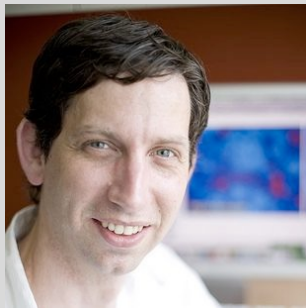




# SU2: The Distant Universe

Sabine Bellstedt



# Who are we?







# Who are we?







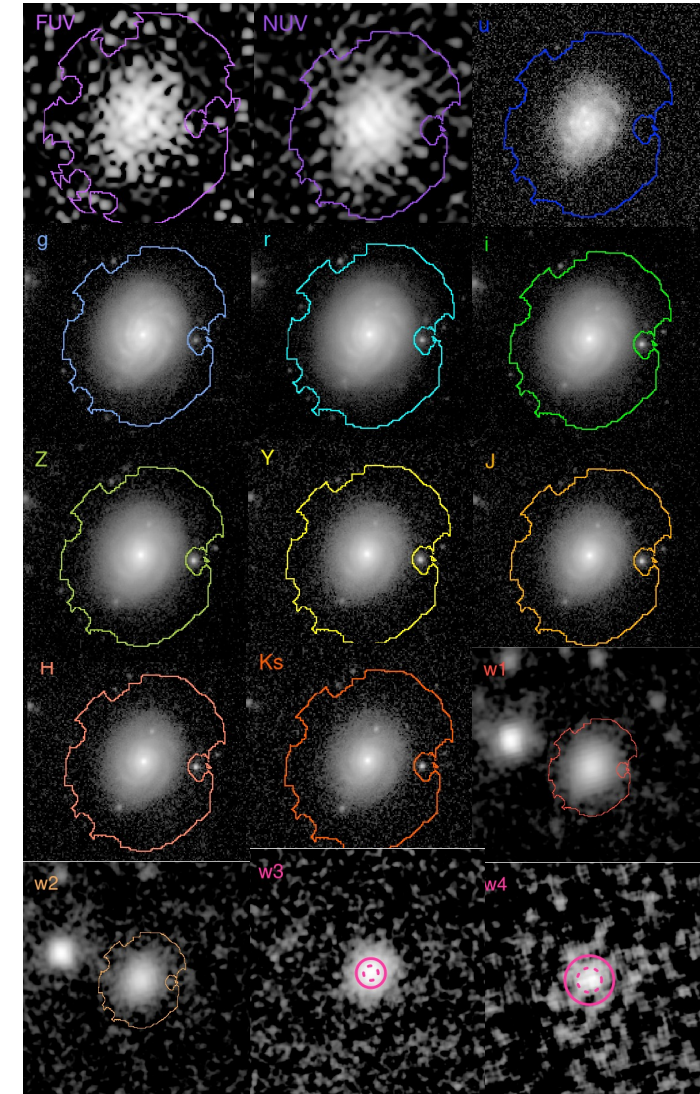
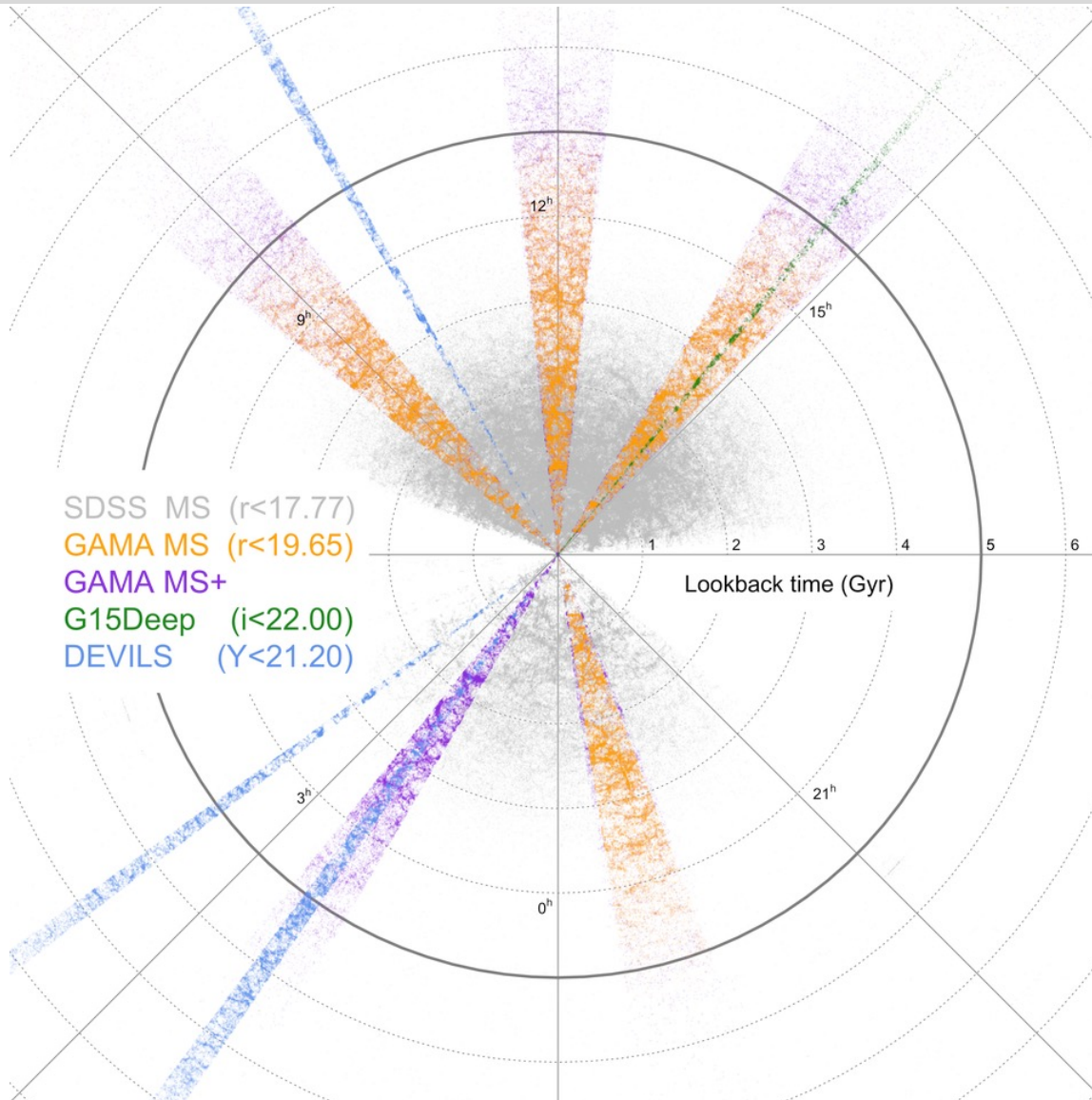
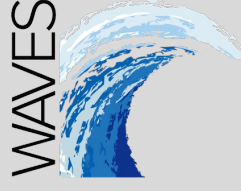
# Who are we?







