Sala del Planetario

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OATo presents

Star Formation in Nearby Super Star Clusters

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Super star clusters (SSC) play a dominant role in the formation and evolution of active galaxies at early epochs of their assembly and today in colliding and merging galaxies. A good understanding of the star formation process in SSCs is therefore crucial for clarifying the important role that the large number of very young stars play in the origin and fate of these clusters. In particular, the accurate study of the cluster's stellar mass function and its evolution in time allows us to determine whether or not the SSC quickly dissolve or survive to become the globular clusters we see today. With the new WFC3 camera on HST, we have carefully observed two of the closest SSC in our neighborhood:NGC 3603 and 30 Doradus. In this talk, I will describe these very recent observations and discuss some of the implications of the results.

Francesco Paresce is currently a senior astronomer with the Istituto di Astrofisica Spaziale e Fisica Cosmica in Bologna, Italy. He is also a consultant for the European Space Agency (ESA) on the ESA/NASA joint project for the Hubble Space Telescope (HST) and is a member of the Science Oversight Committee for the Wide Field Camera 3 that has been recently installed into the HST by the shuttle Science Servicing Mission 4. His research interest at the moment concerns the physics of star formation in super star clusters in the Milky Way and the Magellanic Clouds. He worked in the past for ESA as the project scientist for the Faint Object Camera on HST and for the European Southern Observatory as project scientist of the Very Large Telescope Interferometer. He holds a doctorate in Physics from the University of Rome La Sapienza and a PhD in Astronomy from the University of California at Berkeley where he worked on several space physics missions for NASA. He has written more than 180 refereed scientific papers and is the author of a book called "Tra Razzi e Telescopi", DiRenzo editore, 2005.