

The [CII] Mapper: Mapping the Milky Way in C⁺

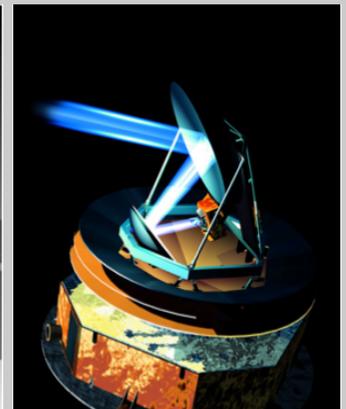
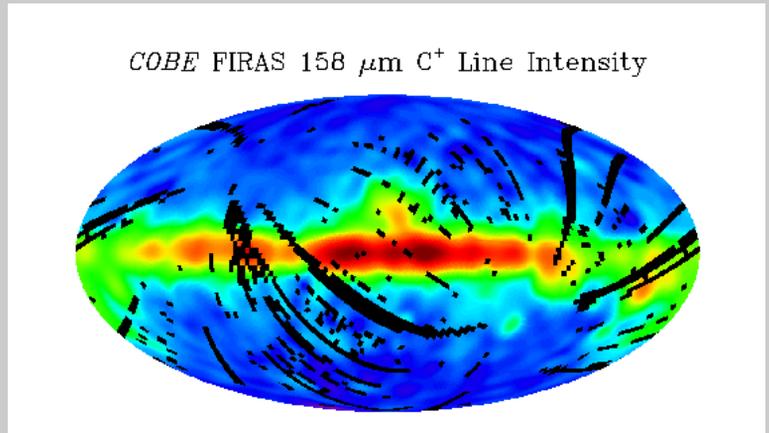
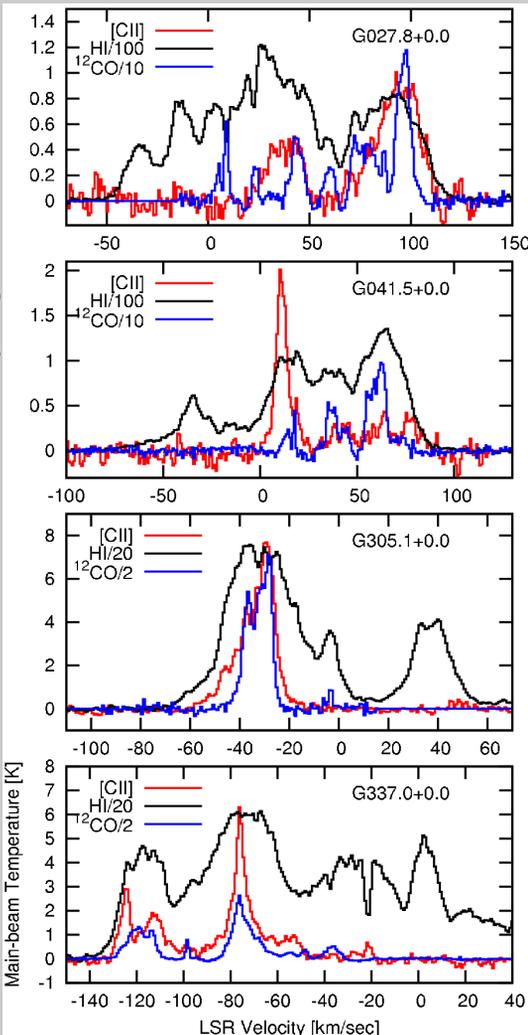
Frank Helmich on behalf of the [CII] mapper team



Overview:

- The bright fine structure line of C⁺ (158 μm, 1.9 THz) is the main ISM cooling channel from galaxies
- Mapping the C⁺ line in the Milky Way can answer key questions about Galactic evolution, e.g. revealing all molecular cloud interfaces and trace cold H₂, invisible in CO
- A [CII] Mapper using a sensitive, **heterodyne** receiver array will go beyond COBE and BICE in spectral resolution and beyond Herschel/HIFI and SOFIA mapping capabilities
- Map the Galactic structure and establish the template for external galaxies

Measurements of C+ from the GOTC+ program



Drawing ESA Planck



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