Conductance of single walled carbon nanotubes by induced defects with ion irradiation CRISTINA GOMEZ-NAVARRO, Dpto física de la materia condensada, Universidad Autonoma de Madrid — In this work we report direct evidences of the influence of artificially induced defects, on the electronic transport of single walled carbon nanotubes. Defects are induced by Ar$^+$ ionic bombardment. Consecutive ion irradiation doses are applied to nanotubes producing an uniform density of defects. After each dose the electrical characteristics of the same carbon nanotube are measured by using a conductive atomic force microscopy. Using this method we are able to measure the resistance vs. Length characteristic of the nanotube after each known dose of Ar$^+$ ions. The results are fitted to $R(L)=R_C+R_0/2\exp(L/(L_0)_{total})$.where the localization length due to induced defect is $1/(L_0)_{total}=1/(L_0)_{ini}+1/(L_0)_{def}$ . The data present a decrease of $(L_0)_{def}$ with increasing doses.