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Hydrated Minerals on Asteroids: What (Do We Think) We Know?

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Water- and hydroxyl-bearing (or hydrated) minerals are present in carbonaceous chondrites and some ordinary chondrites, providing evidence of aqueous alteration and in some cases allowing primordial water itself to be studied. For over 25 years, the spectral signatures of these minerals have been observed, first near 3 microns and more recently near 0.7 microns. The results have in some cases bolstered and extended our expectations from the meteorite record, but in other cases have shown existing paradigms to be somewhat limited. I will present our current knowledge about hydrated minerals on asteroids, touching on results both the expected and unexpected.