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High resolution Broadband CARS of laser shocked materials[1]
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We will present preliminary data and methods detailing experiments scheduled later this year using Janus at the Jupiter Laser Facility at LLNL to obtain Coherent Anti-stokes Raman Spectra (CARS) of materials under shock conditions. High resolution ($\sim$1 cm^{-1}) CARS of the pre-shocked materials will demonstrate the feasibility and high precision of the methods involved. Pressures as high as 200 GPa have been previously achieved. Initially, our experiments will focus on quartz and diamond and should subsequently lead to hydrogen, deuterium and other constituents of the giant gas planets.

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