

Contracts Final Presentation 19-20 Feb. 2004

1. Title of the presentation

Electric sail: wire mesh in solar wind

2. Speaker

Pekka Janhunen

3. Abstract

We present a new idea for tapping the momentum of the solar wind for propulsion purposes. A wire mesh structure is expected to be an almost impenetrable obstacle for solar wind protons, provided that the structure is kept at a few kilovolt positive potential and the mesh spacing is smaller than the Debye length. We present preliminary numerical estimates showing that significant acceleration can in principle be obtainable using only modest electric power. We also discuss some topics that should be addressed to study the feasibility of the concept further.