

COLORADO

# CAFÉ SCIENTIFIQUE

TUESDAY 22 APRIL 2008

at the Wynkoop Brewing Company

<http://www.wynkoop.com/>

Corner of 18<sup>th</sup> and Wynkoop in LoDo, Denver

About a block from Light Rail. Thirteen minutes by foot from Auraria.

## **DARK MATTER, DARK ENERGY AND THE ACCELERATING UNIVERSE**

**Erica Ellingson, PhD**

Dept. of Astrophysics and Planetary Science, U. Colorado, Boulder

Astronomers and physicists have been studying the Universe for hundreds of years, using ever more sophisticated instruments and techniques, only to find that everything we know anything about comprises only about 4% of the known Universe. The other 96% is made up of mysterious and poorly-understood stuff nicknamed "dark matter" and "dark energy." How did we find ourselves in this embarrassing predicament? Dr. Ellingson will explain how she has been using the world's biggest telescopes to look at stuff which is really completely invisible, and what its existence means for both the origin and the fate of the Universe.

Galaxy clusters are one of the places to look for clues. They are the largest gravitationally bound objects in the universe-- the great whales of the starry deep. Although they contain hundreds of galaxies, and tremendous amounts of gas, their gigantic masses are dominated by mysterious stuff called dark matter. As the densest intersections in the cosmic web, they can help map the patterns of cosmic structure, and provide important clues about dark matter and the even-more-elusive dark energy. Dr. Ellingson will describe her search through space to find these cosmic Moby Dicks.

***EVERYONE IS WELCOME.*** The discussion starts at 6:30 in the Mercantile Room (no food service there). Come before 6 PM to leave yourself time to get something to eat in the restaurant area, or stay and eat afterwards. We end around 8 PM.

There's no charge. The Wynkoop is generously providing the facility; we buy our own drinks. It is first come, first seated, and **seating is limited** so that everyone can take part in the discussion.

The Colorado Café Scientifique in Denver is organized by an informal committee of faculty from CU and institutions up and down the Front Range, as well as writers, students, and science fans from industry, government and all over. We welcome your input, including ideas for speakers and topics. Bring them with you to the next Café, or e-mail them and any questions to [John.Cohen@UCHSC.edu](mailto:John.Cohen@UCHSC.edu)

Essential information on our Web site at <http://CafeSciColorado.org>