Evolution of the Early-type Galaxy Luminosity Function Since z=1

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Hubble Tuning Fork Diagram at z~1

Wow! Look at that! - the Hubble sequence has emerged at z~1, at least the early-type galaxies. **But** they are not there in the same numbers as at z=0.

![Hubble Tuning Fork Diagram](image)

Comoving Volume Number Densities at z~1 and z=0

The number of Sa galaxies has increased by an astonishing factor of ~20 since z~1.

The number of S0s increased too, by a factor of ~7 since z~1.

But what’s going on with those ellipticals? They went down?

Yes, but only a bit.

Sadly, there’s too few Sa galaxies at z~1 in the EGS field to plot their LF. But stay tuned, we’re doing the COSMOS field next!

Rest Frame K-Band Luminosity Functions at z~1 and z=0

…and a comparable decrease at low luminosities.

Factor of ~2 increase at high luminosities,

Look at those S0s increase in number!