

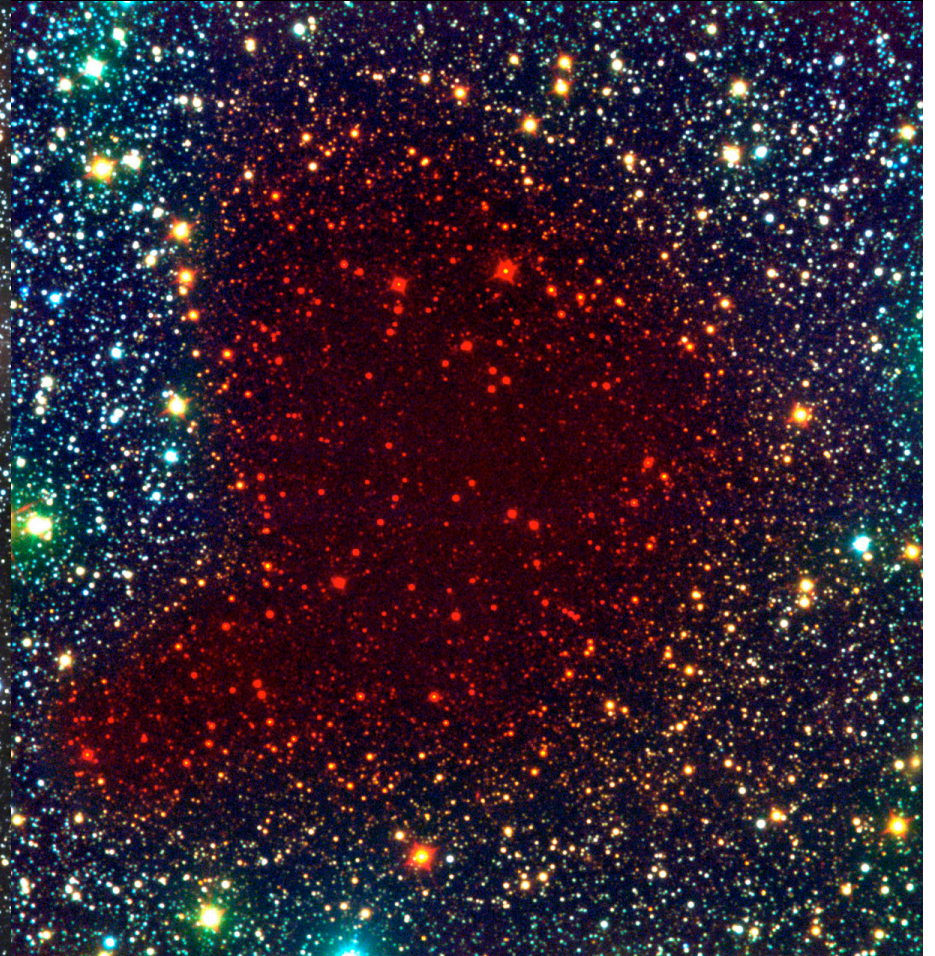


U Arizona Astronomy Club
Kinematical Survey of Star
Forming Regions in the
Milky Way

