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Shell model effective operators from IM-SRG STEVEN STROBERG, TRIUMF, HEIKO HERGERT, SCOTT BOGNER, MSU / NSCL, ANGELO CALCI, JASON HOLT, TRIUMF, TITUS MORRIS, MSU / NSCL, PETR NAVRATIL, TRIUMF, NATHAN PARZUCHOWSKI, MSU / NSCL, ACHIM SCHWENK, JOHANNES SIMONIS, TU Darmstadt — The past decade has witnessed the development of a number of ab-initio many-body methods which can reach to medium-mass nuclei and beyond. Recently, these techniques have been extended beyond doubly-magic systems by producing effective interactions for shell-model valence spaces, extending the reach of ab-initio theory to a large swath of the nuclear chart. This talk will discuss the use of the In-Medium Similarity Renormalization Group (IM-SRG) to produce consistent effective operators for use with these shell model interactions, yielding ab-initio radii, multipole moments, and transition rates for open-shell nuclei.

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