

Chieffi Alessandro

Position: I^o researcher

Period covered: 2001-present



I Scientific Work

He has been working on stellar evolution for more than 20 years. His expertise extends from the low mass stars ($M=0.5 M_{\odot}$) up to the massive stars ($M=120 M_{\odot}$) and covers almost all the evolutionary phases experienced by these stars (Pre Main Sequence, H-burning, Red Giant Branch, He-burning, Asymptotic Giant Branch, Thermal Pulses, advanced burnings, explosive burnings).

Over these 20 years he has worked actively on these subjects:

Star clusters (Galactic Globular and Open Clusters, Magellanic Clouds Globulars etc.)

Horizontal Branch of the Globular Clusters

AGB stars and S-process nucleosynthesis

Stellar nucleosynthesis

Nuclear Astrophysics

Chemical evolution of the matter in the Universe

Core collapse supernovae

Explosive nucleosynthesis

The first stellar generation (pop.III stars)

He is also the primary developer of the stellar evolutionary code FRANEC, one of the most versatile codes presently available. Hence his interests cover also all the numerics and input physics involved in the stellar modelling.