Optical Image

DUST ABSORPTION

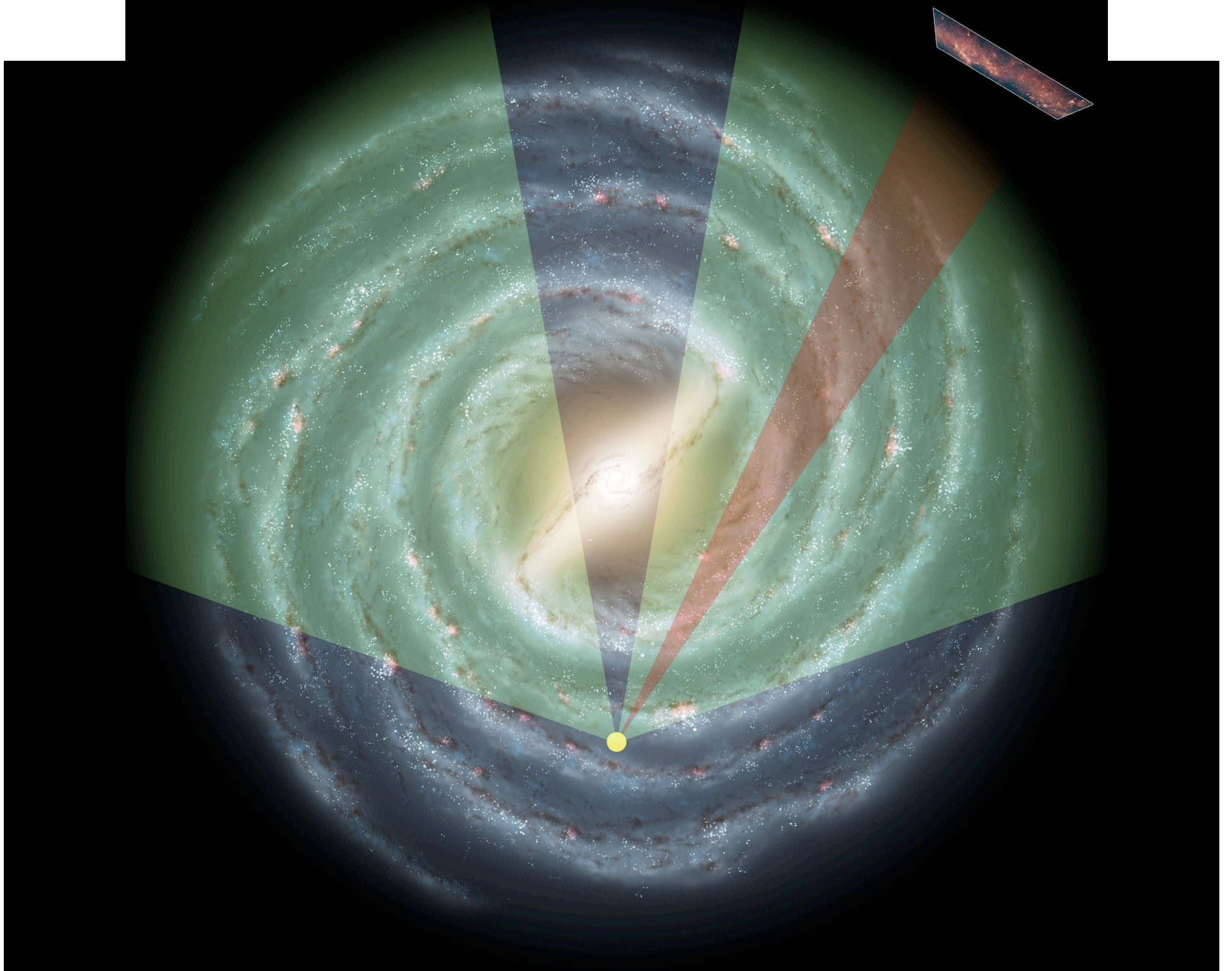
Infrared Image



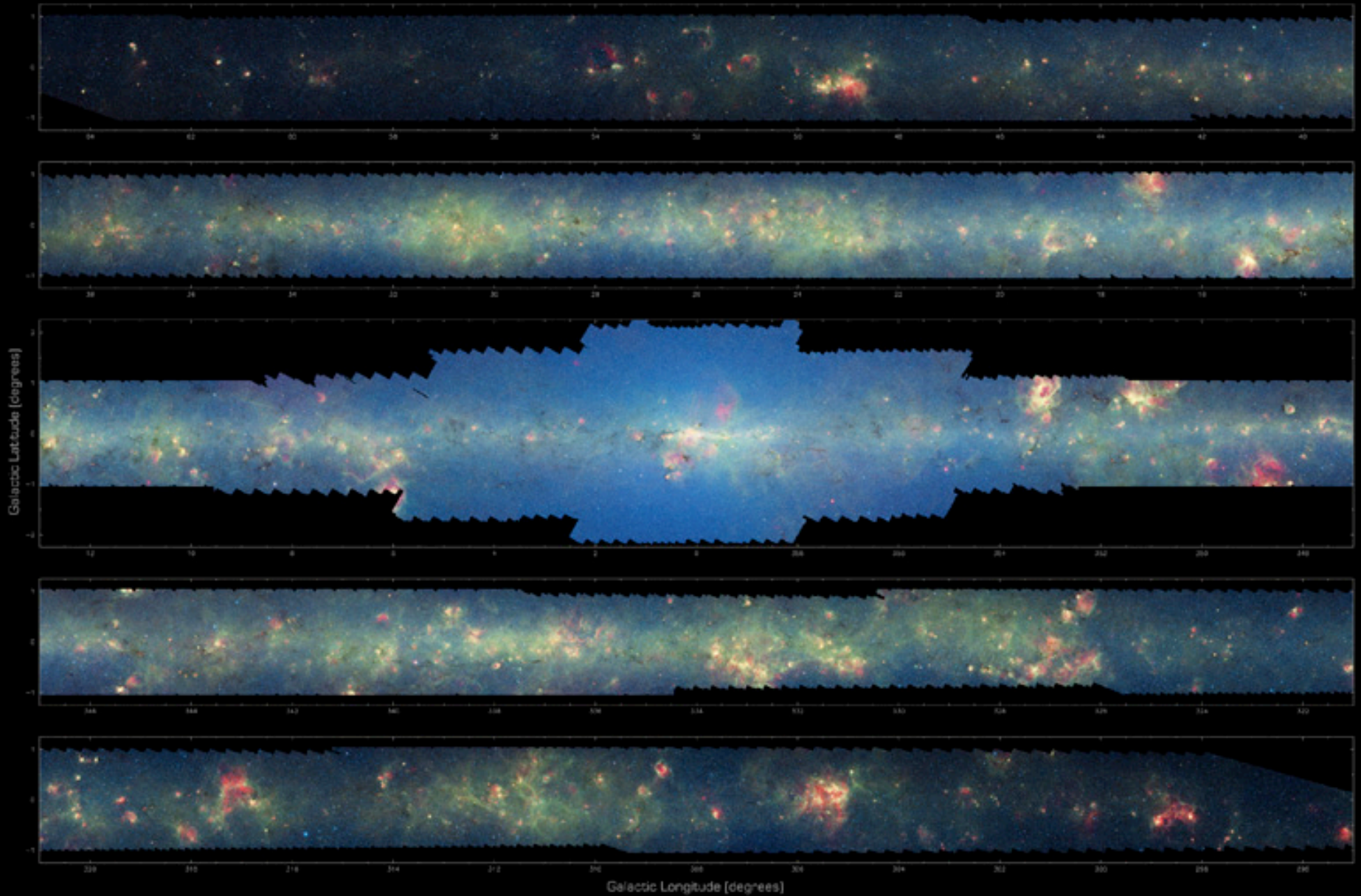
Credit: Joao Alves/ESO

Spitzer Space Telescope





THE INFRARED MILKY WAY: GLIMPSE/MIPSGAL (3.6–24 microns)



GLIMPSE team: Ed Churchwell (PI), Martin Meade, Bruce Balser, Penny Edouard, Barbara Whitby, Christine Wilson, Bob Regier, Steve Brackley, Thomas Robitaille, Stephen James, Doug Willock, Mark Wolff, Mia Wolf, Matt Povich, Tom Smees, Don Demers, Martin Cohen, Cecilia Capomonte, Kate Evans, Fabian Heitsch, Jim Jenness, Katherine Johnson, Chip Kelsley, John Mathis, Emily Moran, Josephine Pea, Mark Sereno, Susan Stalvey, Brian Tegen

MIPSGAL team: Ron Carey (PI), Alberto Noriega-Crespo, Don Malone, Scott Brink, Roberto Padilla, Kathleen Krueger, Barbara D. Price, Heide Pudge, Eric Ryan, Pamela Bracken, Peter Hadravsky, Thomas Kuchar, Di Bracciar, François Maréchal, Jim Irwin, Deborah Padgett, Luis Reboul, Bruce Sermon, Boris M. Franzosi, Benjamin T. Lee, Carl Dill, Peter Marín, Maria Antonia Moll, Casimiro, Sergio Malinar, Russel Sigmund, Leandra Teak

