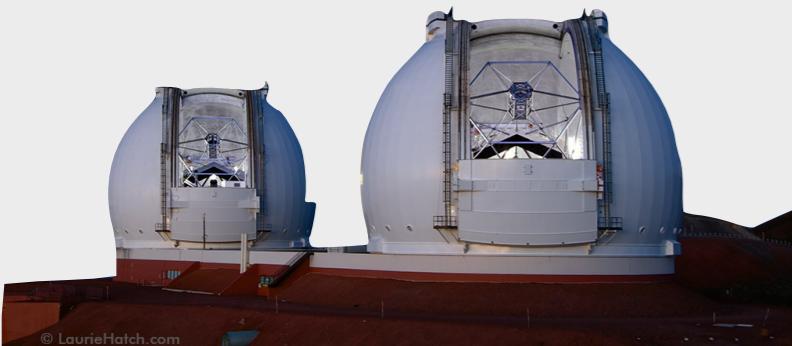


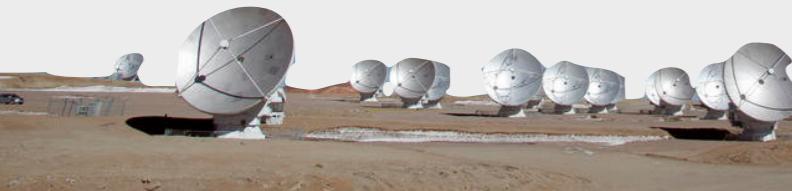
# ANDREAS FAISST (CALTECH/IPAC)

How do galaxies **form** and **evolve** in the early Universe ( $z > 4$ )?  
How do the most massive galaxies **die**?

I use **Keck** to follow up the first galaxies spectroscopically to study **how quickly the early Universe was ionized**.

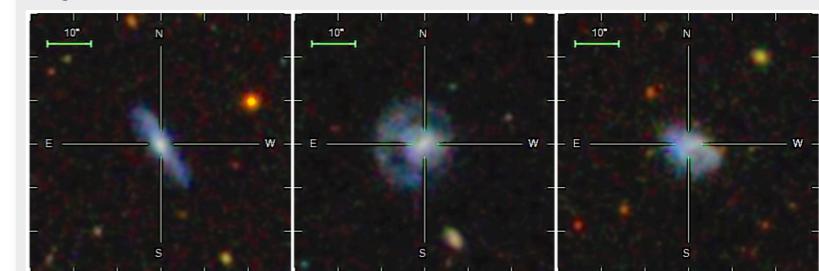


With **ALMA** measurements of C<sup>+</sup> and continuum, I **study the dust properties and gas kinematics of the first galaxies** to inform galaxy formation.



I use **Spitzer** to **measure emission line properties** of the first galaxies ( $z > 4$ , where no spectrograph can reach) to **study mass assembly rates**.

I am using **local galaxies** to **predict the emission line properties of high redshift galaxies**. My work will be used by *Euclid* and *WFIRST*.



I am the **North-America PI** of **ALPINE**, a 70h ALMA program to measure C<sup>+</sup> + FIR continuum of 122 galaxies at  $4 < z < 6$ . We learn about **dust, gas kinematics, SFR, and mergers**.

