Progress toward post-adiabatic EMRI waveforms using the multiscale approximation JORDAN MOXON, Cornell Univ, EANNA FLANAGAN, Cornell University, TANJA HINDERER, University of Maryland, College Park, ADAM POUND, University of Southampton — I present updates on an analytic approximation method for use in computing orbits and waveforms for Extreme Mass Ratio Inspirals (EMRIs). EMRIs are of particular interest for future space-based gravitational wave detectors, such as (e)LISA. Such gravitational wave detectors will depend on precise predictions of the waveform to take full advantage of the available data. The analytic approximation method for which I present new developments is based on second order self force methods, improved by use of the two-timescale approximation method. Once complete, this method will allow efficient computations of highly accurate EMRI waveforms.

Jordan Moxon
Cornell Univ