



Simulating Galaxies

Galaxies can be more than 100,000 light years across, consisting of hundreds of billions of celestial bodies, and with a mass more than a trillion times that of our sun. Modeling such huge, complex systems, in which many of the stars have chaotic orbits, requires new computational techniques. Advances in the speed and memory of computers have improved models, as has parallel computing, but advances in algorithms—the way the mathematics of a problem is converted into steps a computer can perform—are indispensable in developing accurate galaxy models.

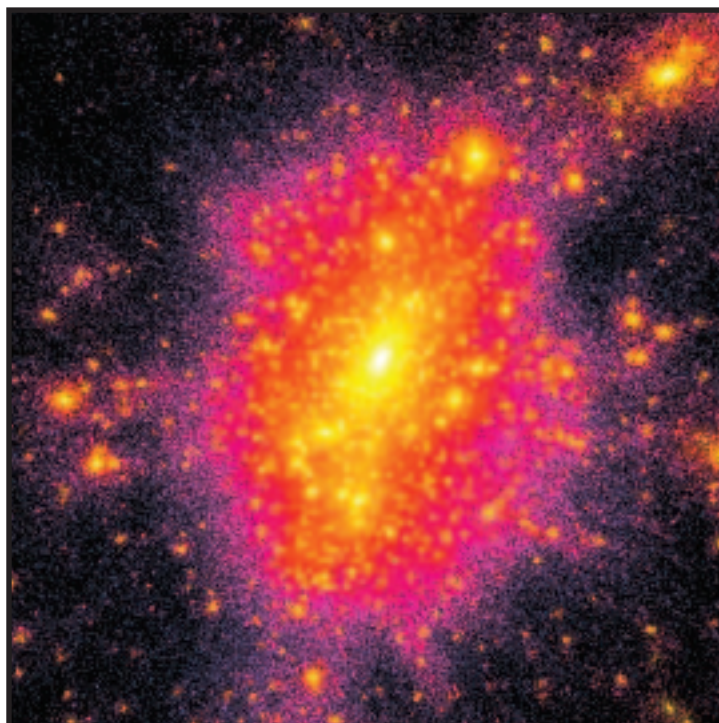


Image courtesy of Joachim Stadel and Thomas Quinn.



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