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**Tipo:** Póster

**Sesión Científica:** Galaxias y cosmología

**Título:** Witnessing the birth of the red sequence

**Nombre (Autor que presenta):** Iván

**Apellidos (Autor que presenta):** Oteo Gómez

**Resumen:**

Exploiting the sensitivity and spatial resolution of ALMA, we have studied the morphology and the physical scale of the interstellar medium - both gas and dust - in SGP 38326, the most luminous star-bursting system known at  $z > 4$ . SGP 38326 contains a molecular gas reservoir among the most massive yet found in the early Universe, and it is the likely progenitor of a massive, red-and-dead elliptical galaxy at  $z \sim 3$ . Probing scales of  $\sim 800$  pc we find that the smooth distribution of the continuum emission from cool dust grains contrasts with the more irregular morphology of the gas, as traced by the [CII] fine structure emission. The gas is also extended over larger physical scales than the dust. Our observations support a scenario where at least a subset of the most distant extreme starbursts are highly dissipative mergers of gas-rich galaxies.