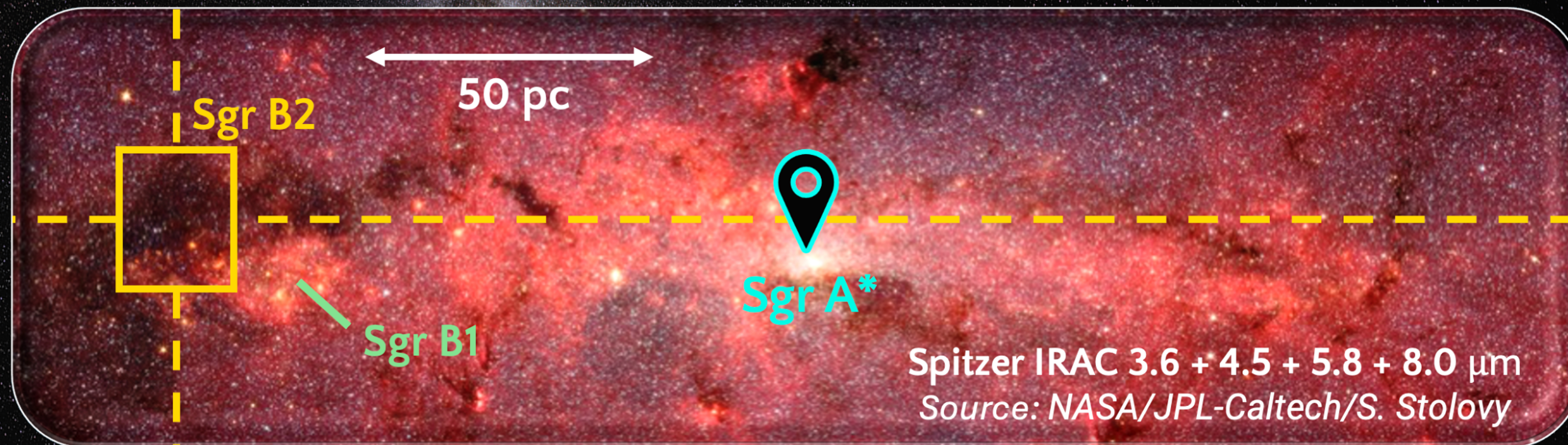


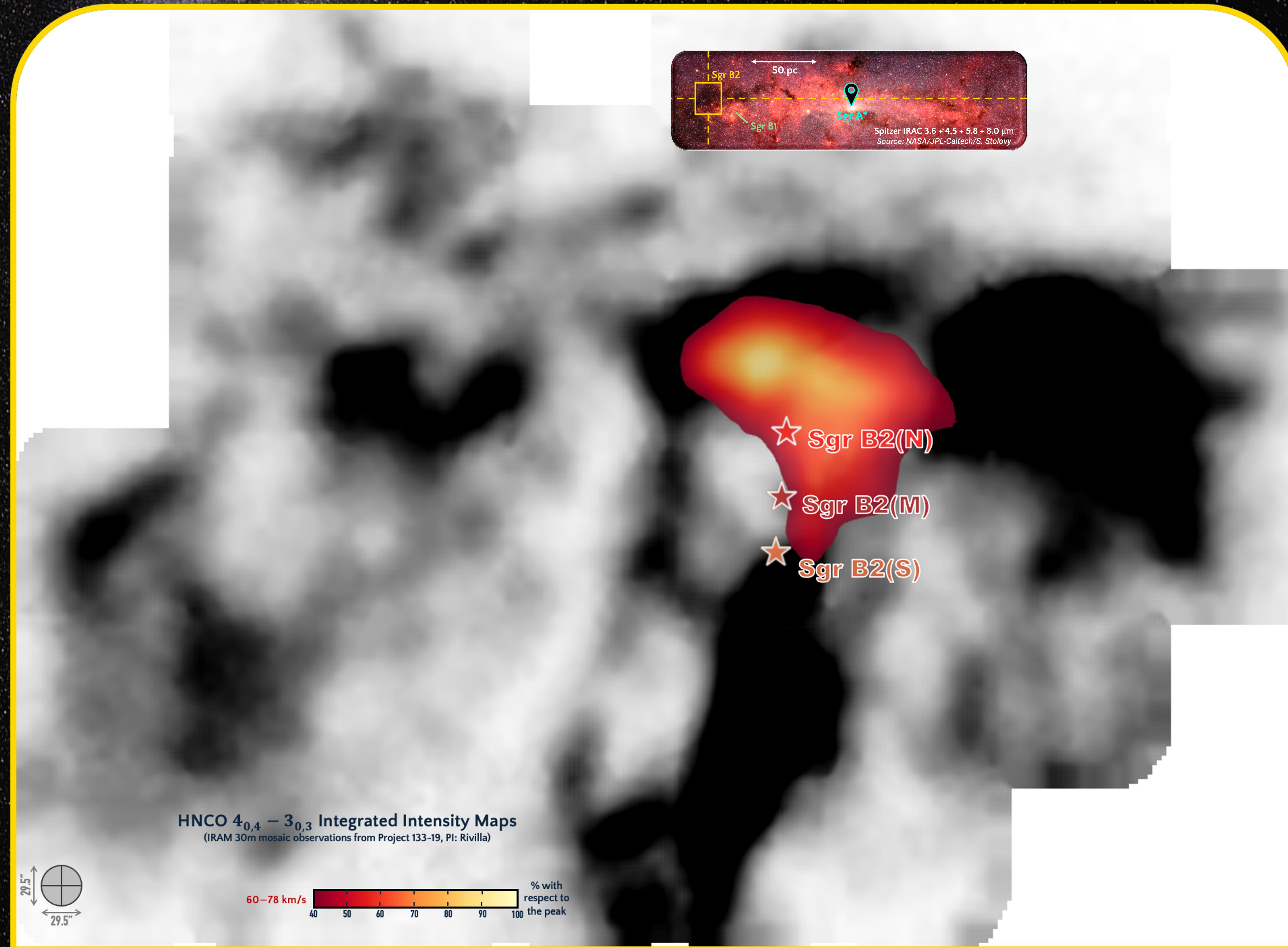
# EXPLORING CHEMICAL COMPLEXITY IN THE INTERSTELLAR MEDIUM: THE G+0.693 AND G+0.633 MOLECULAR CLOUDS

