

Planet formation, from ALMA to ERIS

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In the last years, ALMA has revolutionised the field of planet formation.

The high angular resolution campaigns are showing a great variety of protoplanetary disk morphologies, revealing the presence of rings, gaps, cavities and spirals.

Such sub-structures suggest the presence of young giant planets that perturb the mass distribution and dynamics of gas and dust in the disk.

And yet, a direct proof is still missing. Confirming the presence of young giant planets in correspondence of the dust gaps and cavities seen with ALMA is a mandatory step to understand the origin of the disk sub-structures and to shed light on the formation mechanism of (giant) planets.

High contrast imaging is a powerful tool and in particular VLT/ERIS has the great potential to detect newly-born planets (partly) embedded in the

natal disk via inside the disk thanks to the possibility to observe at long wavelengths (L and M).

In my talk, I will present a proposal for an ERIS observing program starting from the ALMA observations of protoplanetary disks.

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