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Waveforms from a gravitational self-force driven orbital evolution: quasi-circular Schwarzschild orbits KRISTEN A. LACKEOS, LIOR M. BURKO, University of Alabama in Huntsville, GAURAV KHANNA, University of Massachusetts Dartmouth — We evolve an extreme-mass-ratio binary for the specific case of quasi-circular Schwarzschild orbits, driving the orbital evolution with the full gravitational self force, including both its dissipative and conservative components. The orbital evolution is done in two methods: first by direct integration of the self force, and second by the method of osculating geodesics. When the conservative piece of the self force is artificially set equal to zero we find excellent agreement with results obtained with the usual energy balance approach. For the full gravitational self force we find the dephasing and other effects of the waveform.

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