

Abstract Submitted  
for the DAMOP17 Meeting of  
The American Physical Society

**Storage of Heralded Single Photons in Warm Atomic Ensemble.**

TAEK JEONG, HAN SEB MOON, Pusan National University — We report the correlated photon-pair generation and the storage of heralded single photons in a warm atomic ensemble. We observed the correlated photon-pairs from warm atomic ensemble of  $^{87}\text{Rb}$  by using spatially prepared optical pumping process. The process is realized by donut-like optical pumping beam. The photon pairs are generated at the dark region, which is the center of the optical pumping beam, for reducing fluorescent noise. And we performed experiment for storage of heralded single photons by using another warm  $^{87}\text{Rb}$  atom via electromagnetically induced transparency (EIT). We will illuminate single photon manipulation process based on warm atomic ensembles.

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Date submitted: 26 Jan 2017

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