NGS2: a focal plane array upgrade
for the GeMS multiple tip-tilt wavefront sensor

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ABSTRACT

NGS2 is a focal plane array upgrade for the current Avalanche Photo Diode-based Tip-Tilt Wavefront sensor for GeMS, the Gemini Multi-Conjugate Adaptive Optics system. It uses the first ever produced multi-Region of Interest EMCCD, allowing frame rates of 800Hz for three 8x8 pixel windows, with read out noise down to 0.2e-. We will present the design --a compact and robust opto-mechanical design--, characterization of the HNu512 Nüvü detector, laboratory performance, and --if available-- the first on-sky results.

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