**A Second Interaction Region For Gamma-Gamma, Gamma-Electron & Electron-Electron Collisions for a Linear Collider**, K.-J. KIM for The Second Interaction Region Collaboration, Lawrence Berkeley Laboratory, Berkeley, CA 94720 - We present a design of a possible second interaction region (IR2) for $\gamma\gamma$, $\gamma e^-$ and $e^-e^-$ collisions for a future linear collider for $e^+e^-$ collisions. In the IR2, high energy photon beams are produced via Compton backscattering of focused laser beams by the high energy electron beams and brought into collision with the opposing electron or photon beams. The IR2 will offer, for example, a unique opportunity for measuring the two-photon decay width of the Higgs, and provide a glimpse of the mass scale beyond the TeV range. With the goal of obtaining $L_{\gamma\gamma}$ about $10^{33}$ $cm^{-2}$ $s^{-1}$ within a 10% bandwidth, we use the electron beam parameters for the NLC $e^+e^-$ design, but modify the final focus optics. An array of optical mirrors brings the laser beam into a tight focus 5 mm upstream of the interaction point. The laser required must have about a TW of peak power and tens of kW of average power, and can be either a solid state laser or a free electron laser.

* Work supported by the U.S. Department of Energy.