

Abstract Submitted
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I-V Curves from Photovoltaic Modules Deployed in Tucson

EMILY KOPP, ADRIA BROOKS, VINCENT LONIJ, ALEX CRONIN, University of Arizona — More than 30 Mega Watts of photo-voltaic (PV) modules are connected to the electric power grid in Tucson, AZ. However, predictions of PV system electrical yields are uncertain, in part because PV modules degrade at various rates (observed typically in the range 0% to 3 %/yr). We present I-V curves (PV output current as a function of PV output voltage) as a means to study PV module efficiency, de-ratings, and degradation. A student-made I-V curve tracer for 100-Watt modules will be described. We present I-V curves for several different PV technologies operated at an outdoor test yard, and we compare new modules to modules that have been operated in the field for 10 years.

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