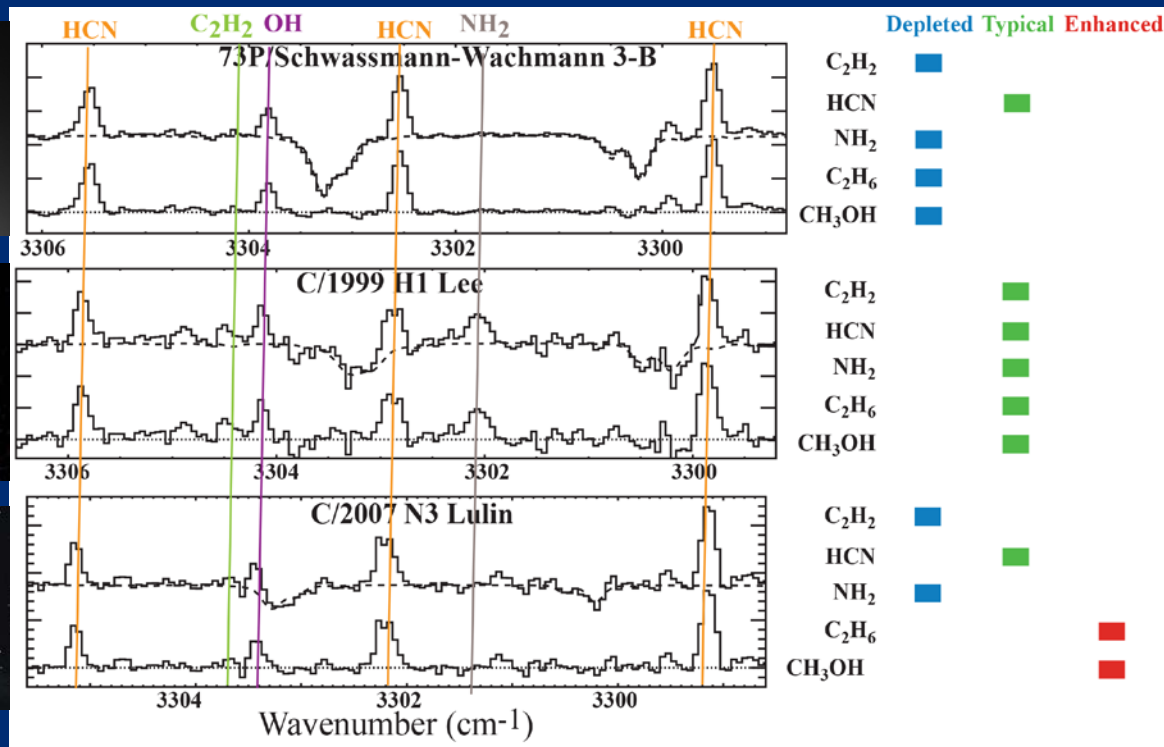


Prebiotic Molecules Storage in Comets



- Infrared spectroscopy reveals that each comet has a unique chemical fingerprint. These early Solar System fossils provide a mirror to the temperature, radiation processing, and chemistry prevalent as the planets were born.
- Patterns within this diversity reveal how simple molecules such as hydrocarbons, nitriles, alcohols, formaldehyde, ammonia, and water were incorporated into and are now stored within comets. This suggests how these molecules of prebiotic importance may have been delivered to Earth — some primarily as volatile ices, others within more hearty dust particles.

The remarkable chemical diversity of comets reflects the range of conditions in the early Solar System