ISSM is embedded into MATLAB and Python, both open scientific platforms. This improves its outreach within the science community. It is entirely written in C/C++, which gives it flexibility in its design, and the power/speed that C/C++ allows. ISSM is svn (subversion) hosted, on a JPL repository, to facilitate its development and maintenance.

ISSM can also model propagation of rifts using contact mechanics and mesh splitting, and can interface to the Dakota software. To carry out sensitivity analysis, mesh partitioning algorithms are available, based on the Scotch, Chaco, and Metis partitioners that ensure equal area mesh partitions can be done, which are then usable for sampling and local reliability methods.

This work was done by Eric Larour and John E. Schiermeier of Caltech, and Helene Seroussi and Mathieu Moringhem of Ecole Centrale Paris for NASA’s Jet Propulsion Laboratory. For more information, see http://issm.jpl.nasa.gov/.

This software is available for commercial licensing. Please contact Dan Broderick at Daniel.F.Broderick@jpl.nasa.gov. Refer to NPO-48164.