

## Electronic Appendix

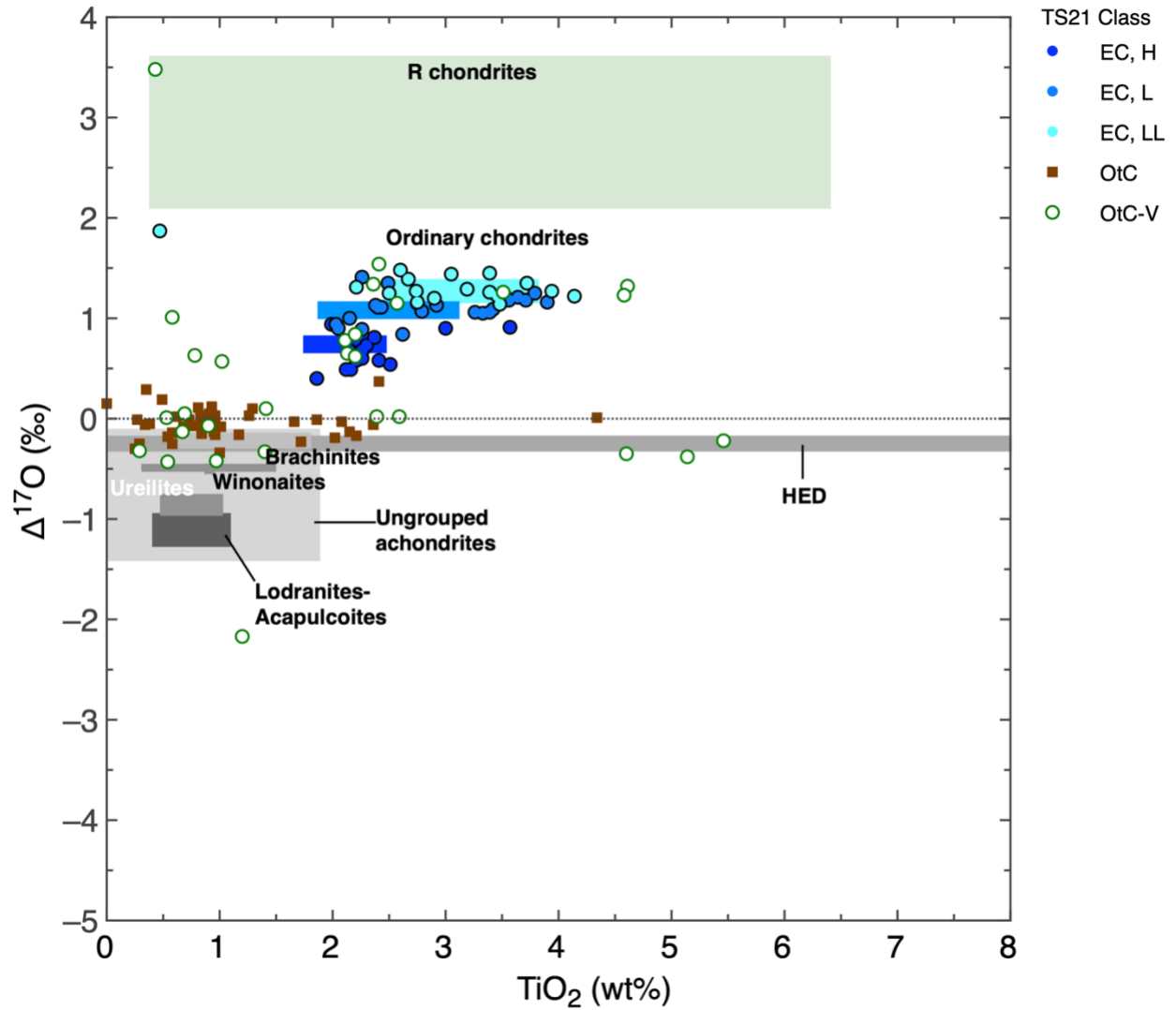


Fig. A-1. Comparison of the chrome-spinel classification based on  $\Delta^{17}\text{O}$  and  $\text{TiO}_2$  and of the one based on elemental concentrations only. HED=Howardite-Eucrite-Diogenite clan. Other abbreviations as defined in Terfelt and Schmitz (2022): “EC”=extraterrestrial chrome-spinel; “OtC”=Other Chrome-Spinel; V-rich “OtC” grains.

