Science case:
Supernovae Demography and Rates based

Members and roles

Maria Teresa Botticella
Laura Greggio (SN progenitors models)
Enrico Cappellaro (SN light curve template)
Stefano Cavuoti (Machine learning Classification)

Framing and Assignments for the Task Force

We aim to simulate the SN events as they would be observed in rolling search mode in DDF survey for different time cadences in order to obtain a statistical significant number of SNe (both type Ia and CC) with the best possible sampling.
We will assume different cosmic SFHs, different models for the SN progenitors and SN light curve templates.
The observed SN sample for both types will be exploited to estimate the SN rates and to analyse the systematic uncertainties affecting SN progenitor constraints.

Work Plan

1st month collection of SFH analytical function, SN progenitors models and ligth curve templates

2nd month Simulation of different observational strategies on COSMOS and eCDFS fields

3rd month Estimate of the observed SNe and photometric typing

Deliverables

Inputs for the DDF proposal: the optimal cadence, the number of sky fields, the number of bands to maximize the number of discovered SNe and to obtain an accurate photometric typing