

Abstract Submitted
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The rotation anomaly of high quality ^4He single crystals XAVIER ROJAS, ARIEL HAZIOT, Ecole Normale supérieur, Paris, JOSHUA T. WEST, MOSES H.W. CHAN, The Pennsylvania State University, HUMPREY MARIS, Brown University, SÉBASTIEN BALIBAR, Ecole Normale supérieur, Paris — We have built a transparent torsional oscillator in order to monitor the growth of ^4He crystals near 20 mK. It allows us to measure the rotational inertia of high quality oriented single crystals and compare it with low quality crystals or polycrystals grown at constant volume. It is also possible to vary the ^3He concentration from 0 to 0.3 ppm (natural purity). Since the change in TO period associated with the change in shear modulus of the He sample could be calculated, we could see if supersolidity is really due to superflow along dislocation lines.

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