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**Particle distribution in a supersonic beam ultracold plasma**  
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GRANT, University of British Columbia — MOT plasmas have well defined initial phase space distributions, owing to the technique of laser cooling. To determine the distribution function of the nitric oxide plasma formed in a seeded supersonic expansion, we perform molecular beam dynamic calculations, incorporating sudden freeze and point-source approximations. Convolution of the resulting NO phase space distribution with the pulsed laser field illumination geometry yields the initial phase space distribution of our beam plasma. We are working to image the spatial part of this distribution and measure its temporal evolution.

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