Galaxy Formation Snapshot

GIZMO (HDF5)

AREPO (HDF5)

GASOLINE (TIPSY)

CHANGA (TIPSY)

ENZO

powderday
common format

variable:
- stellar IMF
- nebular line emission
- birth cloud obscuration
- circumstellar AGB dust contribution
- stellar isochrone models
- post main sequence physics
- atmosphere models

with others implementable in `SED gen.py`

FSPS
on the fly stellar population synthesis

yt

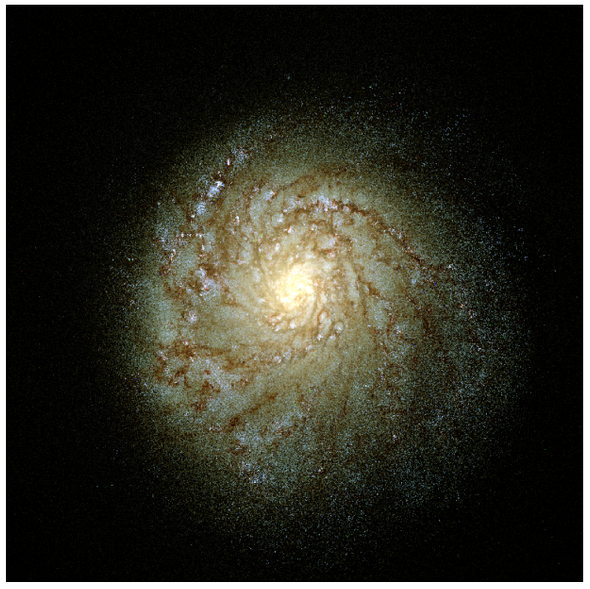
dust grid generation

- octree, voronoi or AMR geometries possible
- flexibility in dust extinction properties
- constant dust to metals (dtm) ratios, dust to gas ratios that vary with metallicity, dust masses from hydrodynamic simulations, and a machine learning-derived content
- spatially varying extinction laws in prep.

hyperion
flexible dust radiative transfer

- empirical PAH templates included
- dust sublimation optional
- multiple sources include:
  - stellar continuum
  - HII regions
  - multiple black hole models

turning simulations into observations



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Interfacing theory and observations to study LABs; nebular line emission; dusty galaxies; SED modeling techniques; quenched galaxies