



## **First results of the aerosol collector pyrolyser experiment of huygens**

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ACP's main objective was to determine the chemical makeup of the photochemical aerosol in Titan's low stratosphere . and also to research for the relative abundances of condensed organics down to the upper troposphere. The instrument sampled the aerosols and condensates during descent in two regions of the atmosphere : first between 130 and 35,2 km, and then between 25,7 and 20.4 km .For this purpose, a pump unit is used to force the gas flow through a filter which has a thimble-like shape.. The collected matter was analysed by ACP, after evaporation and pyrolysis (600°C) in a small furnace and with gas products transferred to the probe Gas Chromatograph Mass Spectrometer (GCMS). For transferring effluent gas and pyrolysis products to GCMS, the carrier gas is a labeled nitrogen  $^{15}\text{N}_2$ , to avoid unwanted secondary reactions with Titan's atmospheric nitrogen. We will present the first results obtained after preliminary study of the pyrograms of the photochemical aerosols, obtained at 600°C. Further investigations ,using laboratory works to simulate the Titan atmospheric particles, will be conducted.