

The growth of massive galaxies due to merging since $z \sim 1$ is size independent

L.A. Díaz-García¹, E. Mármol-Queraltó^{2,3}, I. Trujillo^{2,3}, A.J. Cenarro¹,
C. López-Sanjuan¹, P.G. Pérez-González^{4,5}, and G. Barro⁶

¹Centro de Estudios de Física del Cosmos de Aragón (CEFCA), Plaza San Juan, 1, Planta-2, E-44001, Teruel, Spain

²Instituto de Astrofísica de Canarias, c/ Vía Láctea s/n, E-38205, La Laguna, Tenerife, Spain

³Departamento de Astrofísica, Universidad de La Laguna, E-38205, La Laguna, Tenerife, Spain

⁴Departamento de Astrofísica, Facultad de CC. Físicas, Universidad Complutense de Madrid, E-28040, Spain

⁵Associated Astronomer at Steward Observatory, The University of Arizona

⁶UCO/Lick Observatory, University of California, Santa Cruz, CA 95064

Abstract

Using a large compilation of massive (stellar mass $M \geq 10^{11} M_{\odot}$) earlytype galaxies (ETGs), we have probed, up to $z \sim 1$, whether the presence of satellites within a projected distance of 100 kpc of these objects depends on the size of the host massive galaxies. We do not find any evidence for satellites with a mass ratio down to 1:10 neither down to 1:100 to be preferentially located around compact or extended massive ellipticals. This suggests that, at least since $z \sim 1$, the merger activity in these objects is rather homogeneous across the whole population.