



## **The AtMoCiad database, a necessary element for the upper atmosphere community**

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In the past decades, several models of the upper atmosphere of Earth and planets, along with their corresponding airglow, have been developed. Some of them became so precise that it was possible to infer thermospheric parameters by comparing model and experiment. To improve the precision and to be able to compare the different models with one another, a necessary parameter remained problematic: the cross sections.

While several teams developed their own cross section datasets, several difficulties arose concerning the maintenance of the database (nature of the data, sources, uncertainties). Cross sections became the weak point of the modeling and remote sensing of the upper atmospheres.

Facing that situation, we have developed AtMoCiad (Atomic and Molecular Cross section for Ionization and Aurora Database), a "grand unified" database in constant evolution dedicated to the cross sections of ionization, excitation, and dissociation of atoms and molecules. Instead of creating a new private database, AtMoCiad is by essence open to the community through a dedicated website, which aims at inviting all the interested people to participate.

In this work, we present the database, how we designed it to compare previous and current work, how it evolves, and how interested people can participate to that effort.