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Emission Mössbauer spectrometer from ILmenau (eMIL): An update

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The advanced emission Mössbauer spectrometer, eMiL (Emission Mössbauer from Ilmenau) was built for the emission Mössbauer (eMS) collaboration at ISOLDE/CERN. The set-up is based on the emission geometry and combines on-line and off-line isotope implantation used to measure hyperfine interactions in solids. Using radioactive Mössbauer probes that are ion-implanted to the sample by the GLM setup, eMiL has multiple advantages over the more common transmission or electron conversion setups. The versatility of the set-up is epitomized through five different lids: rotation, magnetic, powder, hot and cold lid. These lids can be easily interchanged, without the need for realignment, which makes eMiL extremely flexible during beam time. eMiL had its first successful run this year, which marked the first beam time for the Mössbauer collaboration since 2018. During this beam time it was proven that the set-up makes probe handling easy, while providing the flexibility needed by the eMS collaboration.

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