

Abstract Submitted
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Three-body effective range and other properties for ultracold bosonic atoms near a three-body threshold¹ SHINA TAN, KEVIN DRISCOLL, SHANGGUO ZHU, Georgia Institute of Technology — The two-body scattering length and the effective range are important parameters for ultracold atoms. We introduce an analogous concept of *three-body* effective range for three bosonic atoms near a three-body threshold. This will be useful for ultracold atoms near low-energy three-body resonances. It may also be relevant for certain nuclear systems near three-body resonances. For three bosons with large two-body scattering length, which display the Efimov effect, we derive *analytical* results for the three-body effective range and the two-body and three-body contacts at the three-body threshold.

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Shina Tan
Georgia Institute of Technology

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