Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

Study of the Structural Stability in Lithium and Sodium Undergoes High Pressures GERARDO VAZQUEZ-FONSECA, GREGORIO RUIZ-CHAVARRIA, FERNADO MAGAÑA — In this work we made a study of the structural stability of lithium and sodium undergoes high pressures using a first principles local pseudopotential. This kind of study was made previously successfuly in magnesium [1]. We used the total energy like comparison criterion to investigate the structural stability of studied metals and have studied three structures: fcc, bbc and hcp. We have simulated the different pressures on the metals having varied the r_s parameter, which is related with the electronic density parameter n_0. Finally, we found a prediction correct with the reports for the lithium, whereas for the sodium is partially correct the prediction obtained.

[1] Ruiz-Chavarra, Gregorio. Phys. Lett. A,**336**,210 (2005)

Fernando Magaña
Instituto de Fsica UNAM

Date submitted: 04 Dec 2006 Electronic form version 1.4