

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Using Cryogenics to Improve the Efficiency of Photovoltaic Solar Cells¹ HUNTER SOMERS, Department of Physics and Astronomy, Millikin University, ESTEFANO MARTINEZ, GRACE GANLEY, DANIEL RIVERA, ARIC HOPP, Center for Entrepreneurship, Millikin University, TAKUNDA JAKACHIRA, ANDREA WEST, WHITLEY SAPP, CASEY R. WATSON, Department of Physics and Astronomy, Millikin University, PETE PAULIN, 300 Below Inc. — Improving the reliability and profitability of green energy sources plays a crucial part in transitioning away from fossil fuels as an energy source. As a possible means of making solar energy production more efficient, we consider the effects of cryogenically treating photovoltaic (PV) solar panels at 300 Below, Inc. We report on the pre- and post-cryo performance of two different types of solar panels, when they are exposed to the same, artificial light source. Then, using NREL data, we project the financial benefits of adopting cryogenically treated solar panels throughout the United States over the next five years.

¹300 Below Inc.

Hunter Somers
Millikin University

Date submitted: 18 Jan 2017

Electronic form version 1.4