

Coding in advance of the Apr 2, 2018 class

For this coding exercise, use whatever canned routine you find convenient to (1) compute the K-S probability of sameness between data sets 1 and 2 (which are the Gaussians described in the lecture), and (2) compute the K-S probability of sameness between data sets 3 and 4 (which are mass lists from, respectively, neutron stars that are not in double neutron star binaries, and neutron stars that are). The latter two data sets are available through <https://stellarcollapse.org/nsmasses>, which is kept updated by Jim Lattimer. In both cases, please put on a single plot the two cumulative distributions; do they appear different to your eye?

After you analyze the neutron star data sets, please think about whether (1) the measurement techniques or discovery options for the different types of neutron star might bias the results, or whether (2) there is some physical mechanism that might actually drive the systems to different masses.