It is well known that Effective Stability Domains can occur in non-integrable dynamical systems with $N>2$ degrees of freedom even when $N$-dimensional invariant tori are not able to confine trajectories in the $2N$ phase-space and Arnold diffusion effects are expected.

We are interested in the global shape of the practical stability domains around each triangular equilibrium point of the spatial Restricted Three-body Problem for small values of the mass parameter. Particularly, we want to identify the invariant dynamical structures which account for the long-term confinement of trajectories and are at the boundary of these stability regions. We present a detailed numerical inspection of the escape processes, identifying two different scenarios:

(i) In the first case, the stable and unstable hyperbolic manifolds of the central manifold of L3 play a role in the confinement of trajectories (similarly to what happens for the planar version of the R3BP);

(ii) In the second case, the confinement of trajectories is due to the invariant manifolds of a bi-parametric family of unstable T2 tori associated to a family of periodic orbits that bifurcate from the vertical Lyapunov orbits in the central manifold of L5.