

The composition of comets: clues to solar system formation

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The composition of cometary ices provides clues to the chemistry and conditions prevailing in the early solar system. Since the detection of HCN at millimeter wavelengths in comet C/1973 E1 (Kohoutek), almost 30 molecules have been identified in cometary atmospheres from remote sensing observations from ground or from space platforms. Thanks to progresses in instrumentation and the availability of large telescopes, complex organic molecules have been identified. Measurements will be reviewed and the observed chemical diversity among comets will be presented. The relative abundances will be compared to values measured in star-forming regions to discuss the possible formation routes of cometary molecules. The talk will also include new findings about comet composition obtained from the Rosetta mission to comet 67P/Churyumov-Gerasimenko.
