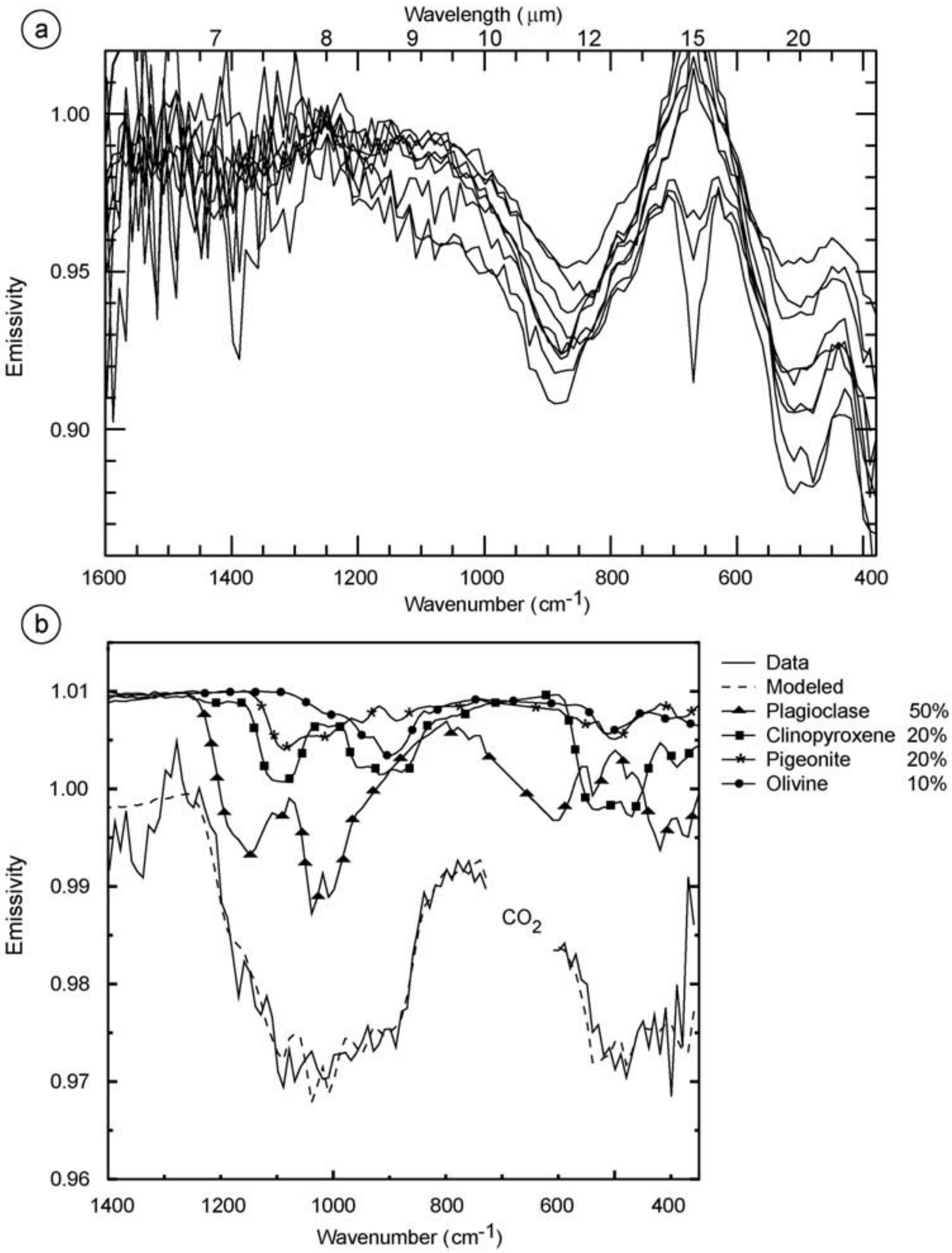

Figure 7. MiniTES spectra of Gusev rocks and soils. (a) Spectra of non-dusty rocks are similar, demonstrating that all the rocks on the plains have similar compositions. The absorption band at $\sim$500 cm^{-1} results from olivine. (b) Deconvolved spectra of average disturbed soils on the Gusev plains probably reflect the mineralogy of the rocks. CO_2 marks the position of the atmospheric CO_2 band.

discernable differences, except those arising from re-normalization. The revised APXS analyses and uncertainties for Adirondack, Humphrey, and Mazatzal (natural, brushed, and RATed) are tabulated by *Gellert et al.* [2006].

[23] Plots of oxides versus SO_3, originally developed to correct for dust coverings on Mars Pathfinder rocks [*Rieder et al.*, 1997], are illustrated for Gusev basalts and soils in Figure 8. Pathfinder rocks were variably coated with dust, and clean rock compositions were estimated by extrapolating the trends to 0.3 wt.% S (0.75 wt.% SO_3), the average sulfur abundance (as igneous troilite) in Martian basaltic meteorites [*Brückner et al.*, 2003]. Surface (as-is), brushed, and RATed rock compositions, which have progressively less SO_3, are shown by small symbols in Figure 8. For most elements, the brushed compositions do not lie on straight lines connecting the RATed compositions to surface or soil compositions. Compositions of the brushed areas represent thin alteration rinds seen in MI imagery and are distinct from the soil compositions. However, natural rock surface compositions commonly plot along mixing lines between brushed and soil compositions.

[24] Analyses for Route 66, Mimi, Planck, and Joshua are also given by *Gellert et al.* [2006] and plotted in Figure 8. Soil analyses form a cluster at $\sim$6 wt.% SO_3, with a trend to lower SO_3 (presumably representing admixture of local rock fragments) and another to higher SO_3 (apparently represent-