David San Andrés, Víctor M. Rivilla, Laura Colzi, Izaskun Jiménez-Serra, Miguel Sanz-Novo, Jesús Martín-Pintado and Sergio Martín



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## 2. The G+0.693-0.027 Molecular Cloud: an Established Reservoir of Prebiotic COMs



Among the most prolific sources  
(besides Sgr B2(N) or TMC-1)

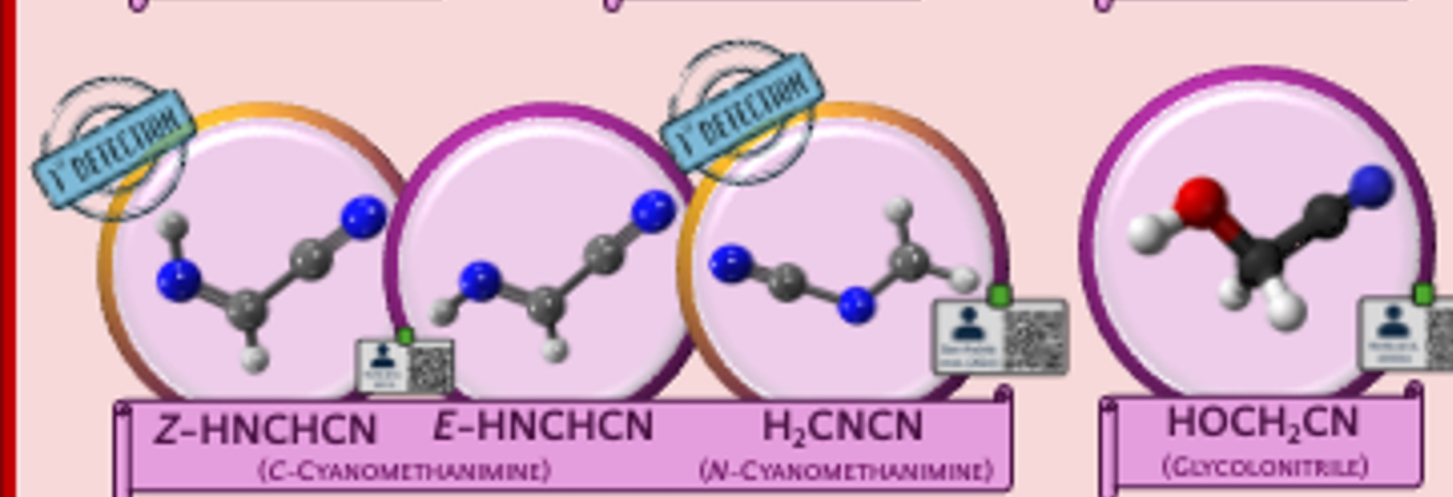
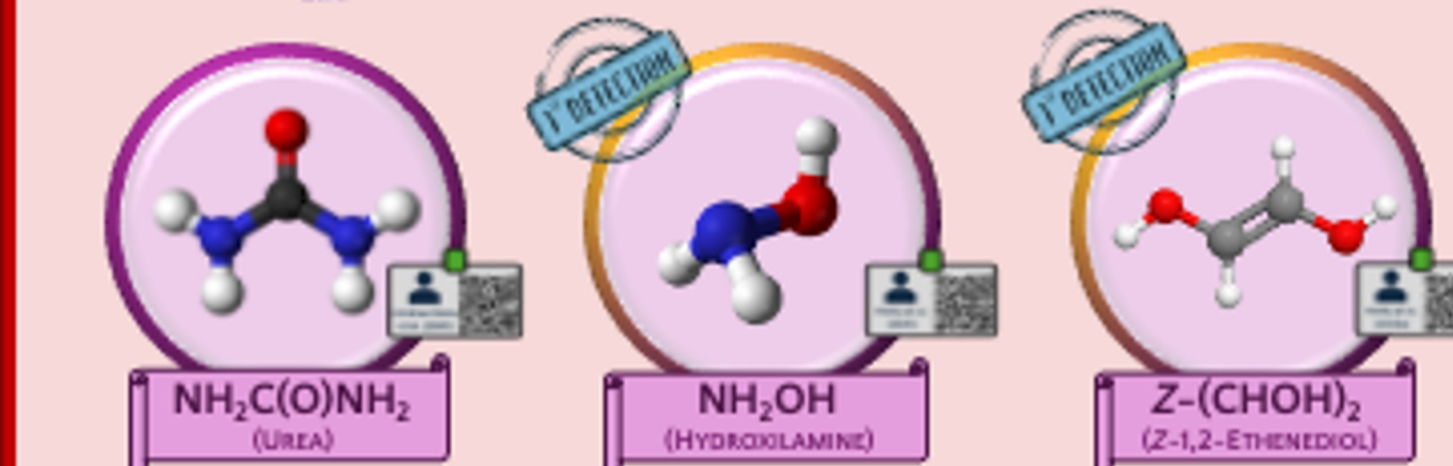


