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Growth of hcp Solid ^{4}He from the Superfluid[1] MICHAEL RAY, ROBERT HALLOCK, Univ. of Mass. Amherst — Using the same experimental apparatus that we developed to search for mass flux in hcp solid ^{4}He at pressures greater than 25 bar[1], we study the growth of solid helium from the superfluid at constant temperature. As the pressure of the solid is driven above the melting curve, with helium continuously being added to the sample cell, we observe apparently random events during which the pressure of the solid drops. These pressure drops are accompanied by a sharp transient rise in the temperature of the cell. We will present the data, along with some discussion of what might cause these transients.

[1] M.W. Ray and R.B. Hallock Phys. Rev. Lett. **100** 235301 (2008)

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