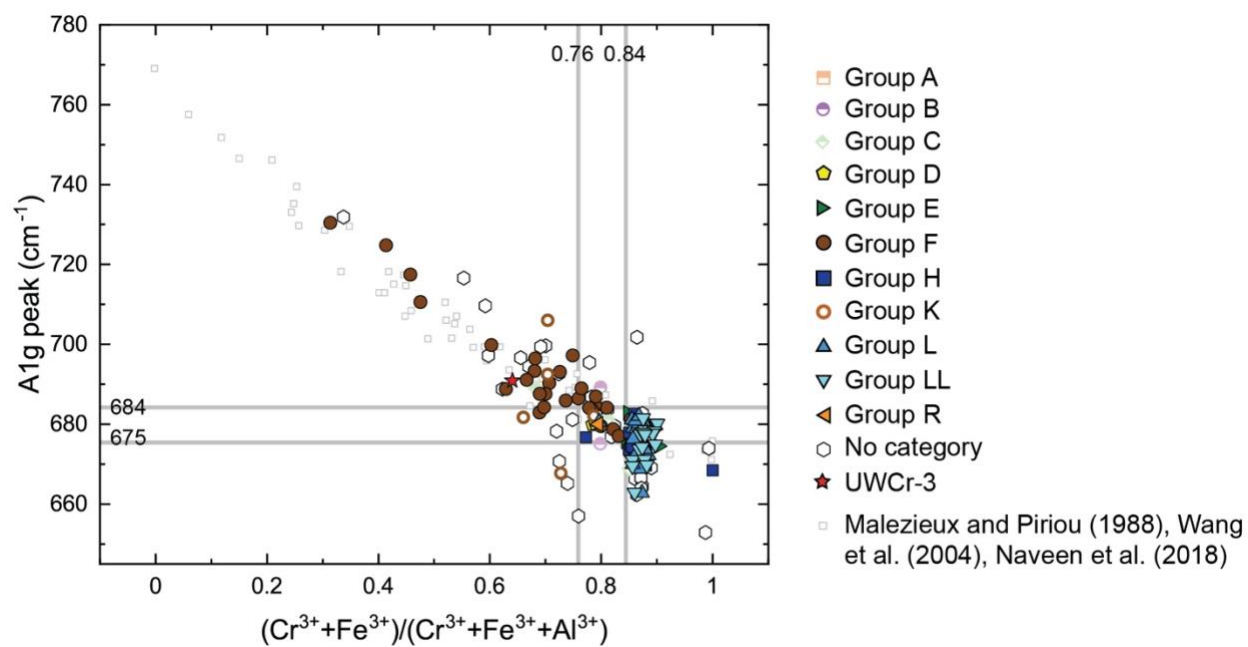


Fig. A-2. Correlation of major cation ( $\text{Cr}^{3+}$ ,  $\text{Fe}^{3+}$ ) occupancy of octahedral sites vs. the A1g (v1) mode. All data points are shown.

