
V43C-0545: Raman and FTIR spectroscopy of methane in olivine

Thursday, 14 December 2017

13:40 - 18:00

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Olivine has been proposed to be a direct source of methane (CH₄) in serpentinization systems and experiments. Here, Raman and Fourier Transform Infrared (FTIR) spectroscopy were used to verify the presence and abundance of CH₄ in olivine samples from nine localities, including the San Carlos olivine. Raman analyses did not identify any methane in the olivine samples. As olivine is orthorhombic, three polarized FTIR spectra were obtained for the olivine samples. No methane was detected in any of the olivine samples using FTIR. Overall, olivine investigated in this study does not appear to be a primary source of methane.

Plain Language Summary

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