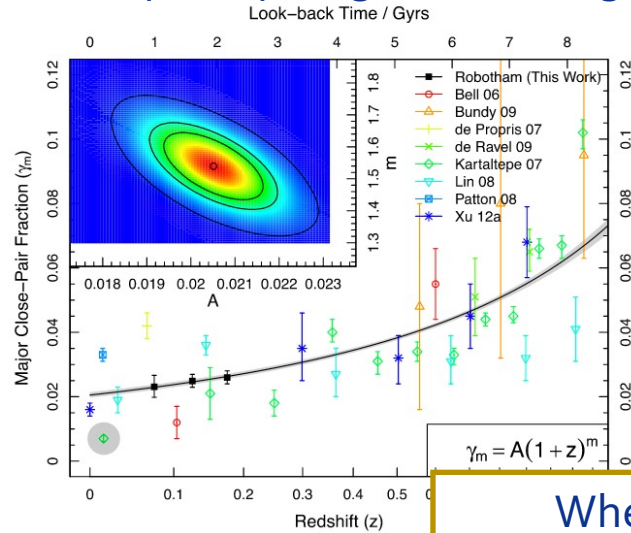
# Large Galaxy Surveys



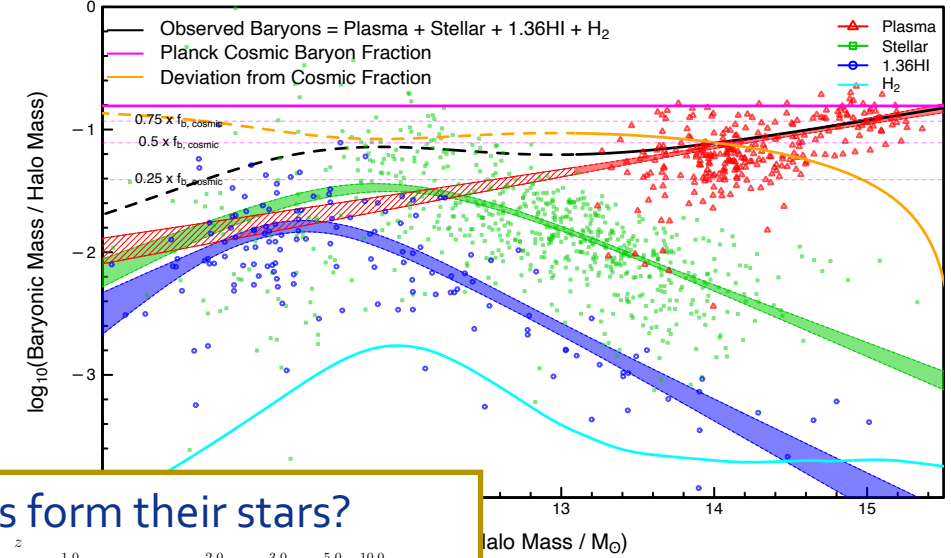


Redshift surveys form the statistical backbone for galaxy evolution studies

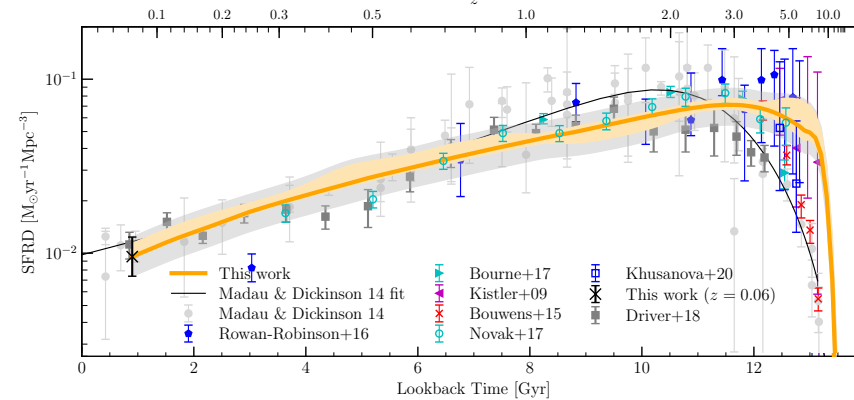
## How frequently do galaxies merge?



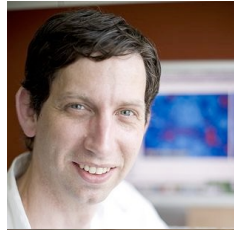
## Where are the baryons?



