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# TRANSITION TO COHERENCE IN DENSE CORES USING THE GREEN BANK AMMONIA SURVEY (GAS)

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## ABSTRACT

We use the first data release (DR1) of the Green Bank Ammonia Survey (GAS). GAS is an ambitious Large Program at the Green Bank Telescope to map all regions within the northern hemisphere Gould Belt star-forming regions with $A_v \gtrsim 7$ in emission from $NH_3$ and other key molecular tracers. This first release includes the data for four regions in Gould Belt clouds: L1688 in Ophiuchus, Orion A North in Orion, NGC 1333 in Perseus, and B18 in Taurus. We study the velocity dispersion obtained towards all these regions and identify sharp transitions between super-sonic and sub-sonic turbulence in molecular clouds.

*Keywords:* ISM: clouds — stars: formation — ISM: molecules — ISM: individual (Perseus Molecular Complex, L1451, HH211, IRAS03282)



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*Facility:* Green Bank Telescope

*Software:* Astropy (**?**), Matplotlib (**?**), pyspeckit (**?**)