1164-37-169 **Joan Gimeno***, Via della Ricerca Scientifica, 1, 00133 Roma, Italy, and **Renato Calleja**, **Alessandra Celletti** and **Rafael de la Llave**. *High precision computations for an invariant KAM attractor in celestial mechanics.*

We will talk about the existence of invariant attractors in conformally symplectic systems focusing on a physical model, the spin-orbit problem. We will explain a way to compute an invariant attractor with given Diophantine frequency. The construction is based on a KAM theorem for conformally symplectic systems, which provides also estimates on the breakdown threshold of the invariant attractor. We will give a sketch of the proof of the KAM theorem, which is based on an a-posteriori theoretical result. To construct the invariant attractor, we will use high precision numerical simulations to compute some of the required quantities.

This talk refers to joint works with R. Calleja, A. Celletti, and R. de la Llave. (Received January 18, 2021)