## When did galaxies form their stars?



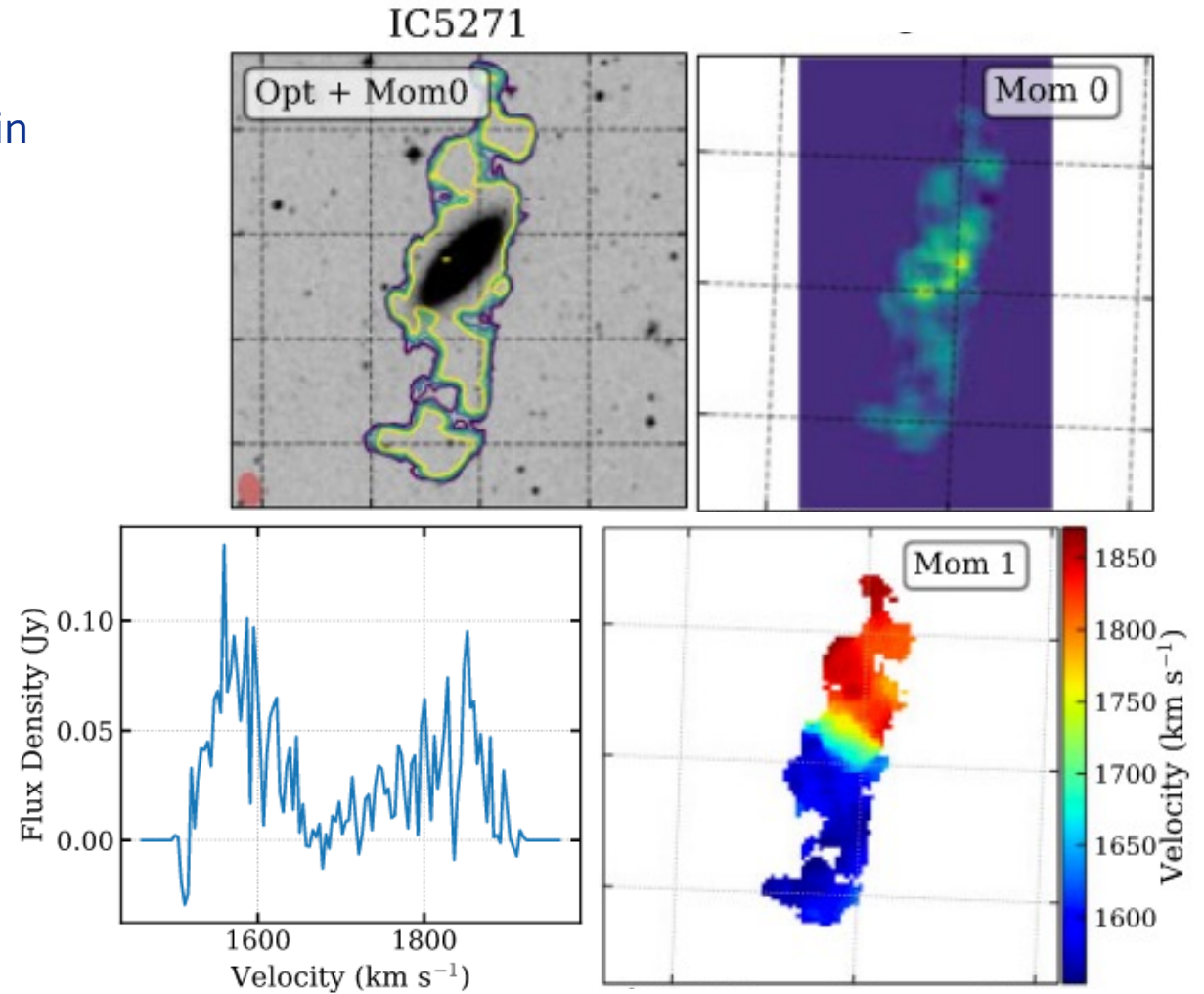


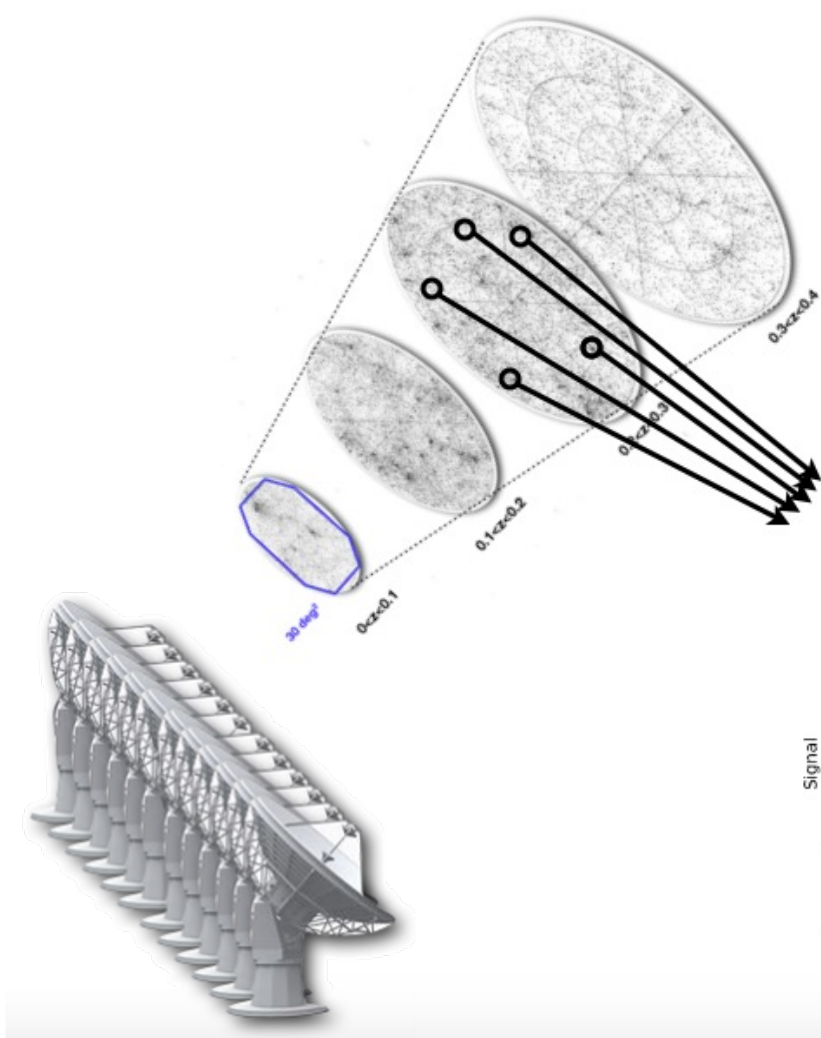
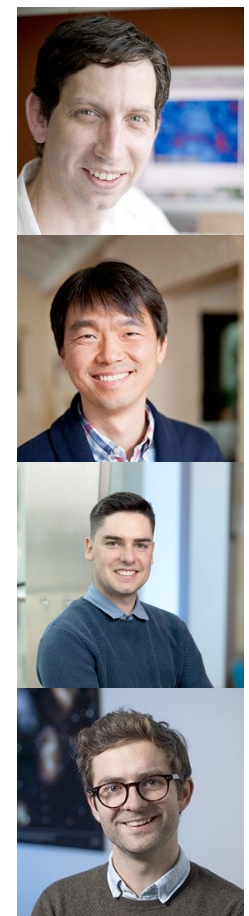


