Regulation of star formation by stellar feedback from individual massive stars

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The interstellar medium (ISM) is notoriously difficult to reproduce in simulations. The standard approach models star formation following a Schmidt law and performs feedback with the same single instantaneous injections of the SN energy per stellar population particle. I will present an alternative method using sink particles to represent individual star clusters. This allows for each stellar cluster to have its own stellar population with individual delay time distributions. Stellar feedback from massive stars, in the form of radiation, winds, and SNe, is coupled to the sink particles following stellar evolution tracks. I will discuss applications to molecular cloud and galactic disc simulations.

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Session Classification: Star Formation