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## Development of SensL SiPM Arrays

*Saturday, 23 September 2017 09:45 (15 minutes)*

In this talk, I will present work being done at Davis to develop and utilize SensL silicon photomultiplier (SiPM) arrays. First, I will talk about the development of a UV-sensitive SiPM system suitable for deployment in noble element time projection chambers. We show that device performance is not compromised in high electric fields nor at low temperatures.

Second, I will talk about arrays coupled to stilbene crystals to perform neutron-gamma pulse shape discrimination (PSD) as part of a larger project to develop a neutron scatter camera for fission neutrons. On this end, our interests are twofold: a) Ensuring strong neutron-gamma PSD and b) Providing fast time of arrival resolution in order to measure the scattered neutron's time of flight. We propose using both the standard and the capacitively coupled fast (SOUT and FOUT, respectively) outputs on the SensL arrays to simultaneously accomplish both of these tasks. Updates on the status of this work and preliminary design studies will be presented.

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