MLZ User Meeting 2023



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Type: Talk (20 min + 5 min discussion)

Sodium Source Based Measurements at the CDBS in Between Reactor Cycles

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The Coincidence Doppler Broadening Spectrometer (CDBS) at the NEutron induced POsitron source MUniCh (NEPOMUC) uses positrons as a microprobe to investigate material defects on an atomic level. The instrument can give insights into open volume defect concentrations in samples. However, additionally, by utilizing the coincidence feature and advanced evaluation software the chemical environment around the positrons annihilation site can be investigated. During the reactor shutdown the instrument has used a 22Na source to perform bulk measurements. The findings of several studies on AlCu alloys, as well as high statistics measurements will be shown. The latter gives a better insight into the behavior of the positron in bulk materials, specifically the thermalization process.

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