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Where Discoveries Begin
RAF

Atmospheric Composition

- >100 compounds
- 0.1 to 1000pptv (except O_3, CH_4, N_2O etc.)
- >80 are hydrocarbons

Positive ion APIMS

- $H_3O^+ + A = A^+ + H_2O$
- $A^+ + X$ = Ionized fragments
- Identified and quantified by MS or MS/MS
- Few species have proton affinities > H_2O

Negative ion APIMS

- $A^- + B = A + B^-$
- $B^- + C$ = ionized products
- Analysis by MS/MS
- Good for explosives, CWA'S Insecticides

Capillary Column Gas Chromatography

- Preconcentration on cold column
- Release by temperature programming
- Identification by retention time >10^5 plates
- Detection by FID, NPD, FPD, ECD
- > 150 compounds per sample (1 pg)