To see the gas in galaxies, we need to look in radio wavelengths...

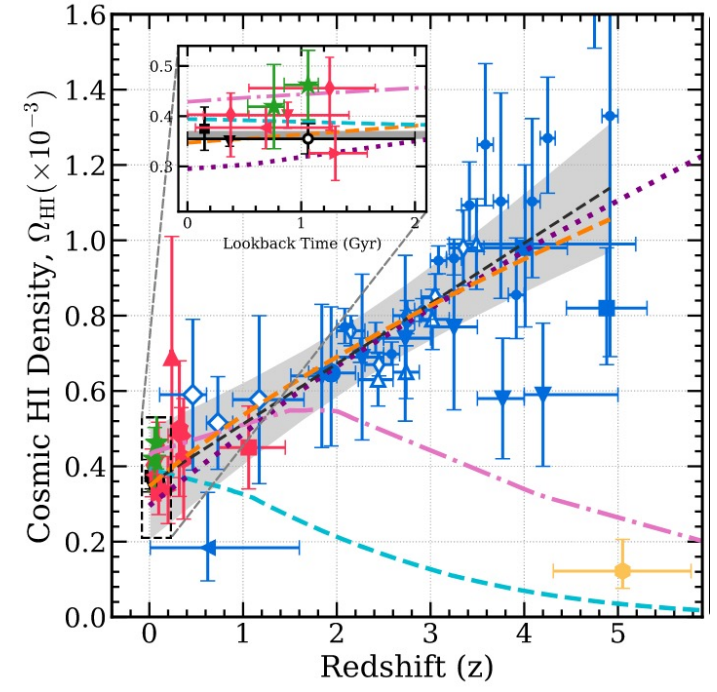
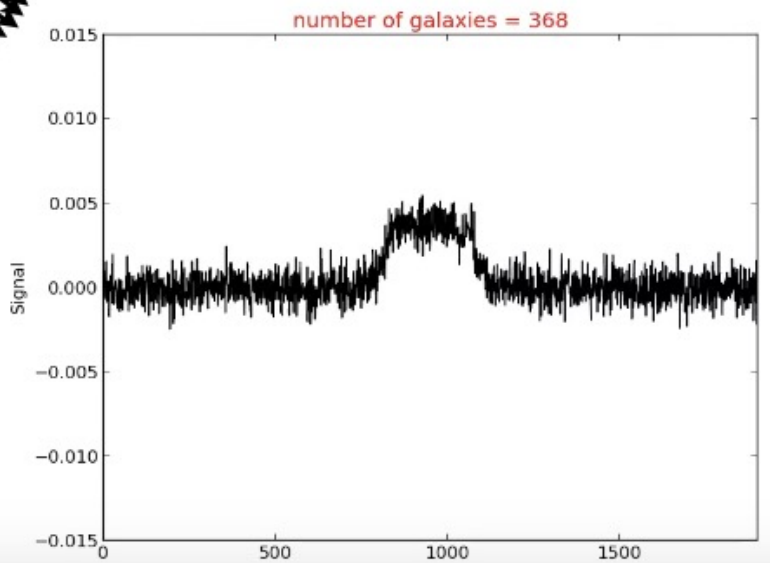


