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**“Magic-angle” technique for suppression of inhomogeneous broadening of Mössbauer spectra** PETR ANISIMOV, YURY ROSTOVTSEV, OLGA KOCHAROVSKAYA, Texas A&M University — In this work, we demonstrate “magic-angle” technique with respect to Mossbauer spectroscopy. The case of dipole interaction of  $^{57}\text{Fe}$  is analyzed. Floquet-state perturbation theory for the RF modulation of the Mossbauer resonance and the concept of effective magnetic field is used to calculate the spectra of the 14.4 keV  $^{57}\text{Fe}$  nuclear transition. Our analysis provides physical insight into the technique and defines necessary range of parameters for an experimental realization.

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