

Superfluidity of rotating atomic gases in traps

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Superfluids are characterized by unique rotational properties which are the consequence of the irrotationality constraint on the velocity field. Recent experiments have revealed the occurrence of spectacular features in cold Bose gases below the transition temperature for Bose-Einstein condensation. These include the occurrence of quantized vortices and the quenching of the moment of inertia with respect to the classical value. The recent results in the field will be discussed.