Poster designed by Thomas Robitaille and Robert Hurt

3.6, 8, 24 μm

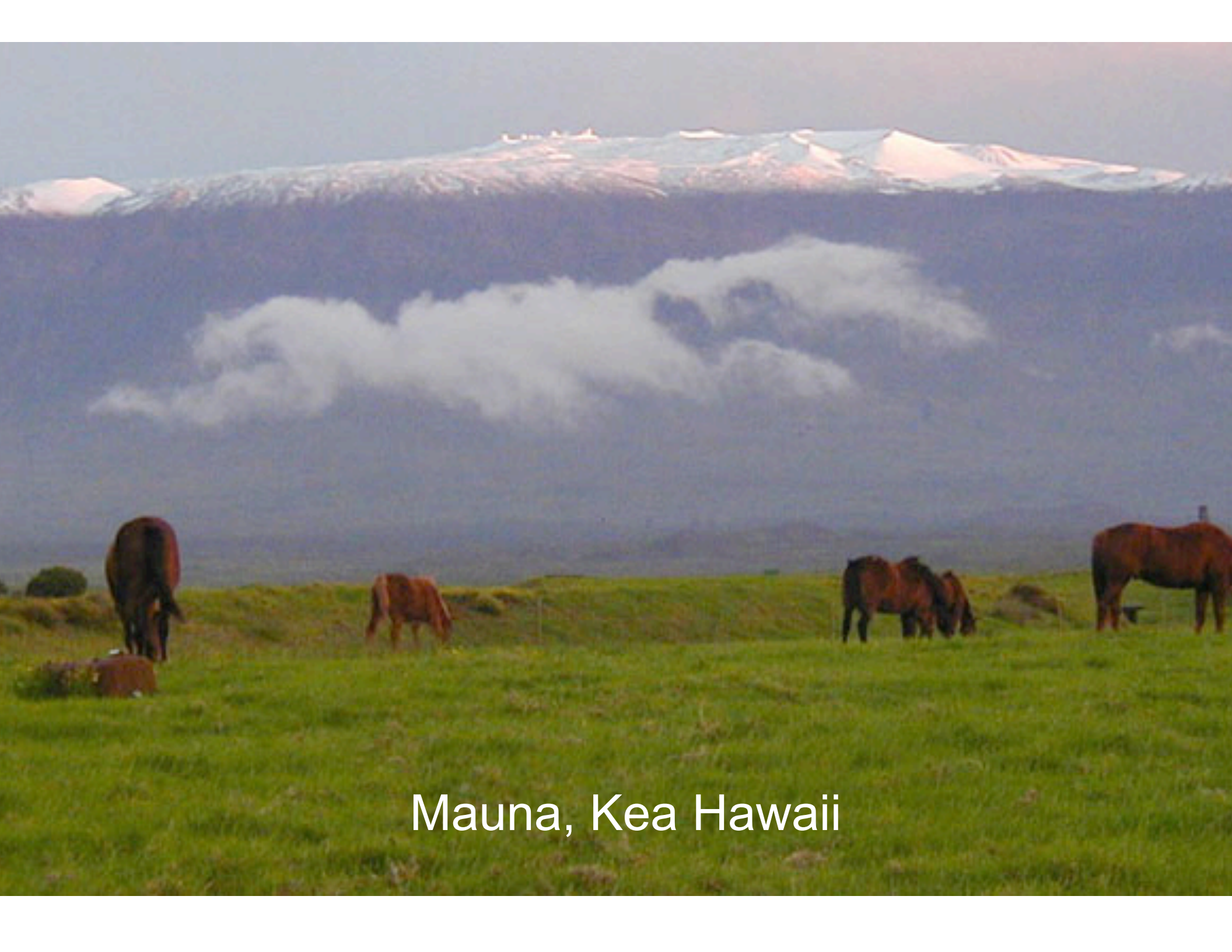


Star Formation and Dust in the Galactic Plane

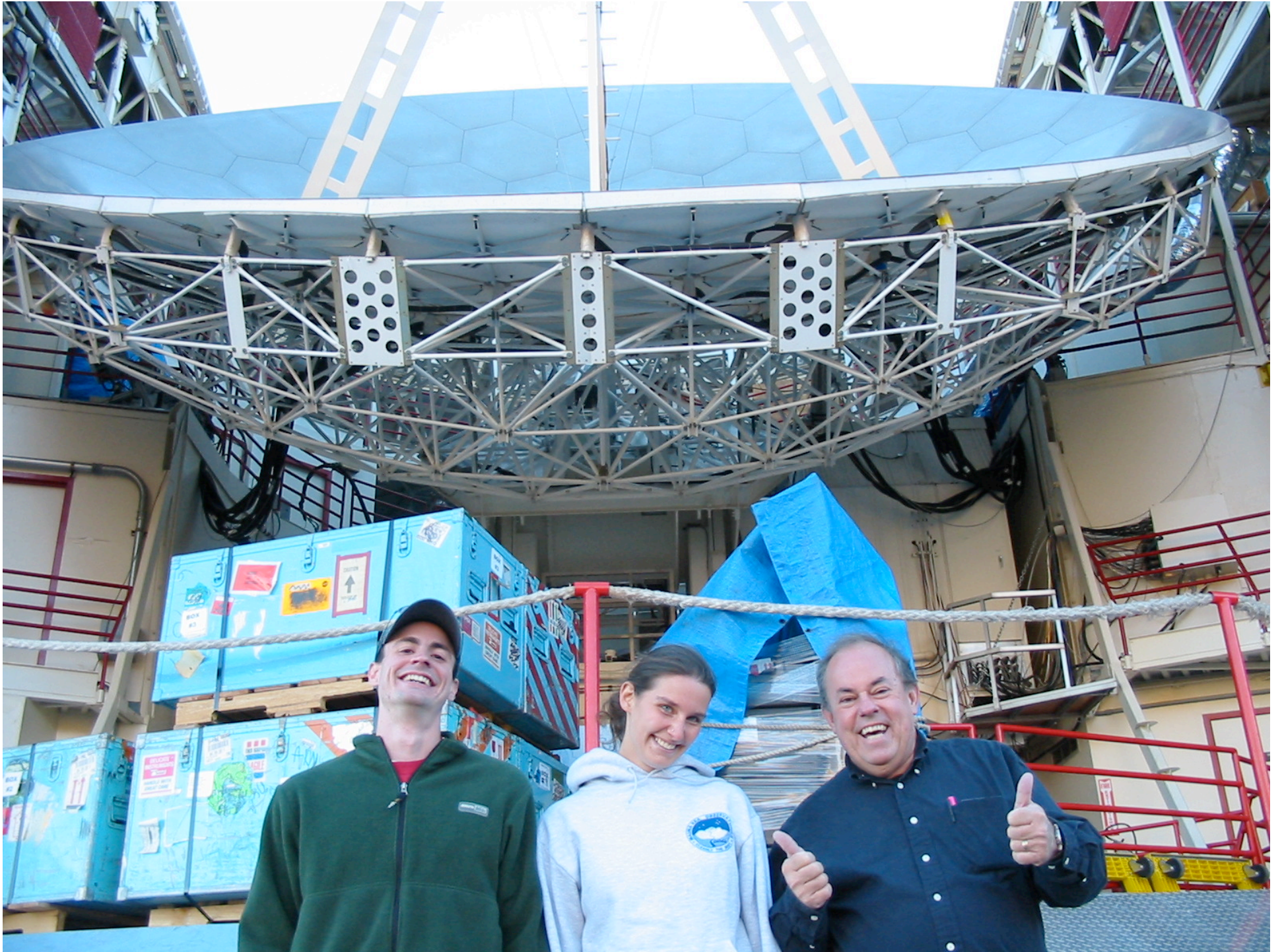
NASA / JPL-Caltech / S. Carey (SSC)

