

## **A "NON FORCE-FREE" MODEL FOR THE MAGNETIC FIELD AND PLASMA STUDY OF THE MAGNETIC CLOUD**

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In this work we present a "non force-free" model for the magnetic field and plasma in the magnetic cloud inner as a whole study.

The model has been fitted to the experimental data which correspond with the three magnetic field components and the hydrostatic pressure. This fitting allow us to obtain five physical parameter which are connected with the magnetic cloud (attitude orientation, the current density components and closest approach of the spacecraft to the main axis of the cloud).