

Abstract Submitted  
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**Effect of resistivity on Alfvén Surface Waves Propagating Along Plasma-Vacuum Interface** NAGENDRA KUMAR, M.M.H. College, Ghaziabad, VINOD KUMAR, J.V. Jain College, Saharanpur, HIMANSHU SIKKA, Maharaja Agrasen Institute of Technology, Delhi — We study the effect of resistivity on Alfvén surface waves (ASW) propagating along partially ionized plasma-vacuum interface. We consider a partially ionized medium consisting of viscous incompressible ionized gas and neutral gas. A dispersion relation is obtained for such waves and solved numerically. The variations of real and imaginary parts of wave number  $k$  with viscosity parameter for different values of resistivity and other parameters are shown graphically. It is concluded that two mode structure of Alfvén surface waves results due to the effects of resistivity, viscosity and ion-neutral collisions taken simultaneously. These results are useful to study the ASW in laboratory and Astrophysical plasmas e.g. photosphere, chromosphere and interstellar clouds.

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