Hosting the detection of **~135 different molecules** (~41% of total census), including **N-, O-, S-, P-, Na- and Mg-bearing species** + **several isotopologues!**

(e.g., Zeng et al 2018; Sanz-Novo et al. 2024; Rivilla et al. 2022c; Rey-Montejo et al. 2024; Colzi et al. 2022)



A unique reservoir of **molecules** of **prebiotic interest**, embracing...



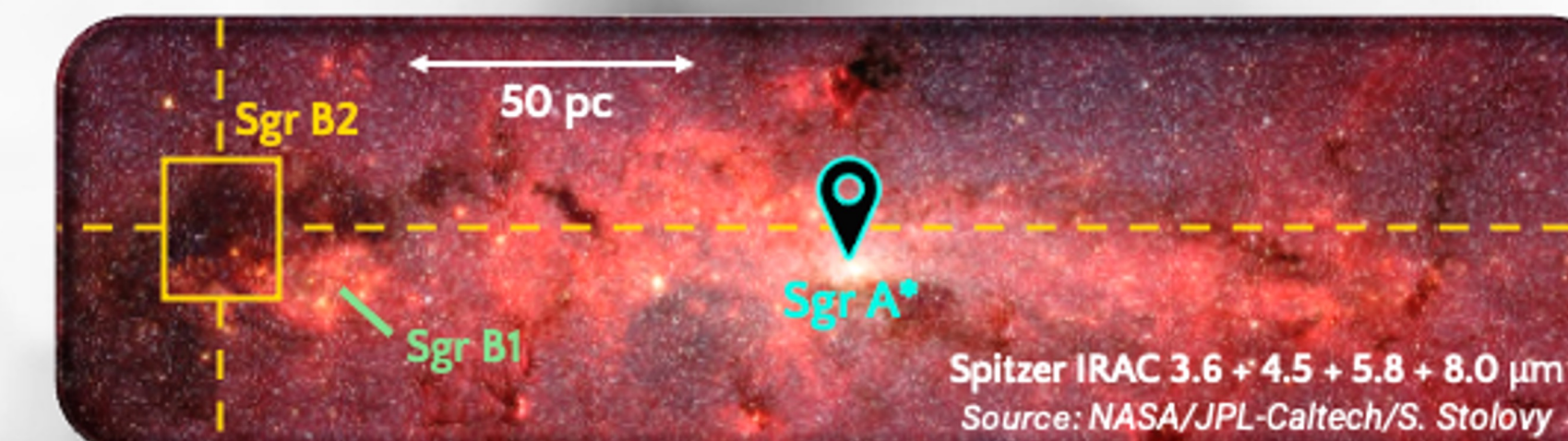
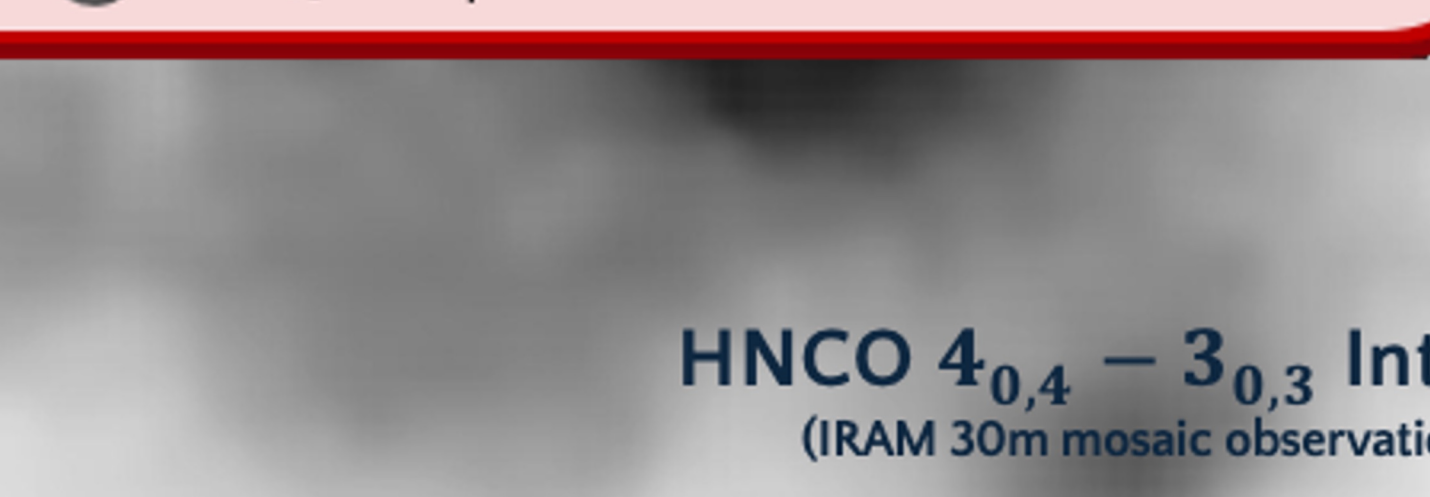
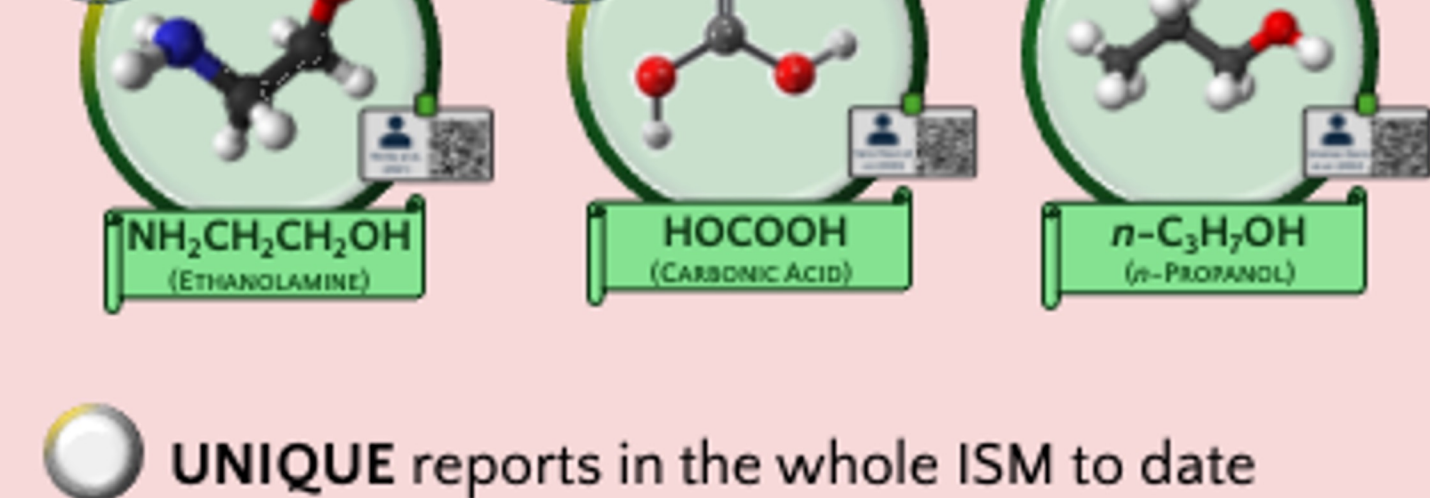
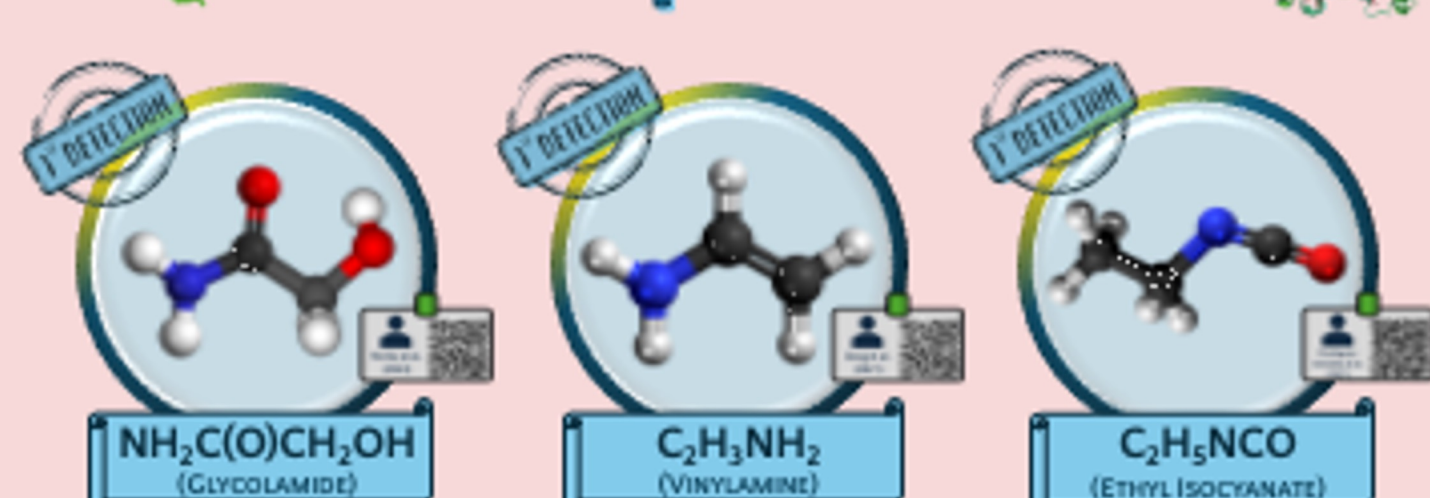
... and many more!



