

Galaxy Simulation
Universe,
Galaxia_ananke.Input
(cosmology, DM model,
gravity, gas physics, star
formation, stellar feedback,
...)

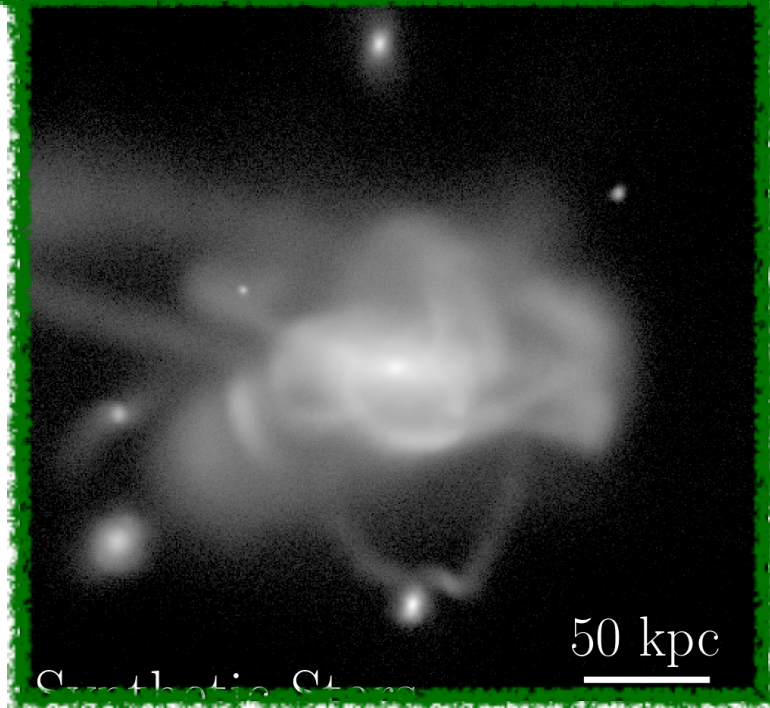


One data entry =
One star particle =
many “stars”
...with same age,
chemical elements

Stellar Populations
Galaxia_ananke.Survey
(C++ galaxia-ananke)
(stellar structure, stellar
evolution, convection models,
isochrone mapping, IMF, ...)

Phase-space density estimation
DensitiesDriver ← EnBiD-ananke
(C++ EnBiD)
(kernel dimension, smoothing
scales, ages, accretion history, ...)

Mock Catalog
Galaxia_ananke.Output
One data entry =
One synthetic star with synthetic
astrometry and photometry



Survey description
Observer
Magnitude/color limits,
sky footprint of survey

Instrument model
ErrorModelDriver
error models for
observed quantities as
function of magnitude,
color, etc

Dust model
ExtinctionDriver
extinction reddening of
starlight in observed
wavelength ranges

Synthetic Survey
Galaxia_ananke.Output
One data entry =
One “observed” star with
realistic astrometry and
photometry and associated
uncertainties

