1160-37-350 **Adrian P Bustamante***, apb7@math.gatech.edu, and **Rafael de la Llave**. *Gevrey estimates for asymptotic expansions of tori in weakly dissipative systems.*

We consider a singular perturbation for a family of analytic symplectic maps possessing a KAM torus. The perturbation introduces dissipation and contains an adjustable parameter, making the family conformally symplectic (the pull-back of the symplectic form is equal to a constant times itself – $f^*\Omega = \lambda\Omega$). By choosing the adjustable parameter one can ensure that, for a fixed frequency, the torus persist under perturbation. Such models are common in celestial mechanics. We prove that the asymptotic expansions of the quasi periodic orbits satisfy Gevrey estimates, that is, the n-th term of the expansion is bounded by a power of $n!$. (Received August 11, 2020)