FIRST detections in the ISM



UNIQUE reports in the whole ISM to date



★ Sgr B2(N)

★ Sgr B2(M)

★ Sgr B2(S)

HNCO  $4_{0,4} - 3_{0,3}$  Integrated Intensity Maps  
(IRAM 30m mosaic observations from Project 133-19, PI: Rivilla)



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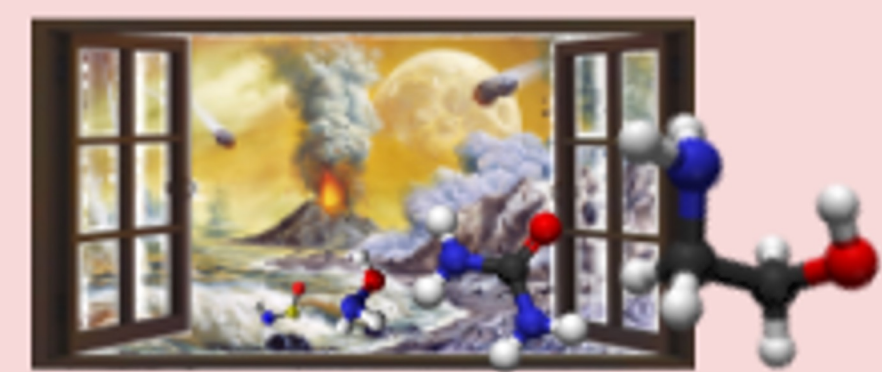