Spitzer Space Telescope • IRAC • MIPS

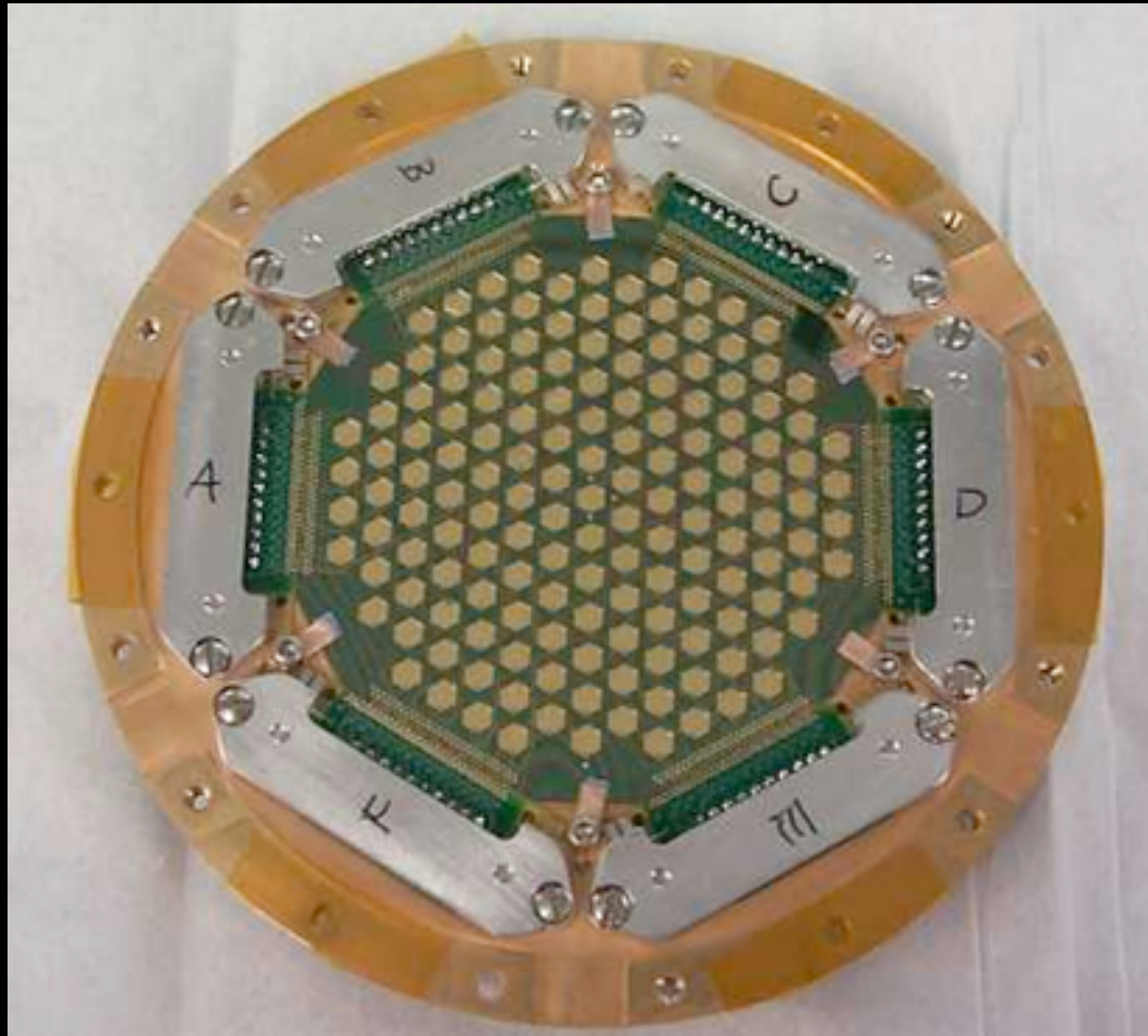
ssc2006-20a



Mauna, Kea Hawaii



BOLOCAM





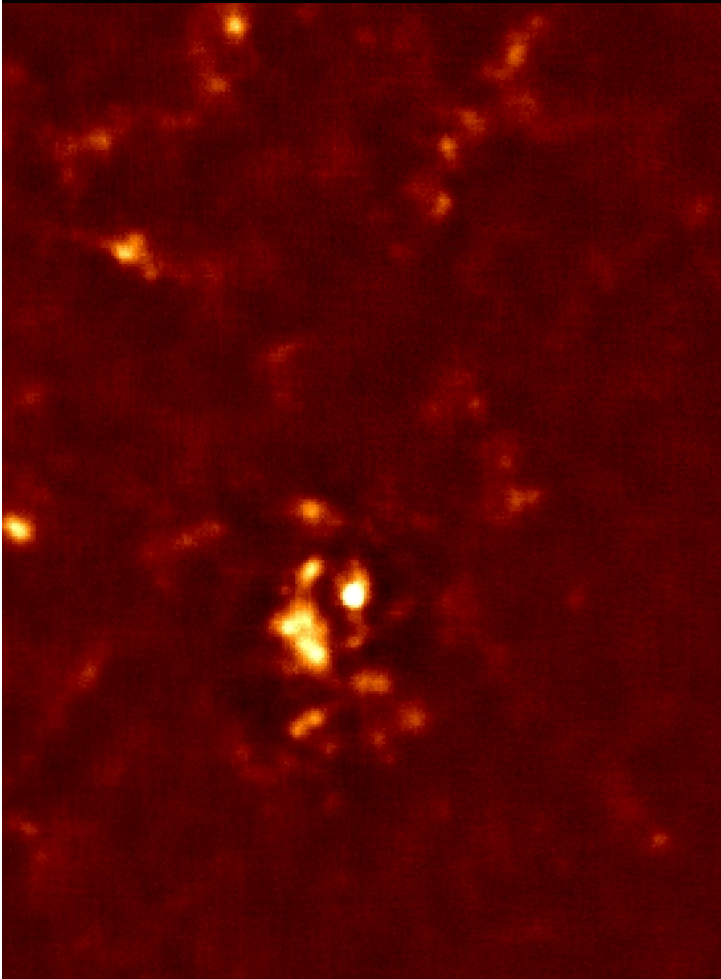
1.1 mm

Detects cold $T > \sim 10\text{K}$ material!

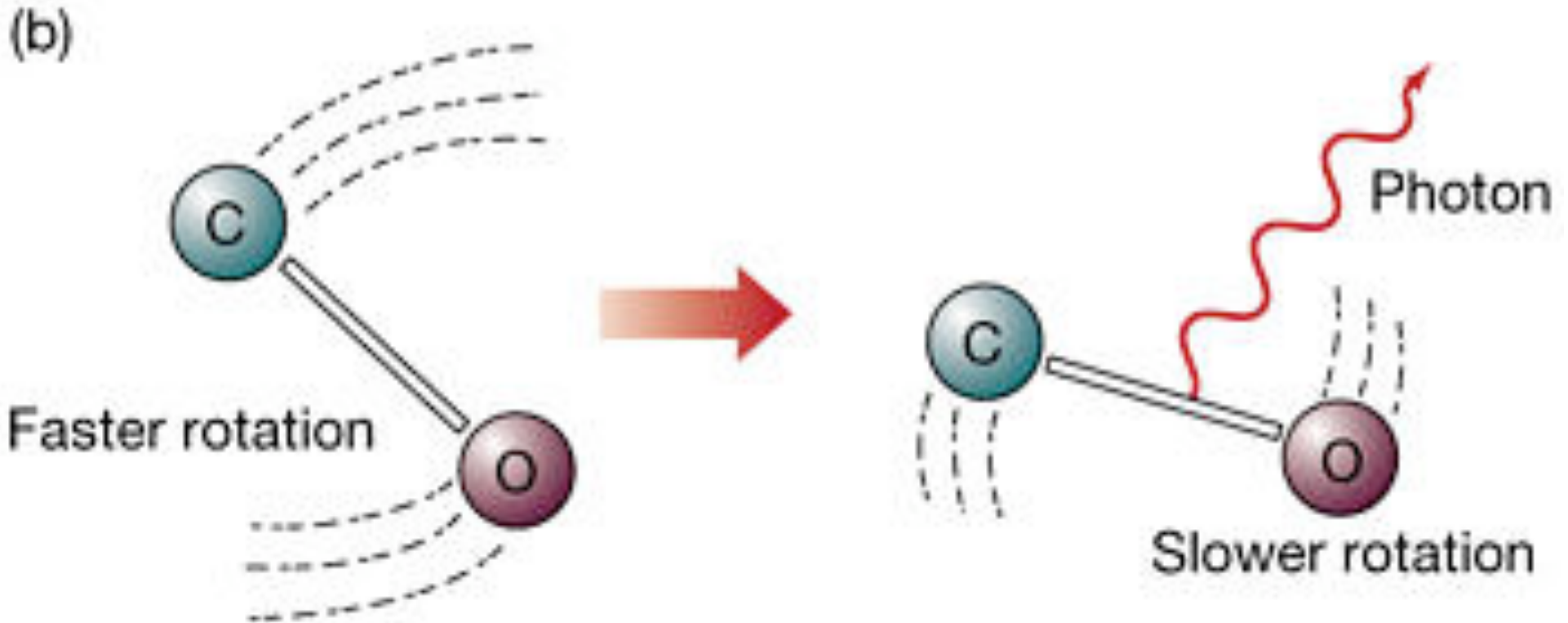
