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Thermoelectric properties of mechanically milled  $AgSbTe_2^1$ SATHISHKUMAR VEERAMALAI, RAVHI KUMAR, Department of Physics and astronomy and HiPSEC, University of Nevada Las Vegas, SEIGI YONEDA, Department of Physics, Kanagawa University, Japan, ANDREW CORNELIUS, Department of Physics and astronomy and HiPSEC, University of Nevada Las Vegas — AgSbTe<sub>2</sub> and AgBiTe<sub>2</sub> have gained much importance recently due to their low thermal conductivity and possible potential thermoelectric applications [1, 2]. AgSbTe<sub>2</sub> is the parent composition for the AgPbSb<sub>18</sub>Te<sub>20</sub> high figure of merit thermoelectric alloy [3]. Crystalline size is one of the crucial parameters which affect the thermoelectric properties. In order to investigate the size effects we have ball milled AgSbTe<sub>2</sub> up to 4 hrs and measured the thermoelectric figure of merit, Seebeck coefficient and thermal conductivity from 10K to 350 K for different milled samples. The results will be presented in detail. [1]. D.T. Morielli et al., Phys.Rev.Lett., 101 (2008) 035901 [2]. K. Wojciechowski et al., J. Phys.Chem.Solids., 69 (2008) 2748 [3]. K.F. Hsu et al., Science 303 (2004) 818

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SathishKumar Veeramalai Department of Physics and Astronomy and HiPSEC, University of Nevada Las Vegas

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