Abstract Submitted
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Three-body resonances using slow variable discretization coupled with complex absorbing potential[1] JUAN BLANDON, VIATCHESLAV KOKOOULINE, Physics Dept., Univ. Central Florida, FRANCOISE MASNOU-SEEUWS, Laboratoire Aime Cotton, Univ. Paris XI, Orsay, France — We are investigating three-body resonances for a model three-particle problem using the slow variable discretization method of Tolstikhin *et al.* [1] coupled with a complex absorbing potential. We compare the results with those of Fedorov *et al.* [2]. We will also present preliminary calculations on Efimov resonances using our method. Efimov states are a universal set of bound trimer states which appear when there is a two-body weakly-bound or virtual state [3]. Bound states of Efimov trimers have been studied in a number of theoretical treatments. Efimov resonances can be viewed as three-body Feshbach resonances that decay into a two-body bound system and a free third body (diatomic molecule + free atom, for example). Recent experimental evidence for Efimov trimers in an ultracold gas of Cs atoms obtained by Kraemer *et al.* [4] has made the study of their resonances especially relevant. [1] O. I. Tolstikhin *et al.*, *J. Phys. B: At. Mol. Opt. Phys.* **29**, L389 (1996). [2] D. V. Fedorov *et al.*, *Few Body Systems* **33**, 153 (2003). [3] B. D. Esry *et al.*, *Phys. Rev.* **A54**, 394 (1996) and references therein. [4] T. Kraemer *et al.*, arxiv.org/abs/cond-mat/0512394

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