Over 8000 Sources detected !

What are the properties of these newly discovered sources?!!

- SIZE
- MASS
- LUMINOSITY
- ALL DEPENDS ON
DISTANCE!



Observing Molecules in Space



(c)

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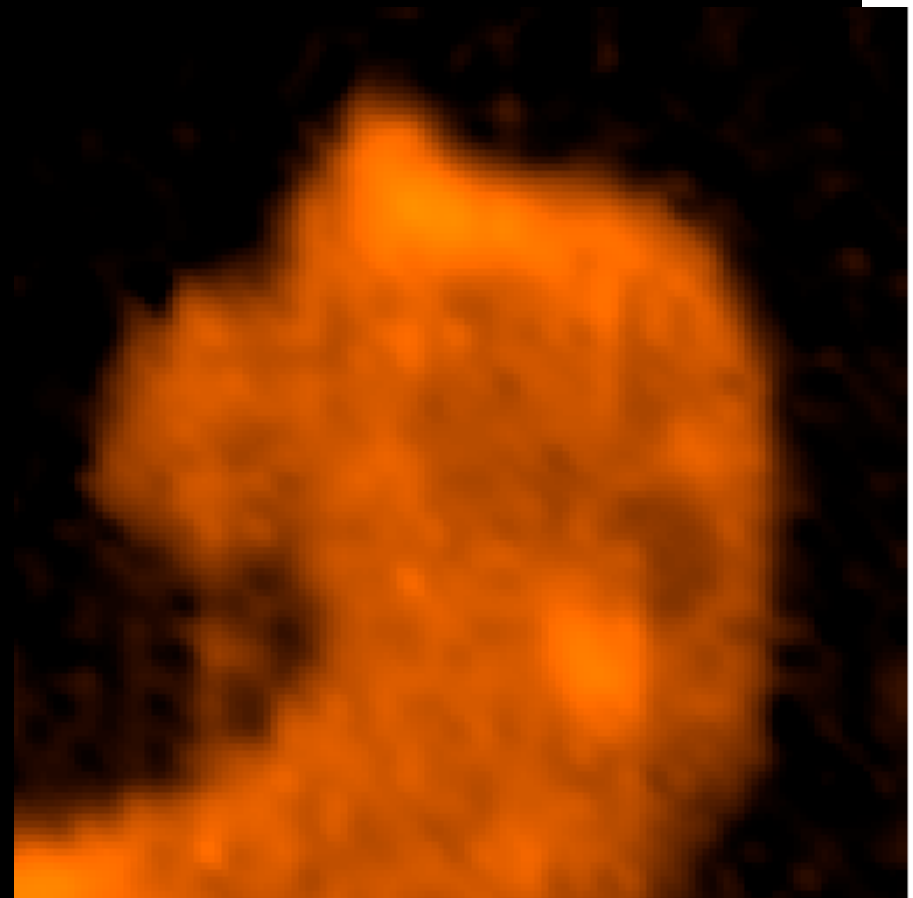


