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Type: **Poster (Non-Student) / affiche (non-étudiant)**

## **Raman and Infrared Study of Phonons in a Pyrochlore Superconductor**

*Tuesday, 14 June 2016 20:00 (2 minutes)*

$\text{Cd}_2\text{Re}_2\text{O}_7$  is a pyrochlore superconductor with a transition temperature ( $T_C$ ) near 2 K. The results of Raman scattering and far-infrared reflectance measurements will be presented. The temperature dependence of optical phonons has been investigated above and below  $T_C$  via IR spectroscopy, and as a function of Oxygen and Cadmium isotope substitution in the normal state via Raman scattering. The dominant presence of lattice vibrational modes in the optical spectra suggests that electron-phonon interaction plays an important role in the normal and superconducting state properties.

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**Track Classification:** Condensed Matter and Materials Physics / Physique de la matière condensée et matériaux (DCMMP-DPMCM)