Contribution ID: **44** Type: **not specified**

Sirio Belli - Cold Gas in High-Redshift Quiescent Galaxies (Invited)

Wednesday, 14 June 2023 10:30 (25 minutes)

The most massive galaxies were the first to shut off their star formation, turning into quiescent systems when the universe was still young. This quenching process is still poorly understood, and to make progress it is crucial to study the role played by cold gas. I will present two different ways in which this can be done. Using millimetric observations with NOEMA, we detected CO line emission from three massive quiescent galaxies at z~1, and measured low gas masses. This suggests that quenching consists in the removal of cold gas rather than in the suppression of star formation efficiency. I will also present new results based on James Webb Space Telescope observations, in which we detect neutral atomic gas in a high-redshift quiescent galaxy using rest-frame optical absorption lines. I will illustrate the implications of this detection for models of galaxy quenching.