



## **Abstract**

The last decade has seen the advent of four new major facilities for the studies of the molecular emission in our Galaxy: Herschel, JVLA, ALMA and NOEMA and the substantial improvement of the receivers capabilities of single-dish telescopes such as IRAM-30m, GBT-100m and YEBES-40m. Molecular astrophysics lives a golden era.

Yet, the more we observe the more we understand how little we know and how much we need more sensitive facilities with higher spatial resolutions and larger frequency coverage. In this presentation, we will review the major future observational challenges, in our view, and what possible new and improved facilities could help to win them.