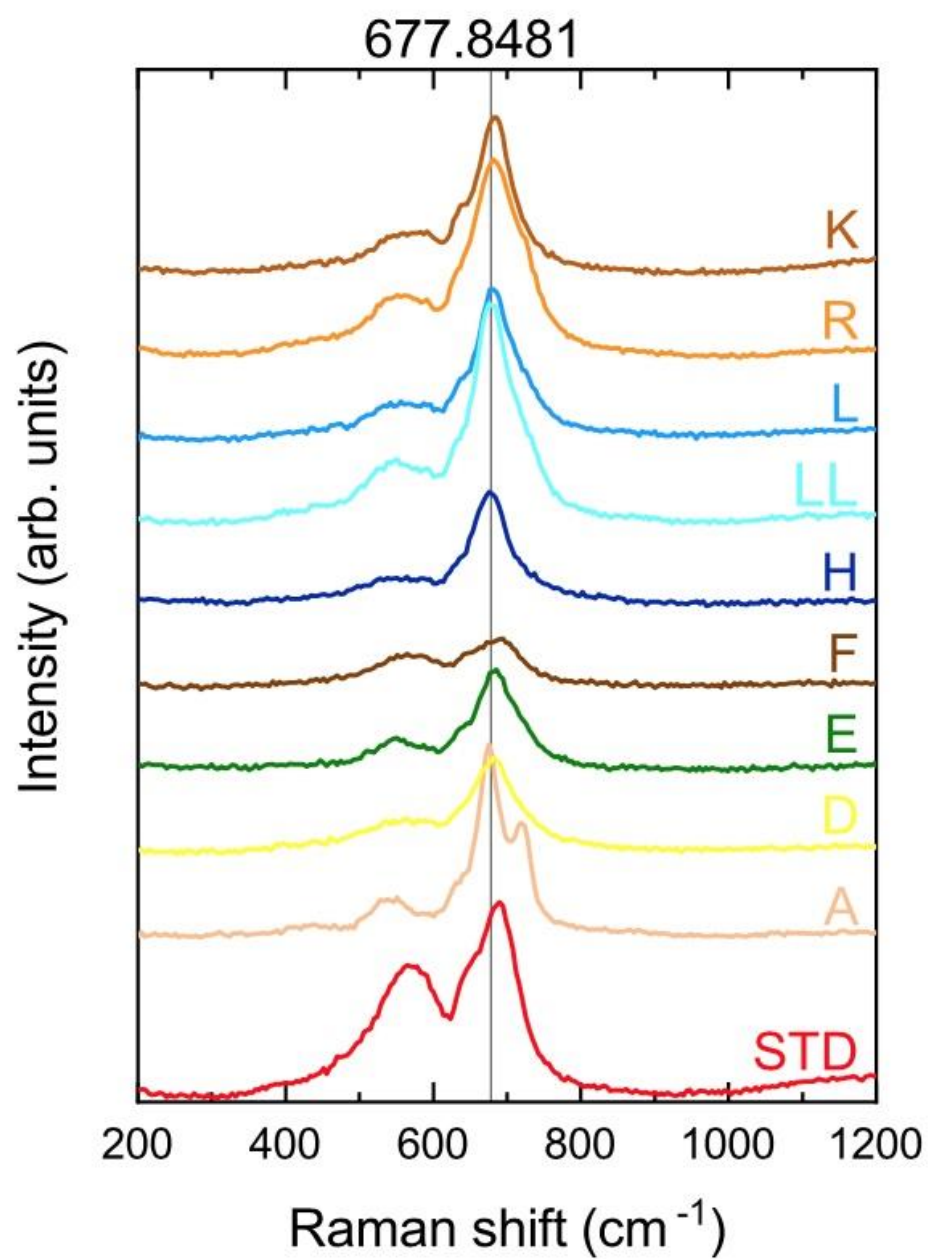


Fig. A-3: Raman spectra of samples from the different classes defined in Heck et al. (2017).

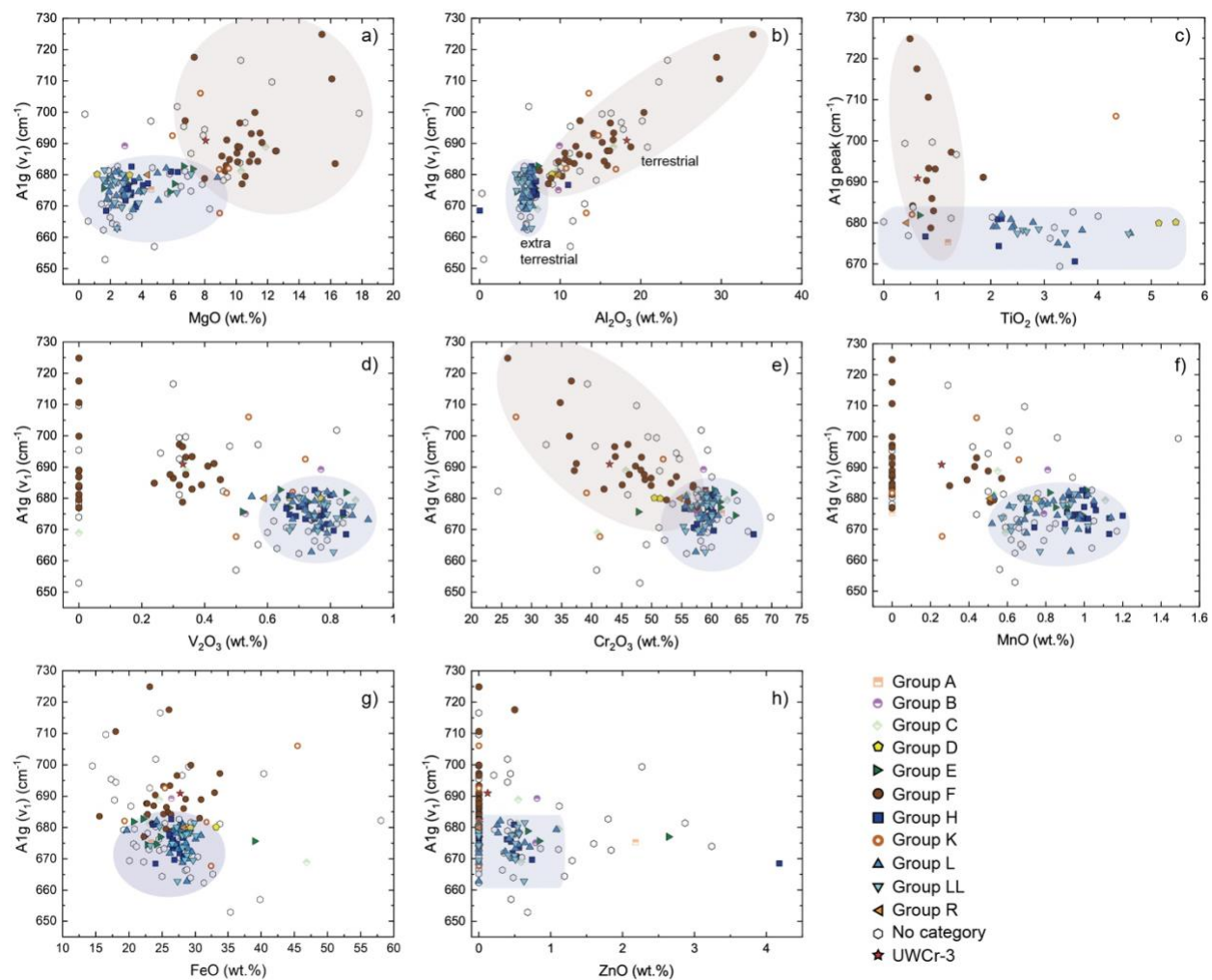


Fig. A-4: Cross plots of prominent A1g Raman peak and minor and major oxide concentrations. All data points are shown.