Australian SKA Pathfinder





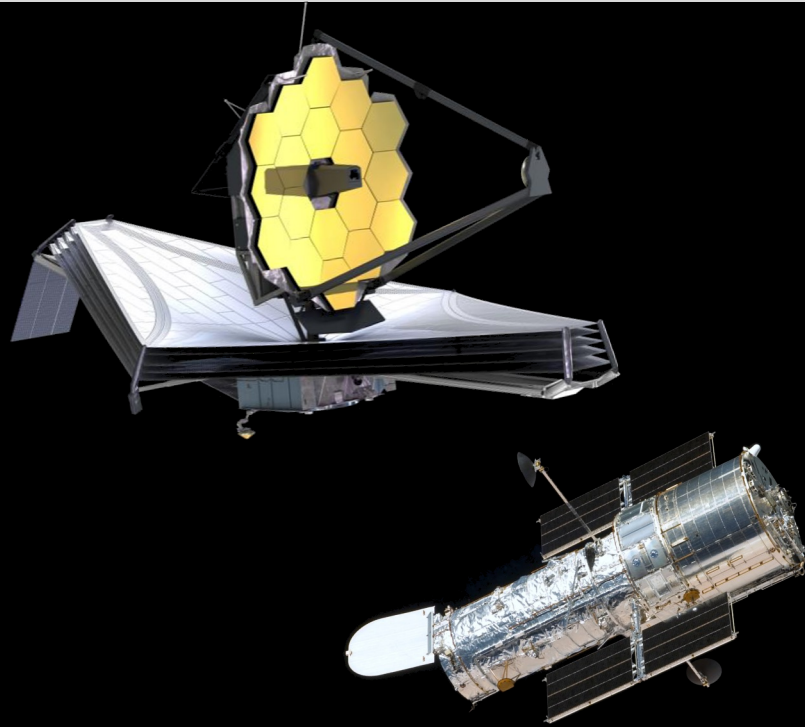
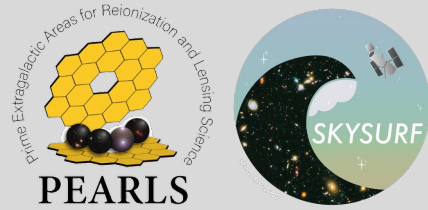
Combine radio data with catalogues from galaxy redshift surveys to understand neutral gas in galaxies







# Space Data



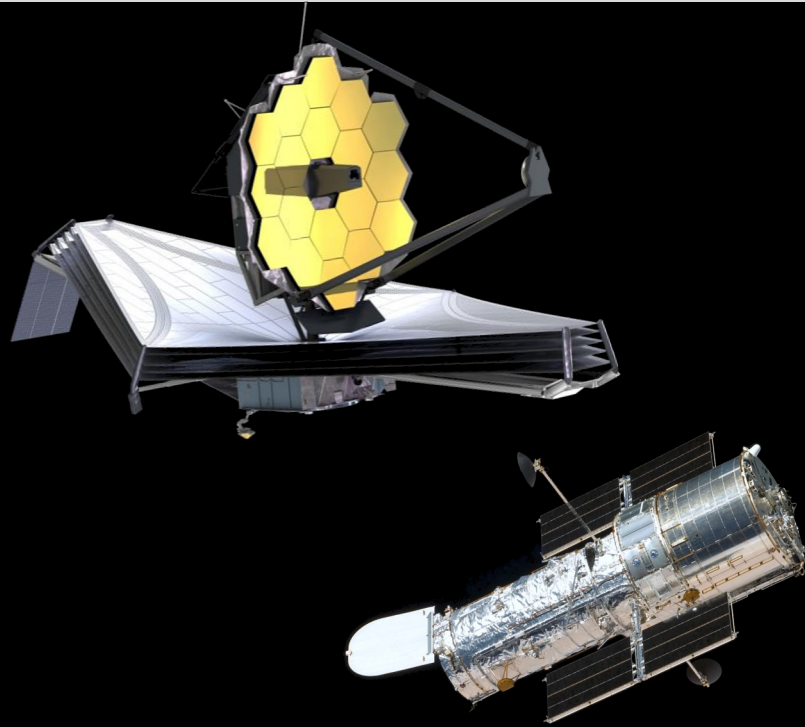
Using telescopes like Hubble and JWST to study the faintest structures, and learn about the most distant galaxies



