

CMDft.Gaia

ChronoSynth

Synthetic CMD computation

PRODUCES

mother CMD

INPUT

flat age [age_{\max} , age_{\min}]

flat Z [Z_{\min} , Z_{\max}]

IMF

binaries: β , q_{\min}

stellar evolution library

bolometric corrections

N_{stars} to M_{lim}

DisPar-Gaia

Error & completeness simulation

(Ruiz-Lara+2022, Fernández-Alvar+2024)

PRODUCES

mother CMD w/errors

INPUT

photometric errors

distance errors

reddening map (*)

quality cuts (*)

completeness 5D/6D(*)

*Not considered for the GCNS

DirSFH

Finding best SSP combination

PRODUCES

deSFH, solution CMD

INPUT

observed & mother CMDs

age (Z) seed points \rightarrow SSP bundle

weight across bundle

colour-magnitude shift

minimisation algorithm (Skellam)

number of SSP realisations