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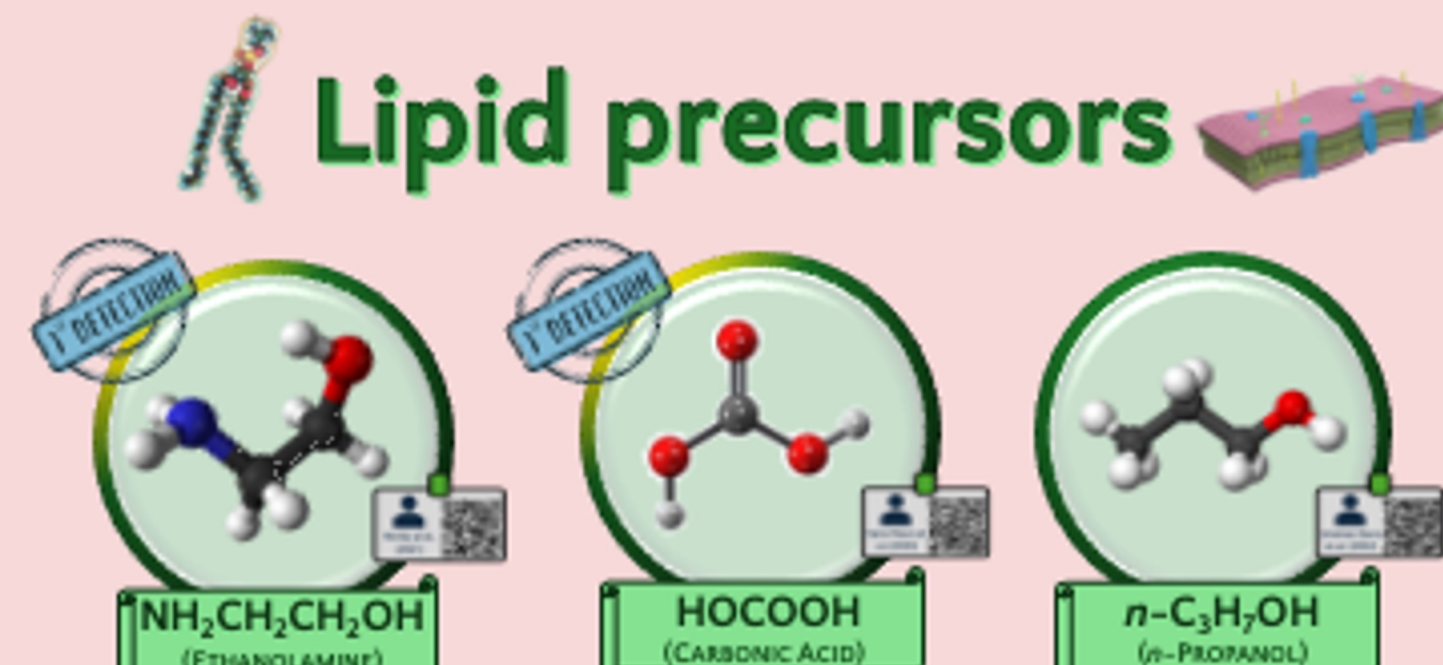