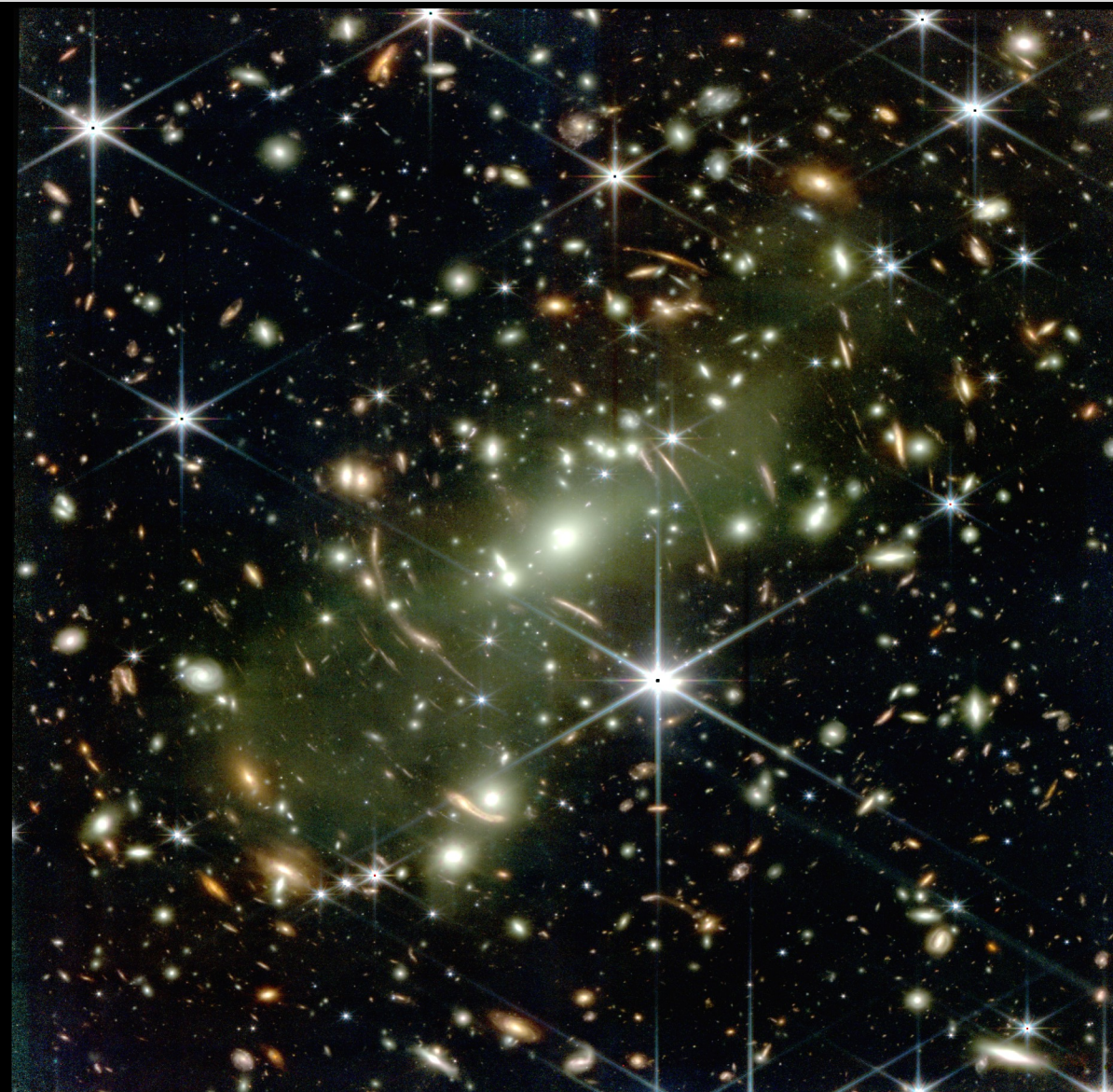




# Space Data



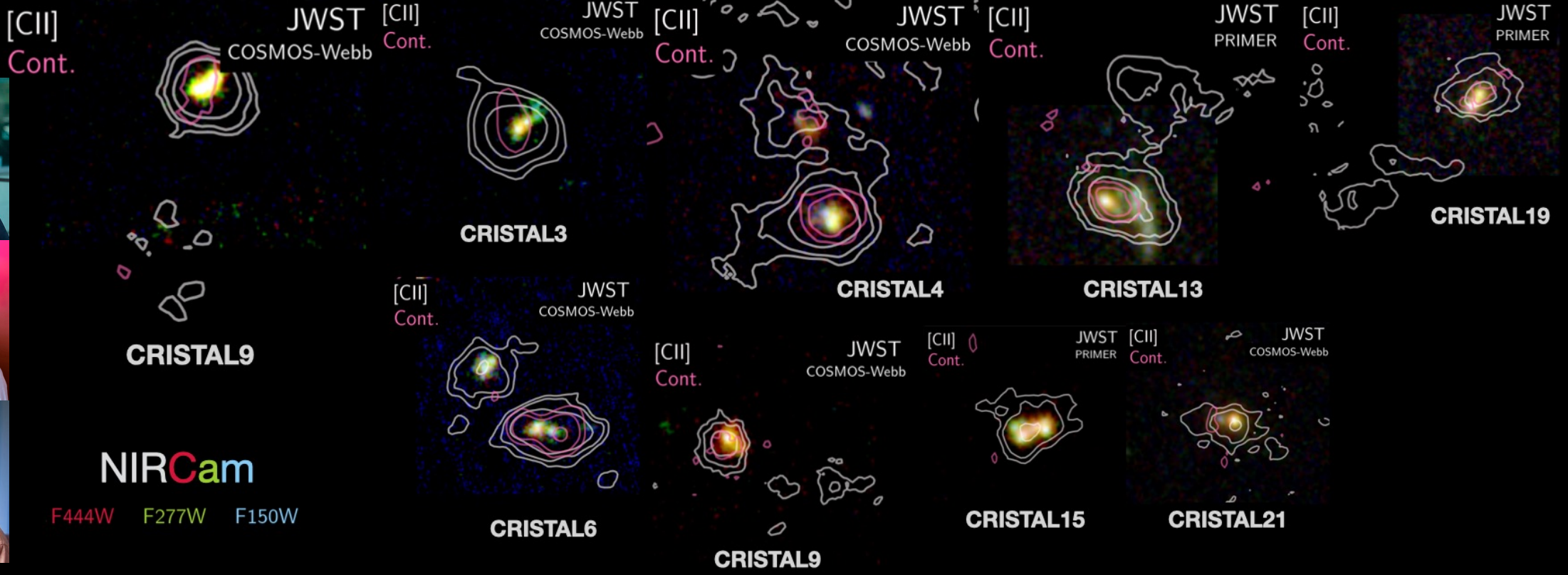
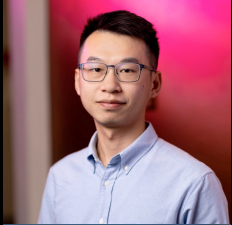
Using telescopes like Hubble and JWST to study the faintest structures, and learn about the most distant galaxies





