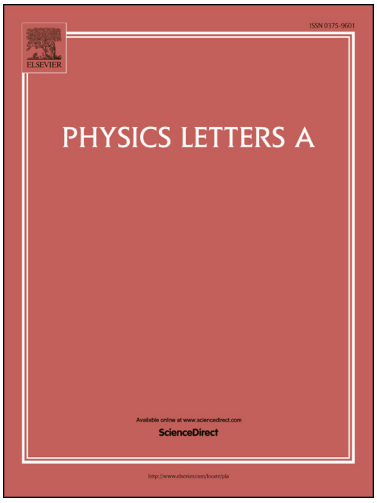
Accepted Manuscript



Wake potential of swift ion in amorphous carbon target

Nabil Janan Al-Bahnam, Khalid A. Ahmad, Abdullah Ibrahim Aboo Al-Numan

PII: S0375-9601(16)32070-9
DOI: http://dx.doi.org/10.1016/j.physleta.2016.12.029
Reference: PLA 24245

To appear in: *Physics Letters A*

Received date: 25 November 2015
Revised date: 2 December 2016
Accepted date: 12 December 2016

Please cite this article in press as: N.j. Al-Bahnam et al., Wake potential of swift ion in amorphous carbon target, *Phys. Lett. A* (2017), http://dx.doi.org/10.1016/j.physleta.2016.12.029

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- Wake effect in an amorphous carbon due to a moving proton were analysed.
- The wake potential was calculated based on the dielectric response theory.
- The oscillatory behavior of the potential depends on the proton velocity.
- Effect of electron binding on the wake potential was studied with first principles.
- Quantum oscillator is more compatible with the real material than other models.

Download English Version:

https://daneshyari.com/en/article/5496716

Download Persian Version:

https://daneshyari.com/article/5496716

Daneshyari.com