

Physicists plan quark conference

April 13 2005

Physicists from around the world will gather at Madison's Monona Terrace from Wednesday, April 27 - Sunday, May 1, to explore the world of quarks, subatomic particles that represent the frontier of modern particle physics.

The meeting, which organizers believe may draw as many as 250 particle physicists, will focus on the "strong nuclear force," a field also known as quantum chromodynamics, according to meeting organizer and physics professor Wesley Smith.

At one time, scientists thought atoms were the smallest of nature's building blocks. It has been only in the past century that physicists realized that atoms are made up of neutrons, protons and electrons. In the 1960s and 1970s, scientists discovered signs of internal structure within protons and neutrons, suggesting that these subatomic particles are composed of quarks and the gluons that bind them together.

Quarks come in six flavors: up, down, strange, charmed, top and bottom. A proton consists of two up quarks and one down quark.

The strong nuclear force carried by the gluons, says Smith, is what holds quarks together to form protons.

The meeting, the [13th Annual Workshop on Deep Inelastic Scattering](#), is being held in the United States for only the second time. New experimental and theoretical data will be presented and discussed.

In conjunction with the meeting, Jack Liebeck, an acclaimed violinist,

will present a free public concert of music favored and played by Albert Einstein. Liebeck will play the music of Mozart, Brahms, Bloch and Prokofiev at 8 p.m. on Thursday, April 28, in Mills Concert Hall at the Mosse Humanities Building.

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