CO Emission in the Horsehead

Optical

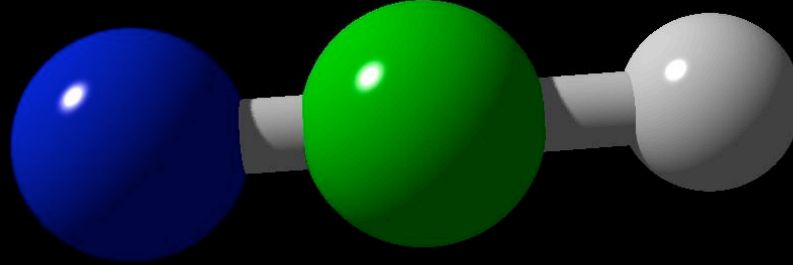


CO Radio

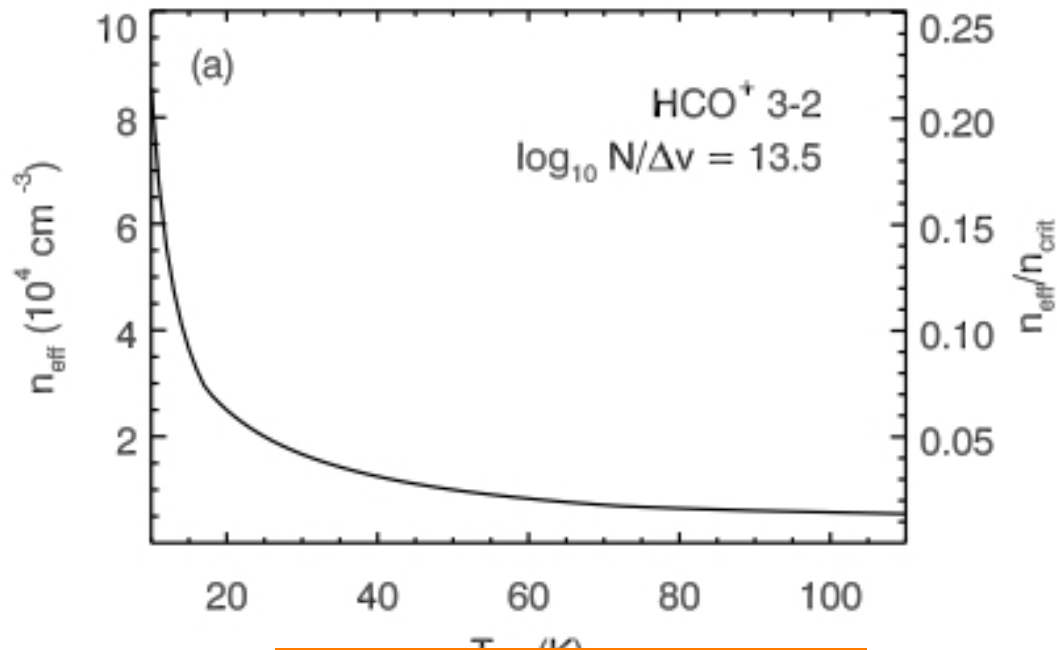


Observing Dense Molecular Gas