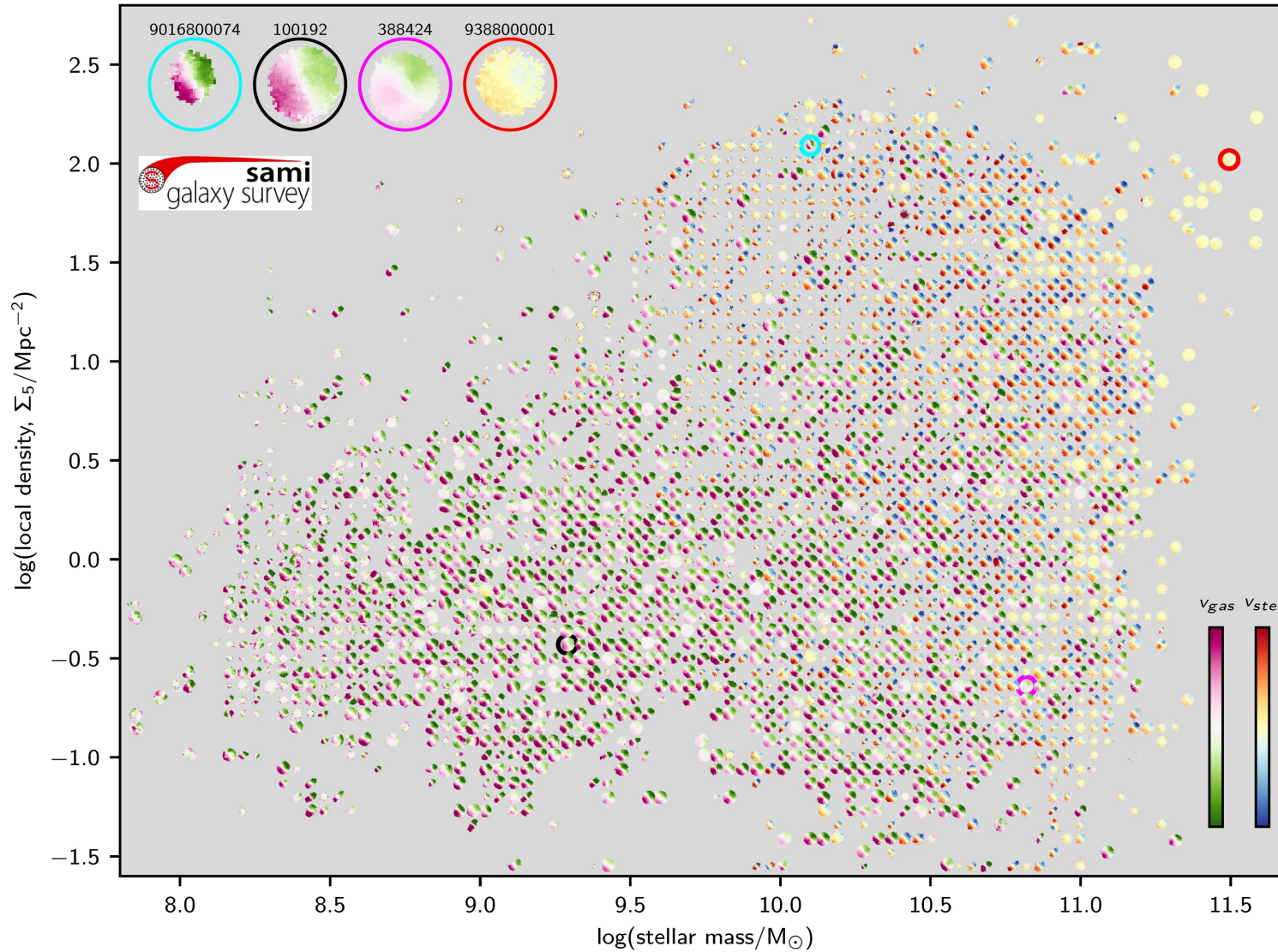
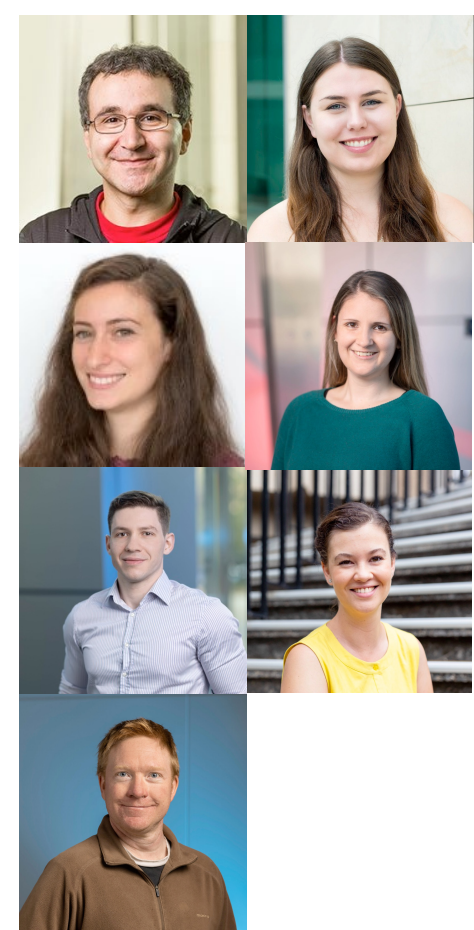