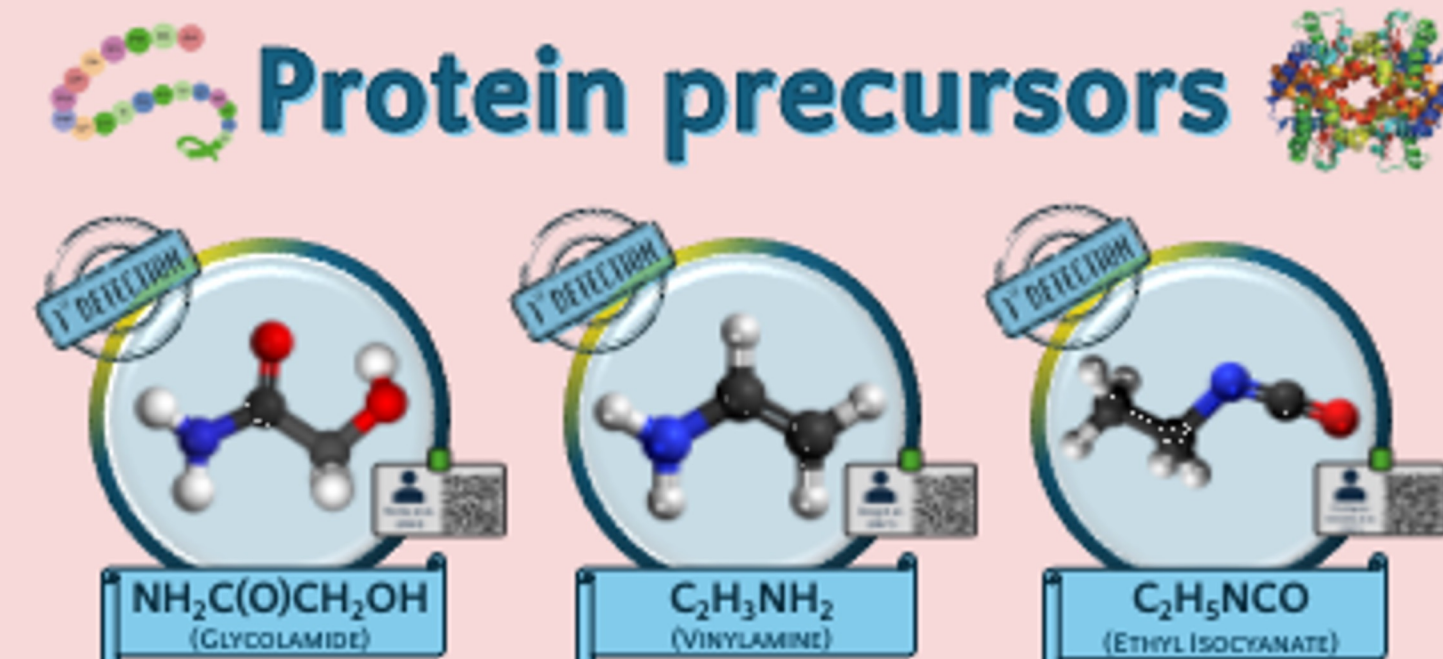
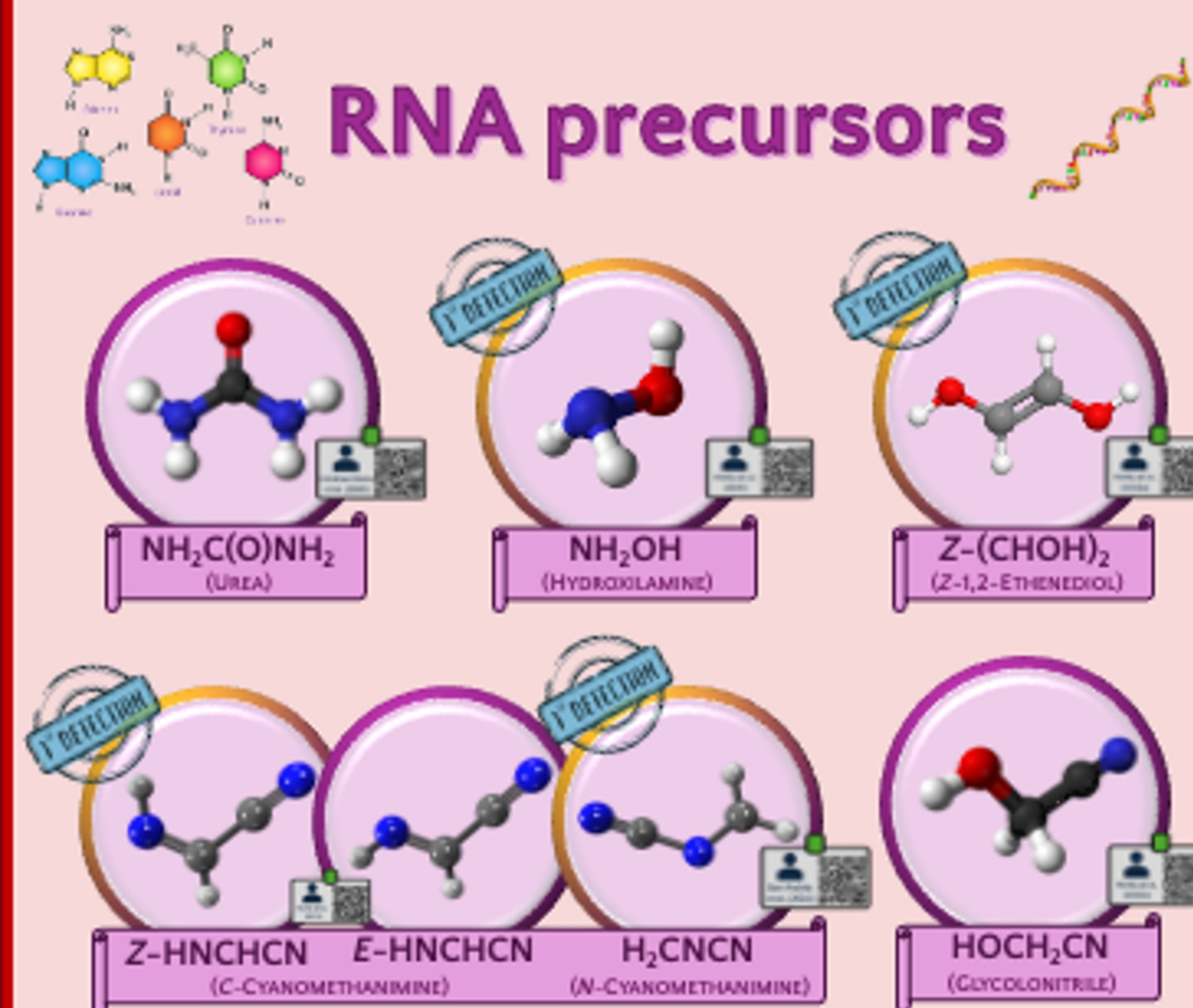


