

Goldstone Modes in Trapped Supersolid BEC Gases

S STRINGARI¹

¹*Department of Physics and CNR-INO BEC Center, University of Trento, 38123, Trento, Italy.*

Contact Phone: +39 3932594737

Contact Email: sandro.stringari@unitn.it

I will discuss recent theoretical advances in the understanding of supersolidity in both dipolar gases and in spin-orbit coupled configurations. I will discuss, in particular, the superfluid characterization of these configurations, including the behaviour of the moment of inertia and the emergence of the Goldstone modes resulting from the spontaneous breaking of gauge symmetry and translational invariance. Comparison with experimental results will also be provided.