

Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Dynamics of Photon in Positive Energy Space WOON YEO — A concept of positive energy space is introduced in this presentation. Dynamics of a photon in a positive energy space is explained here with an example of a photon propagating through multiple mediums of different density. When a photon goes through from air to glass the speed of photon decreases and when it exits from glass it resumes the original speed. This process of propagation is explained with the concept of positive energy space. In a double slit experiment, stream of photons passing through the slits create interference patterns. A double slit experiment with single electron at a time also creates interference patterns even though there are no second electrons to Interfere. A double slit experiment is modeled here with the dynamics of the positive energy space. The model contains two components. One is the interference by phase relationship and the second is the interference by positive energy space distribution. The single electron interference is, in the model, from the second component, positive energy space distribution. The streaming photons create patterns from both the phase relations and the positive energy space distribution. An experiment result with laser is presented that demonstrates the two components of double slit experiment. Demonstrated also is the interference pattern being created by adjacent beams traveling with different wave phase. The calculations for the positive energy space distribution of the double slits are also presented.

Woon Yeo

Date submitted: 20 Jan 2010

Electronic form version 1.4