



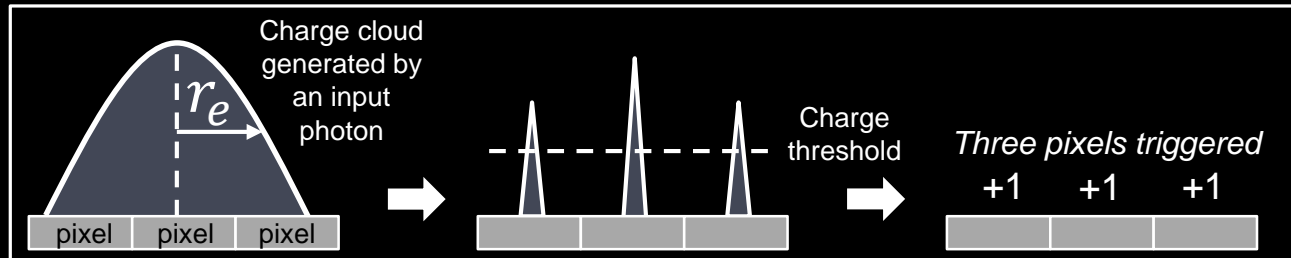
How Does Anti-Charge Sharing Impact DQE(0) of Photon Counting Detector Systems?



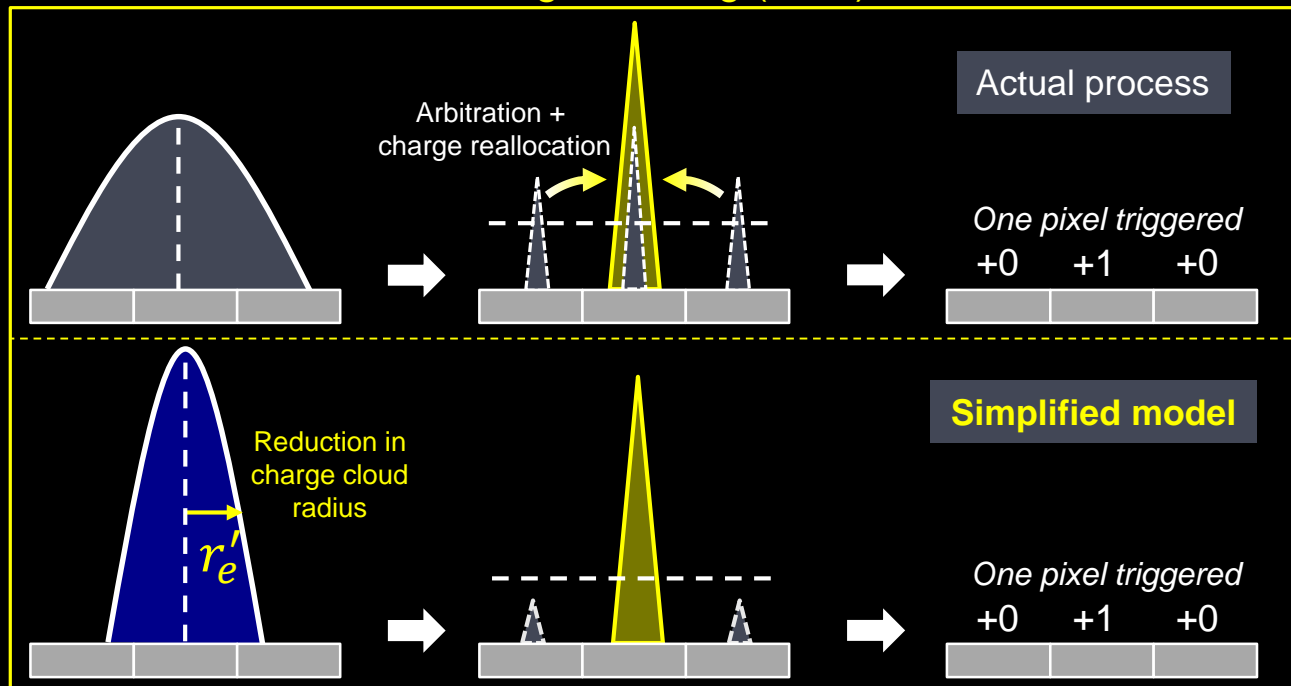
Xu Ji, Ran Zhang, Guang-Hong Chen, Ke Li

Session: Radiography and Fluoroscopy; Time: 8/2 (Thursday), 10:50-11:00; Location: Room 207

Single Pixel Mode (ACS off)

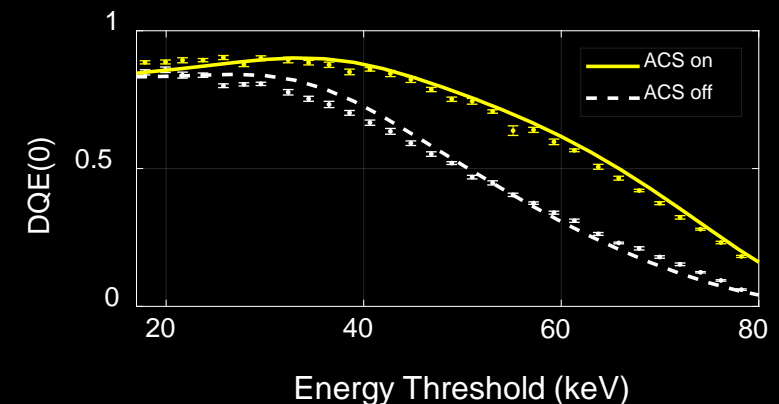


Anti-Charge Sharing (ACS) Mode



The proposed model treats the ACS mode as the conventional single pixel mode but with reduced charge cloud radius and K-fluorescence travel distance, which allows the modeling of the ACS-DQE relationship to be simplified: no prior knowledge about the technical details of the ACS circuitry is required; no Monte-Carlo simulation is needed.

The figure below compares DQE(0) provided by the proposed theoretical framework (solid lines) and experimental data (discrete points with error bars).



Details of the method can be found at: Ji *et al.*, *Phys. Med. Biol.*, **63**, 095003 (2018)