Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Characteristics of S12045(X) photon sensors for GlueX[1] E.S. SMITH, Y. QIANG, I. TOLSTUKHIN, Jefferson Lab, Newport News, VA 23606 USA, W.K. BROOKS, H. HAKOBYAN, S. KULESHOV, O. SOTO, A. TORO, Universidad Técnica Federico Santa María, Valparaíso, Chile, GLUEX COLLABORATION — The barrel calorimeter of the GlueX detector in Hall D at Jefferson Lab will be instrumented with 4000 large-area (1.2×1.2 cm^2) silicon photomultipliers (SiPMs) [1]. These photon sensors have properties similar to vacuum photomultipliers, but are unaffected by high magnetic fields. In our experiment, they will operate in magnetic fields exceeding 1 T. After extensive tests with a variety of sensors, we chose the S12045(X) custom SiPM arrays manufactured by Hamamatsu Corporation, also known as multi-pixel photon counters (MPPCs) [2]. All production units have been delivered and we have measured the photon detection efficiency (PDE), gain, dark rate, cross talk and after pulsing at three different temperatures (5, 7 and 20°C). We will present a summary of these measurements and the plan for use of these sensors in the GlueX experiment.

[1] F. Barbosa *et al.,* NIM A695 (2012) 100.
[2] Y. Qiang *et al.,* NIM A698 (2013) 234.

[1]This work was supported by DOE Contract No. DE-AC05-06OR23177, under which Jefferson Science Associates, LLC, operates Jefferson Laboratory.

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Date submitted: 11 Jan 2013 Electronic form version 1.4