

## **Electron bunch pattern monitoring via Single Photon Counting at SPEAR3**

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In recent years the synchrotron radiation program at SPEAR3 has moved toward laser/x-ray pump-probe experiments which utilize a single timing 'probe' bunch isolated by a  $\pm 60$  ns dark space on either side. In order to quantify bunch purity in the region near the timing bunch, time-correlated single photon counting is used. In this paper we investigate methods to optimize the fill pattern and resolve satellite bunches in the region near the timing bunch. Integration of the Matlab measurement and data processing software into EPICS is reported.