Abstract Submitted
for the CAL12 Meeting of
The American Physical Society

The protection of shock wave for Interstellar travel YONGFENG WU, UMaine — Interstellar travel is definitely an important step for mankind in the future space exploration. Relativistic time dilation is then necessary to cover galaxy-scale distance in a reasonable amount of personal time. Consequently, interstellar hydrogen H, although only presents at a density of approximately 1.8 atoms/cm^3, will be a disaster for spaceships and passengers as it will turn to be a surprisingly high density flow with the effect of relativistic time dilation. Limiting the speed of spaceship may avoid severe H irradiation sets but this is inadequate for long distance trip in the universe. However, shock wave, automatically produced by high speed spaceship, will protect the spaceships and passengers from the radiation of H atoms.

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Date submitted: 05 Oct 2012 Electronic form version 1.4