

Abstract Submitted  
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**Thomson-resonant interference effects in quasielastic x-ray Raman scattering near the Cl K edge of HCl**<sup>1</sup> DENNIS W. LINDLE, U. Nevada, Las Vegas, STEPHANE CARNIATO, PATRICIA SELLES, LOIC JOUNEL, RENAUD GUILLEMIN, UPMC & CNRS, France, WAYNE C. STOLTE, U. Nevada, Las Vegas, LARA EL KHOURY, T. MARIN, UPMC & CNRS, France, FARIS GEL'MUKHANOV, Royal Institute of Technology, Stockholm, Sweden, MARC SIMON, UPMC & CNRS, France — Quasielastic x-ray Raman scattering is investigated experimentally and theoretically around the Cl K edge of HCl. Strong interference effects between Thomson scattering and resonant scattering are observed throughout the near-threshold region, where the Thomson and resonant scattering contributions are found to be of comparable strength, a result in contrast to the conventional wisdom about the importance of nonresonant scattering. The results also exhibit strong polarization sensitivity, allowing easy identification of interferences between resonant and nonresonant channels.

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