A post-processor for analyzing and visualizing results from the SPIRAL code[1] PARAG SRIVASTAVA, ELIOT FEIBUSH, GERRIT KRAMER, PPPL — The full-orbit following code SPIRAL can calculate the effects of magnetic ripple fields, MHD activity, and ICRF fields on the confinement of fast ions in Tokamaks. The confinement of fast ions is very important for fusion plasmas because they heat the plasma when they slow down. With the SPIRAL code sets of data are generated for a large number of test particles. In order to extract useful information on the behavior of ensembles of those test particles a user-friendly graphical user interface (GUI) was developed. With this GUI the data can be visualized in different spaces, and changes in the particle populations due to MHD activity, ICRF waves, and ripple fields can be studied effectively. In this presentation simulations from the National Spherical Torus Experiment (NSTX) where finite Lamor radius effects are significant because of its low toroidal field, are presented to illustrate the capabilities of the GUI. The interface is based on the Java Native Interface (JNI) and is interfaced with a number of C routines for reading and processing the data that is generated by the SPIRAL code.

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