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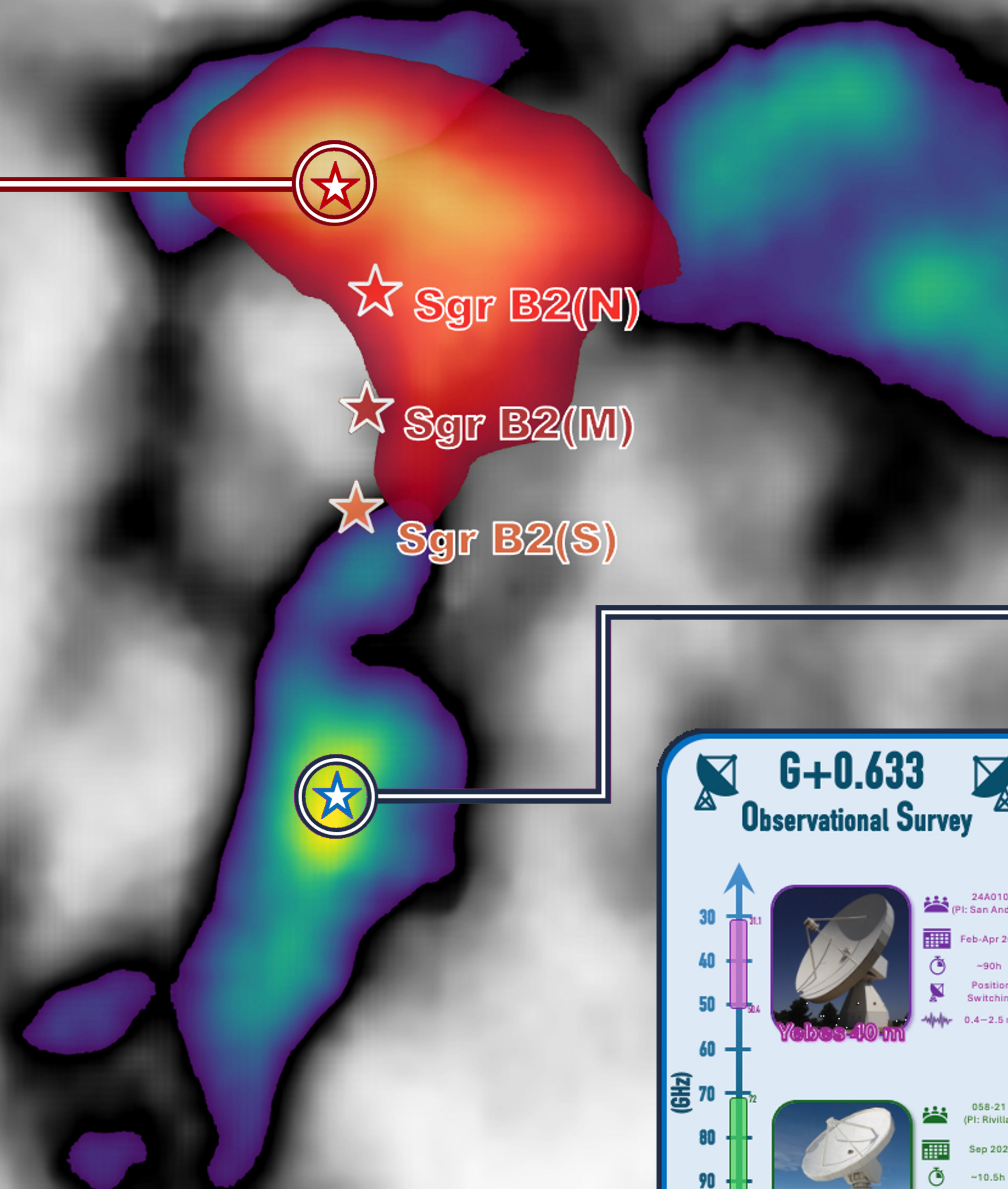
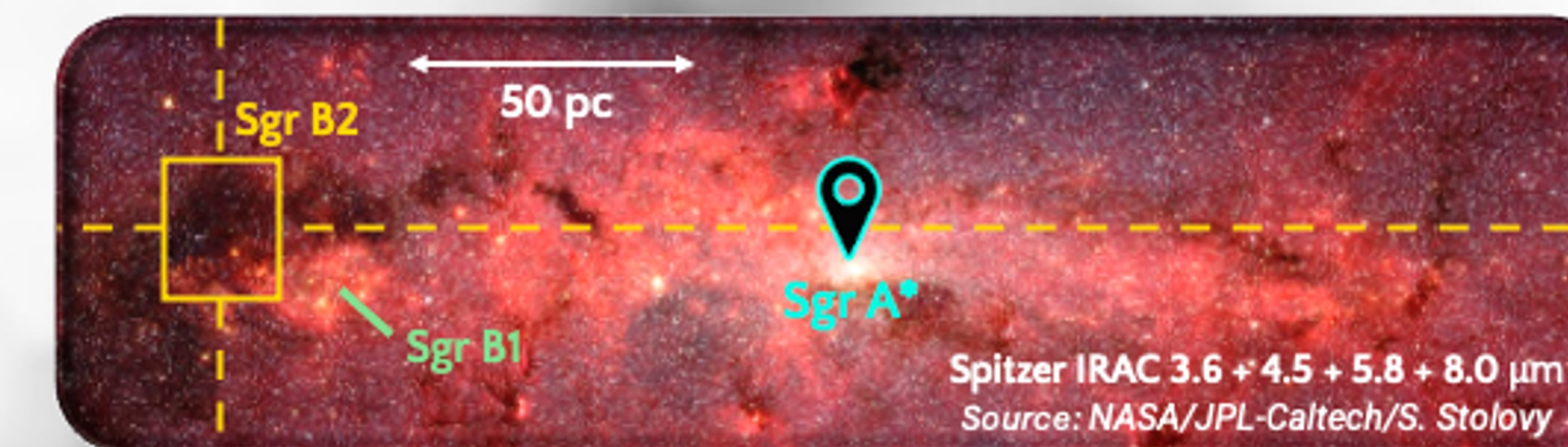