HCN



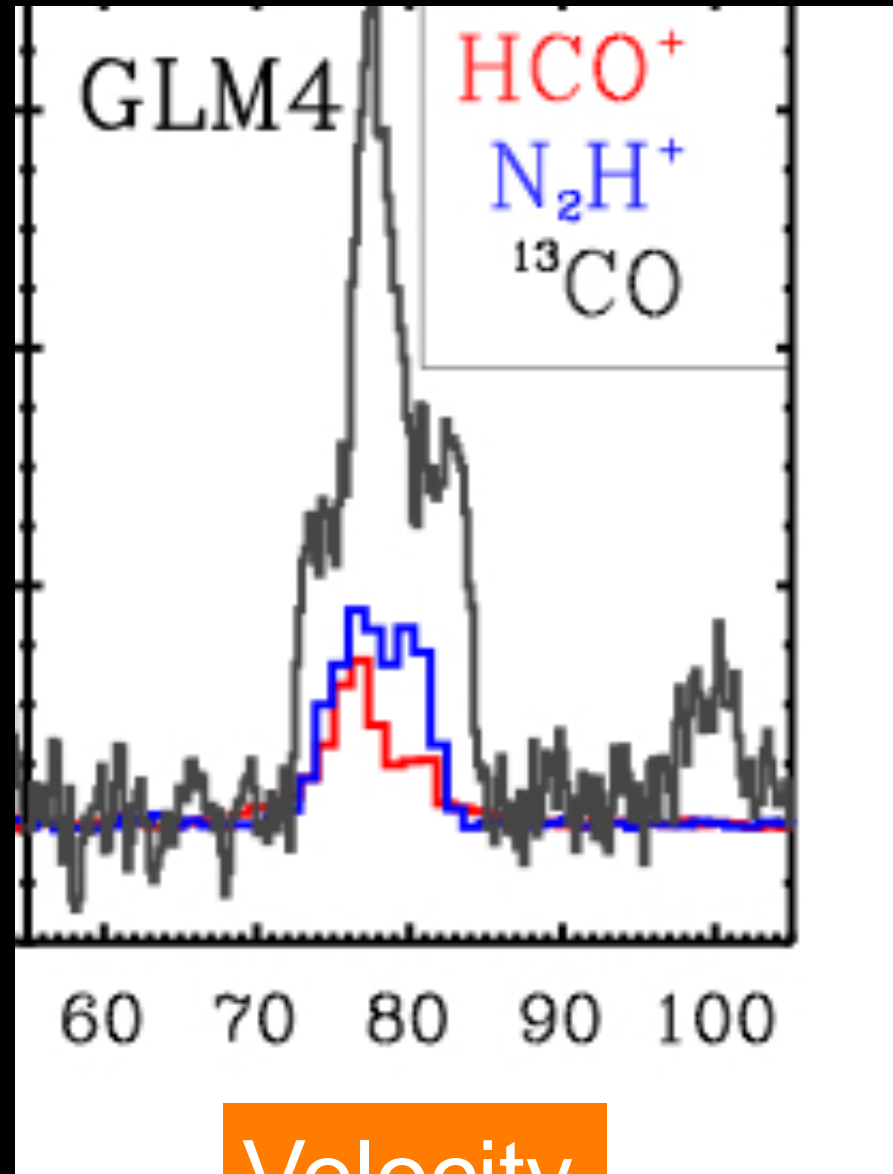
Density $\times 10^4$



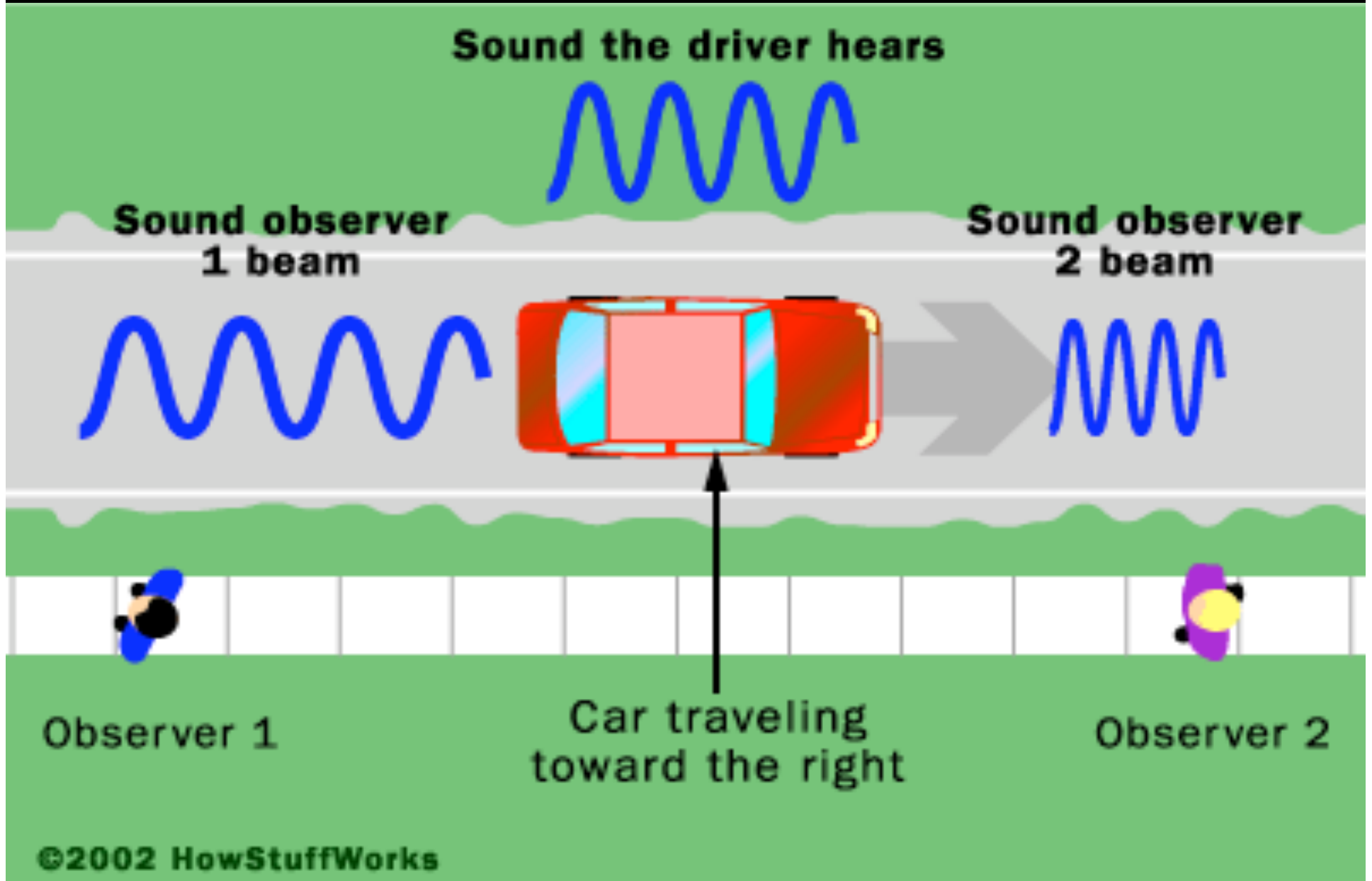
Temperature

Molecular Spectra

