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AN ALL-SKY OPTICAL SETI SURVEY

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We present plans for an all-sky search for pulsed optical SETI beacons at Agassiz station in Harvard, Massachusetts. We envision a 2-meter f/1 parabolic “light bucket” (1 arcminute resolution) focused onto a multipixel camera consisting of eight 64-pixel photomultiplier tubes (with pixels measuring 4 arcminutes on a side) in two matched focal planes. It will observe a two-degree by half-degree patch of the sky in transit mode, thereby covering the Northern sky in 150 clear nights. Fast custom IC electronics will monitor corresponding pixels for coincident optical pulses of nanosecond timescale, triggering storage of a detailed digitized waveform of the light flash. Analysis will be similar to that from our ongoing single-pixel OSETI experiment, preliminary results of which will also be presented.