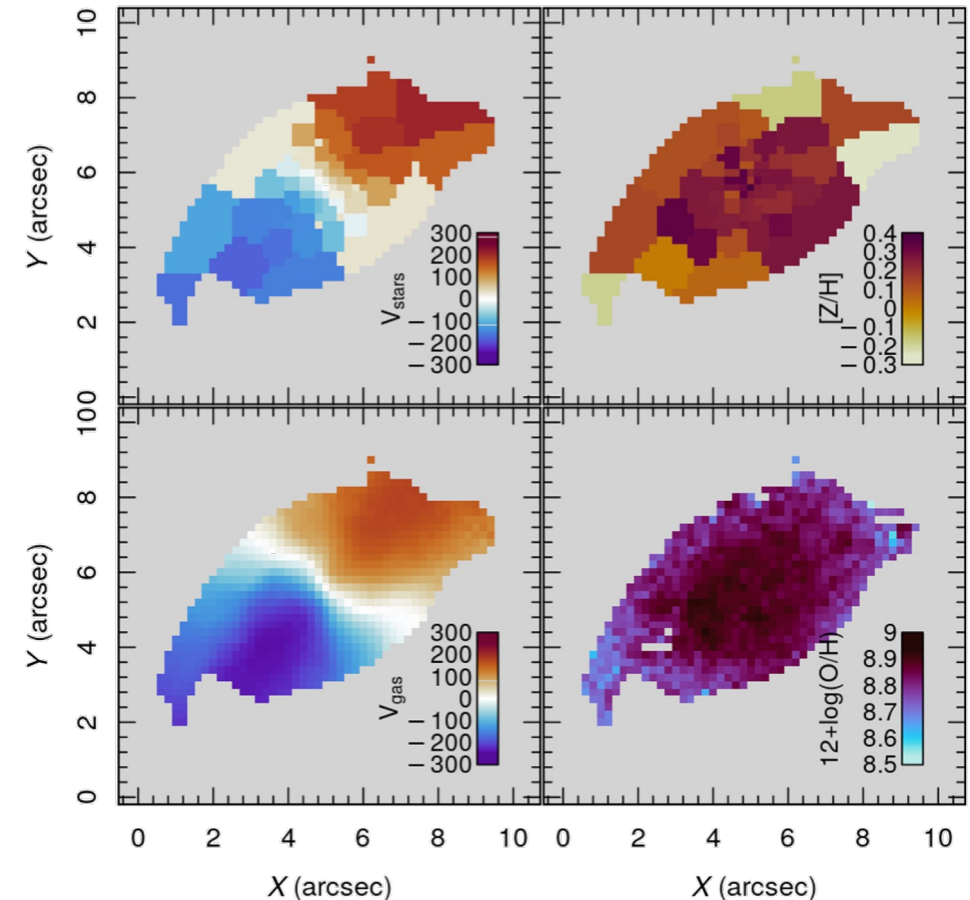
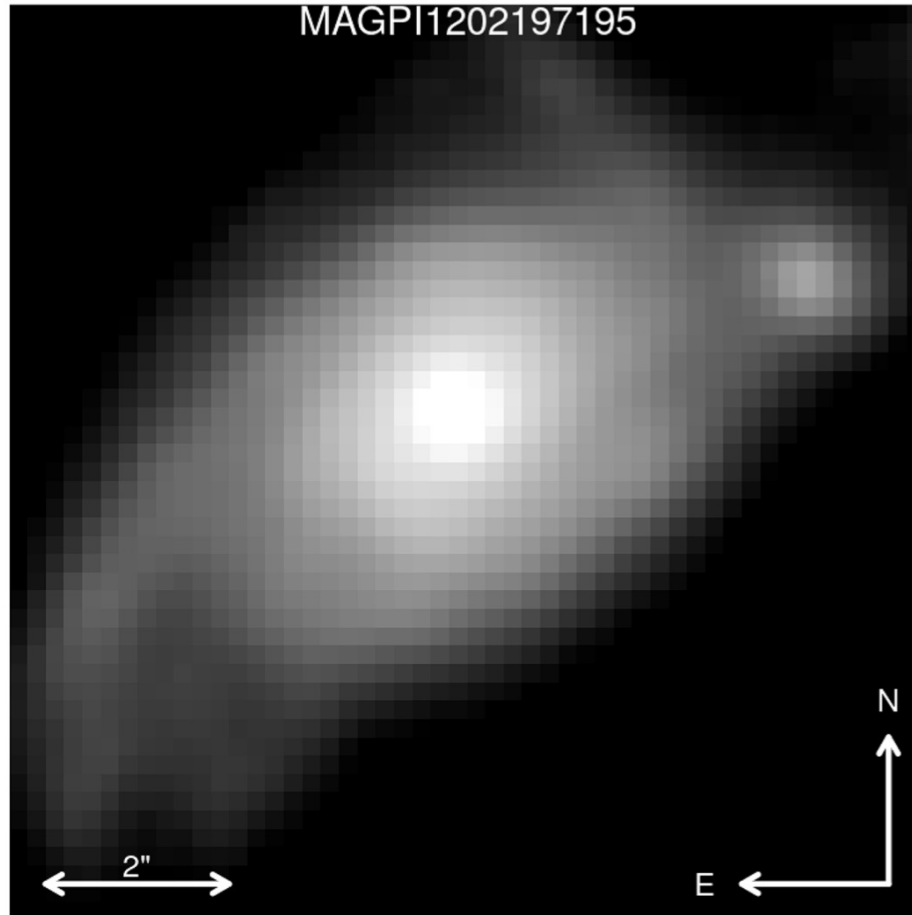
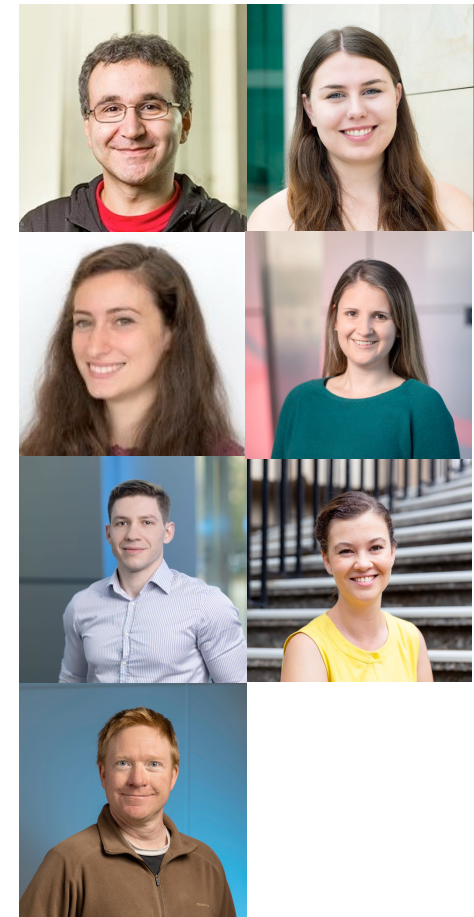
## ALMA [CII] 158 $\mu\text{m}$ and dust continuum + JWST/NIRCam











Next generation surveys help us study galaxies in this detail much deeper into the Universe...