



ID de Contribution: 3

Type: **Oral presentation**

## **First measurement of the composition of exocomets.**

*jeudi 29 février 2024 16:45 (15 minutes)*

Extrasolar comets –or exocomets –are icy bodies placed on elliptical orbits which sublimate when they reach their periastron, producing extensive clouds of dust and gas –the so-called ‘cometary tails’. The most famous star known to harbor such objects is Beta Pictoris, a young (20 Myr) A-type star, for which transiting comets are detected daily using absorption spectroscopy.

However, despite more than 35 years of observations, still very little information on the composition of these objects is known. Here, I will present a new analysis of archival HST/STIS data, which led to the first measurement of the abundance of several metallic species –Si, Fe, Ni, Mn... - within the tails of Beta Pictoris exocomets, and to the estimate of their physical properties. These results are of crucial importance to better understand the history of these objects and the main mechanisms at work within their gaseous tails.

### **Astrophysics Field**

Planetology (including small bodies and exoplanets)

### **Day constraints**

I won't be available on Friday afternoon (March 1st).

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**Classification de Session:** Session 8