

Abstract Submitted  
for the GEC11 Meeting of  
The American Physical Society

**Effective charge fraction for ions bombarding SiC<sup>1</sup>** JUANA GER-  
VASONI, CNEA-CONICET, LEONARDO BIANCO, CONICET, JUANCARLOS  
FURNARI, CNEA — One of the main problems in the interaction of charged parti-  
cles with solids is the transfer of charge among them. The purpose of this work is to  
use the Bohr's adiabatic criterion [1] to study the ion-stripping process in a collision  
event, taking into account the projectile electronic structure [2]. We analyze the ef-  
fective charge fraction for different incident ions on silicon carbide composites, a new  
material that is being intensively investigated due to it presents many advantages  
for use in devices that involve working in extreme conditions as radiation damage  
[3].

[1] J. L. Gervasoni and S. Cruz -Gimenez. *Radiation Physics and Chemistry* **48**,  
433-436 (1996).

[2] S. A. Serebrinsky, J. L. Gervasoni, J. P. Abriata and V. H. Ponce. *Journal of  
Materials Science* **33**, 167-171 (1998)

[3] I. Shibahara. *Radiation Effects & Defects in Solids*, vol. 144, (1998) pp. 233-250.

<sup>1</sup>Acknowledgements to CNEA and CONICET, Argentina.

Juana Gervasoni  
CNEA-CONICET

Date submitted: 28 Jun 2011

Electronic form version 1.4