes on the drive motors or the motor gearbox. This guarantees smooth operation and eliminates any deposits. Likewise, possible damage and/or wear and tear can be detected in good time during regular maintenance.

An analysis of the oil we use for the gearboxes has shown that it is possible to extend the maintenance interval by one year and then a new analysis provides information on whether the interval can be even further extended or changed. Through this analysis, the PSI saves approx. 5500 francs per saved oil change on all insertion devices.

A further task is the assembly of the new insertion devices for SwissFEL and their maintenance during operation. In the course of this work, we will also be involved in smaller projects of the department and will be able to work on and accompany them independently.

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