Superfluid $^4$He

Phase diagram of $^4$He

Andronikashvili Experiment

Tangle of vortices in $^4$He-II
Superfluid $^3$He
FIG. 2. Photographs of stable vortex arrays. Each photograph is a multiple exposure of 60 consecutive motion-picture frames. The length scale on the photographs is known to an accuracy of approximately 2%. The diameter of the dark circles corresponds to the 2-mm bucket diameter. The arrays were placed symmetrically within the circles. The actual location of the bucket relative to the arrays is not known. The angular velocities were (a) 0.30 sec⁻¹, (b) 0.30 sec⁻¹, (c) 0.40 sec⁻¹, (d) 0.37 sec⁻¹, (e) 0.45 sec⁻¹, (f) 0.47 sec⁻¹, (g) 0.47 sec⁻¹, (h) 0.45 sec⁻¹, (i) 0.86 sec⁻¹, (j) 0.55 sec⁻¹, (k) 0.58 sec⁻¹, and (l) 0.59 sec⁻¹. The two distinct configurations of six vortices appeared alternately at constant angular velocity.