

UC SANTA BARBARA

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## **NEW X-RAY IMAGES SHOW PROMISE OF STAR FORMATION**

At the American Astronomical Society meeting in Pasadena, Calif. today, University of California, Santa Barbara scientists presented a study of the "Coma Cluster" using images and spectra from the X-ray Multimirror-Newton Space Observatory that could, in the near future, provide proof of newly formed young stars.

Timothy P. Sasseen, research astronomer in physics, working with UCSB research specialist Alexandria Ware, and Jonathan Mittaz of University College London, have found X-ray emission from a large number of individual galaxies within the Coma Cluster of galaxies. While X-ray emission from this cluster has been well-studied, new images from the powerful XMM-Newton Observatory clearly show broadband emission from individual galaxies.

This emission can arise from star formation activity, a population of compact stars with orbiting companions, or matter falling onto a massive black hole at the center of the galaxy.

The Coma Cluster contains hundreds of galaxies and is located about 350,000,000 light years from Earth.

The XMM-Newton Space Observatory carries aboard six scientific instruments, including three X-ray telescopes and a separate telescope sensitive to optical and ultraviolet radiation.

It is ideal for studying astronomical phenomena that emit energy at many wavelengths.

The work was supported by NASA's Office of Space Sciences, the UK Particle Physics and Astrophysics Research Council, and the European Space Association.

To access images from Sasseen and Ware's investigations, please go to the Web site at

<ftp://xmmom.physics.ucsb.edu> and then to directory: /pub/tim.dir

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## **About UC Santa Barbara**

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.