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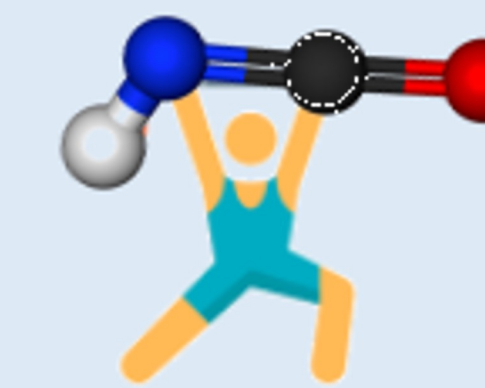
HNCO 4<sub>0,4</sub> – 3<sub>0,3</sub> Integrated Intensity Maps  
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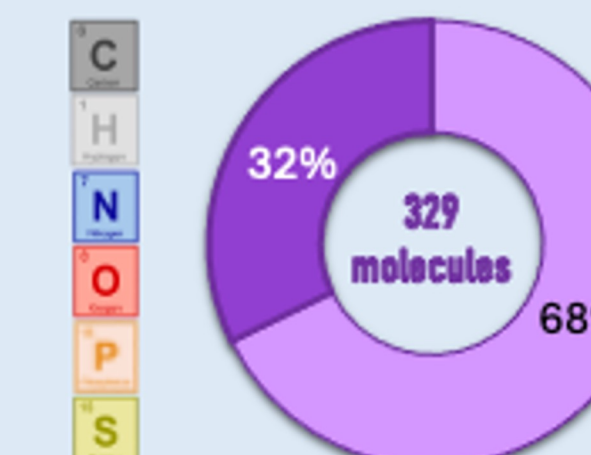
## 3. The G+0.633-0.0604 Cloud: A new Golden Mine for Astrochemistry



Located **~4' south(-west)** from **G+0.693**  
(~10 pc in projected distance)  
~2' pc south(-east) from Sgr B2(S)



Selected among the **strongest peak** of **HNCO** in the **MOPRA Mosaic** of the **Galactic Center** from Jones et al. (2012)



**107 total molecules** identified in the current survey and **51 isotopologues**, showing **N, O, S and P** atoms

Outlining **solid SECOND IDENTIFICATIONS** in the ISM for:

