The spectral signature of solid CO₂ (the C-O asymmetric stretching mode at 4.27 μm) is seen in the Cassini VIMS data for several satellites of Saturn [1,2,3,4]. It often appears strongest in geographic regions of low albedo, compared to the higher albedo regions dominated by H₂O ice; this may be an effect of band contrast rather than true spatial association. In all cases, although to varying degrees, the CO₂ band is shifted to shorter wavelengths than is seen in pure CO₂ at 80 K in the laboratory, suggesting that CO₂ is complexed in one or more ways with another molecule or material. Lab spectra and ab initio calculations of molecular complexes of CO₂ with 1, 2, and more H₂O molecules [5] show that the wavelength shift seen on some satellites can be explained in this way. The CO₂ band on Hyperion is different from that on the other satellites in that its band is further shifted and has a different profile. Both of these spectral parameters are matched by the type II clathrate of CO₂ in H₂O [6]. Although CO₂ clathrate has been postulated to occur on Mars and Enceladus, its spectroscopic signature has not been seen until this identification on Hyperion. The implications of CO₂ clathrate on Hyperion are far reaching in terms of its propensity to decompose explosively [7], Hyperion’s low bulk density, the distribution of low-albedo (organic rich) material on its surface, and other features of this satellite.