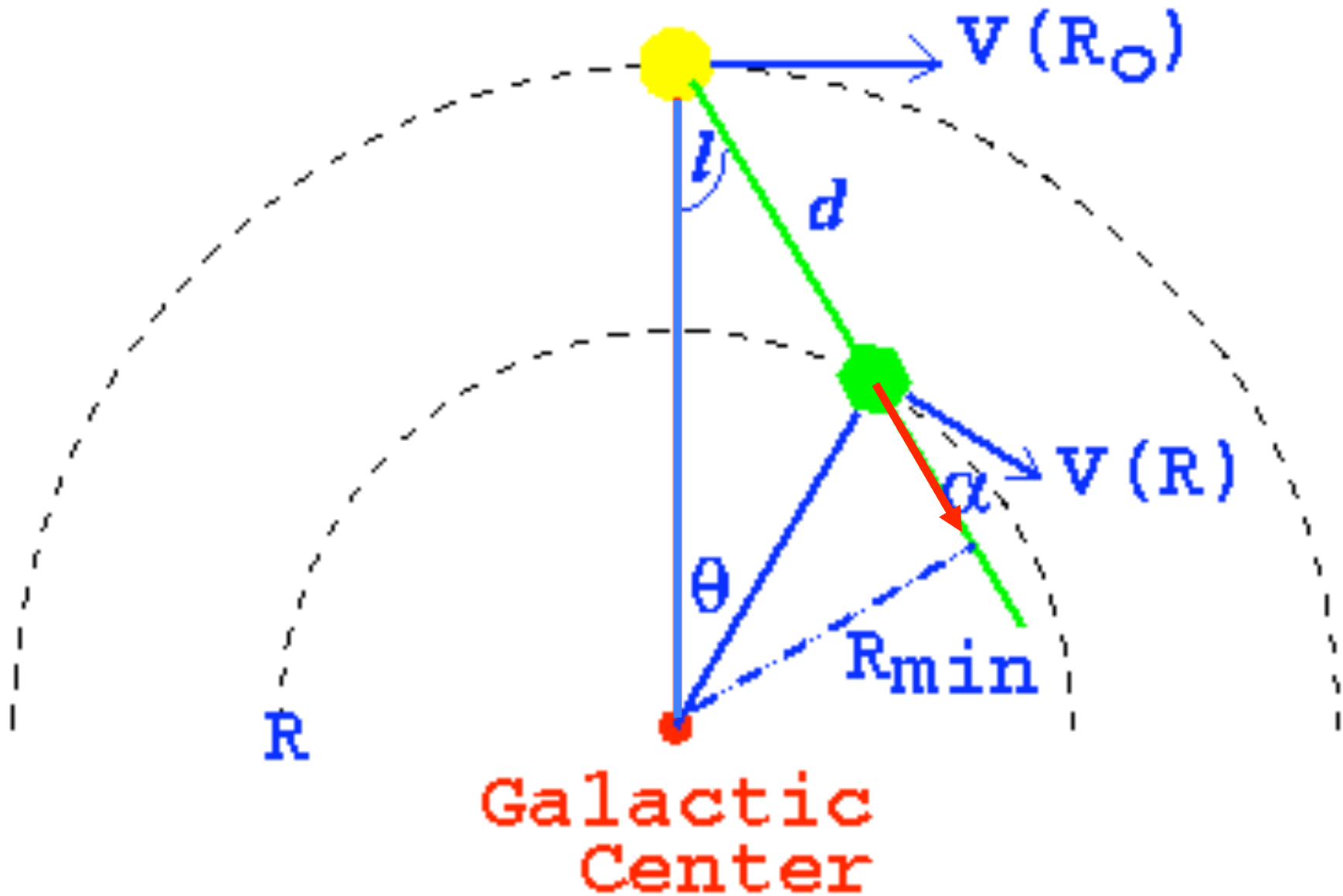
Intensity

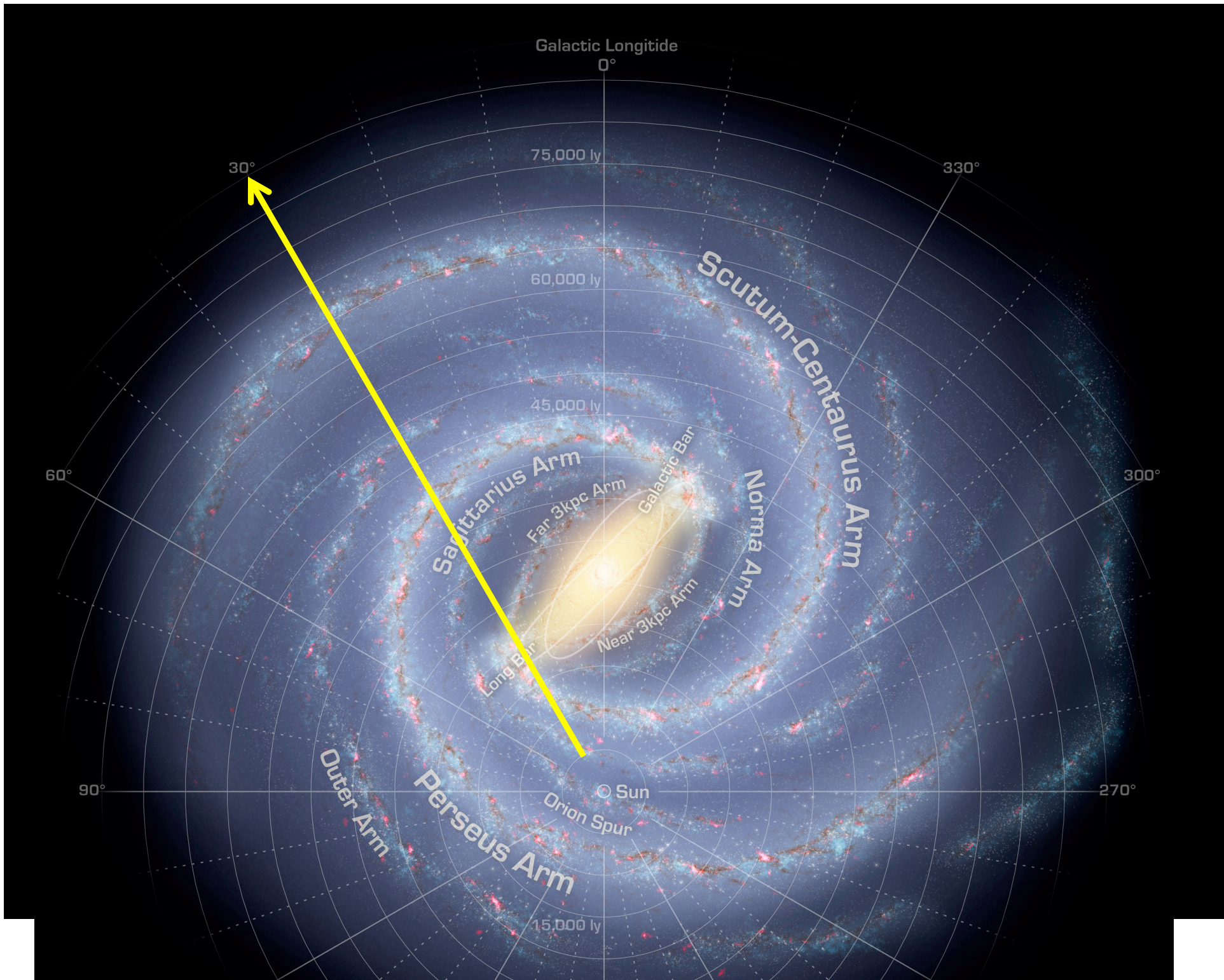


Doppler Shift



Galactic Rotation





Herschel Space Telescope

