

ABSTRACT

The apparatus includes a photon pair source for generating a photon pair that contains a signal photon and an idler
5 photon and correlates with the generating time, photon detectors for detecting a incidence of idler photons, a clock generator, a gate device controller for generating signals for opening or closing a gate device in a frequency lowering a specific number of times within a specified time defined by the clock, and a gate device for opening or closing the
10 gate in response to the signals from the gate device controller.