

Feb. 18, 2008

UCI TEAMS WITH CALTECH, UCLA ON \$12 MILLION ASTRONOMY PROJECT

By Gary Robbins

UC Irvine has teamed up with Caltech and UCLA to seek \$12 million in federal funding for a physics center that would try to identify and examine [dark matter](#), invisible material whose gravitational influence on other objects can be detected.

The proposed National Science Foundation Physics Frontiers Center would be unique, combining the efforts of a core group of 15 investigators and dozens of other scholars, says UCI astrophysicist Jonathen Feng, the lead scientist. Six of the core researchers would come from UCI, which also would co-host the center with UCLA, if the money is granted. NSF will decide the matter later this year.

The proposal represents that latest effort by [UCI's Center for Cosmology](#) to establish itself as a national force in astrophysics. CoC's members include astronomer Aaron Barth, who was just named to lead a major telescope study of black holes, and astrophysicist James Bullock, who helped get the campus involved in the Large Synoptic Survey Telescope project.

“Dark matter makes up four-fifths of the matter in the Universe, but its microscopic properties are unknown,” says the new joint proposal, co-drafted by Feng (shown in photo). “In the coming years, dark matter searches will be undertaken by a diverse array of experiments, from sensitive

detectors deep underground, to indirect searches for dark matter annihilation products, to particle colliders, notably the Large Hadron Collider, which begins operation in 2008.

“These experiments have bright prospects for discovering well-motivated dark matter candidates, and their results will transform the field. At the same time, none of these experiments can identify dark matter on their own. The proposed Center will support innovative experimental research to maximize the potential of direct and indirect search experiments and theoretical studies to propose and explore dark matter candidates, to suggest promising search strategies, and to tie together diverse experimental results.”