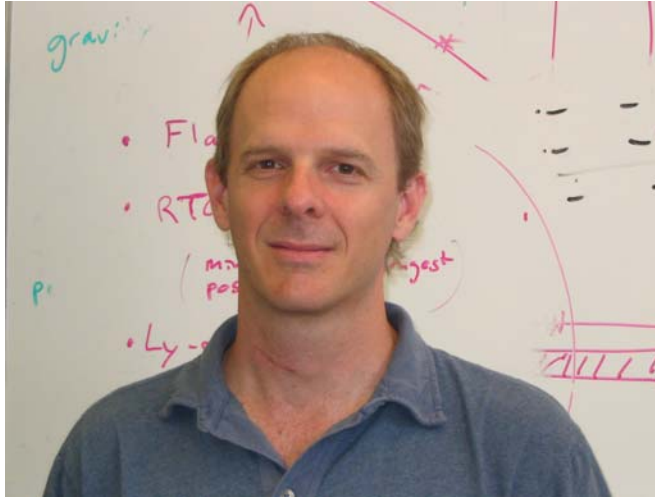


## Meet Featured Alumnus

Joshua E. Colwell, Ph.D.

Stetson Class of 1985



Josh Colwell was a Stetson man from birth. He grew up in DeLand, the son of Professor C. Carter Colwell in the English Department and Ann K. Colwell, and the family was a fixture at Stetson basketball games. Josh entered Stetson early, after the 11th grade, as a Physics major with his sights set on getting a Ph.D. in astrophysics. Josh met his future wife, Anne-Marie Caubet, during his senior year at Stetson, and they married in the midst of graduate school exams in 1985. Josh got his Ph.D. from the Department of Astrophysical, Planetary, and Atmospheric Sciences (APAS, which has since dropped the Atmospheric part in order to have a less humorous acronym) at the University of Colorado in 1989. His dissertation was on the origin and evolution of the rings of Uranus based on new data returned by the Voyager 2 encounter with Uranus in 1986. He has remained at the University of Colorado's Laboratory for Atmospheric and Space Physics with the exception of a year in Toulouse, France, as a Fullbright Senior Research Scholar in 1995-1996. His research activities have included flights of two experiments on the space shuttle, numerous flights on the NASA "Weightless Wonder", and science planning and analysis for the Cassini mission to Saturn since 1991. His extra-curricular activities include running, hiking, writing, and acting in local theater groups. His smallest but most memorable role was a bit part in the 1998 movie "Deep impact". He and Anne-Marie have one daughter, Aylia.

January 17, 2006

### Open Letter to Stetson Physics Majors:

I always wanted to be involved in space exploration in some form or another. My mother claims it started when she witnessed a launch from Kennedy Space Center (before it was named that) when she was 8 months pregnant with me. An undergraduate degree in physics was the obvious first step to take. At Stetson, where I also got a minor in Applied Mathematics, I took just about every physics course available. This put me in a good position to take the next obvious step: a Ph.D. in astrophysics.

I got my Ph.D. in 1989 from the University of Colorado in the Department of Astrophysical, Planetary, and Atmospheric Sciences. Since then the Atmospheric component has formed its own program here. My dissertation involved analysis of observations of planetary rings made by the Voyager 2 spacecraft. That led to some research projects funded by NASA doing further data analysis.

At this time, as a post-doc at CU (as the University of Colorado is peculiarly known), I applied for faculty jobs at a number of colleges and universities around the country. A glaring weakness in my resume at that time was a lack of teaching experience in graduate school. As a research assistant throughout grad school I had not done much teaching. I encourage anyone thinking of a faculty position to actively seek out opportunities to develop her or his teaching skills. It will make you more marketable. Also at this time my thesis advisor won the contract to build an ultraviolet spectrograph for the Cassini mission to Saturn. I got involved in that project early and so stayed at CU as a member of the science team for the Cassini Ultraviolet Imaging Spectrograph (UVIS).

I spent the next decade or so doing research on a variety of problems in the origin and evolution of the solar system, all the while working on preparations for UVIS observations of Saturn's rings. People frequently assume that during the 7 years preceding launch of Cassini in October 1997 and the 6.5 year cruise before it got to Saturn in July 2004 that we didn't have much to do. The opposite was true, with many late nights spent planning observations during Cassini's four-year mission down to the minute. While it was fascinating and exciting to be involved in a such a large space mission from the earliest stages, that kind of work does not result in many publications which are the standard by which scientific productivity is measured. Fortunately that hard work paid off and Cassini is a tremendous success. The observations I spent so much time planning are now taking place and returning a spectacular data set that will keep us all busy for many years to come. My very first observation with Cassini has in fact become a well-known image in the popular media, garnering a two-page spread in Time Magazine's Pictures of the Year issue for 2004. I created this false-color image of Saturn's rings in the ultraviolet in the wee hours following the arrival of Cassini at Saturn. My favorite appearance of this image was on "The Daily Show with Jon Stewart", but it is still showing up all over, most recently on the cover of Science News in December.

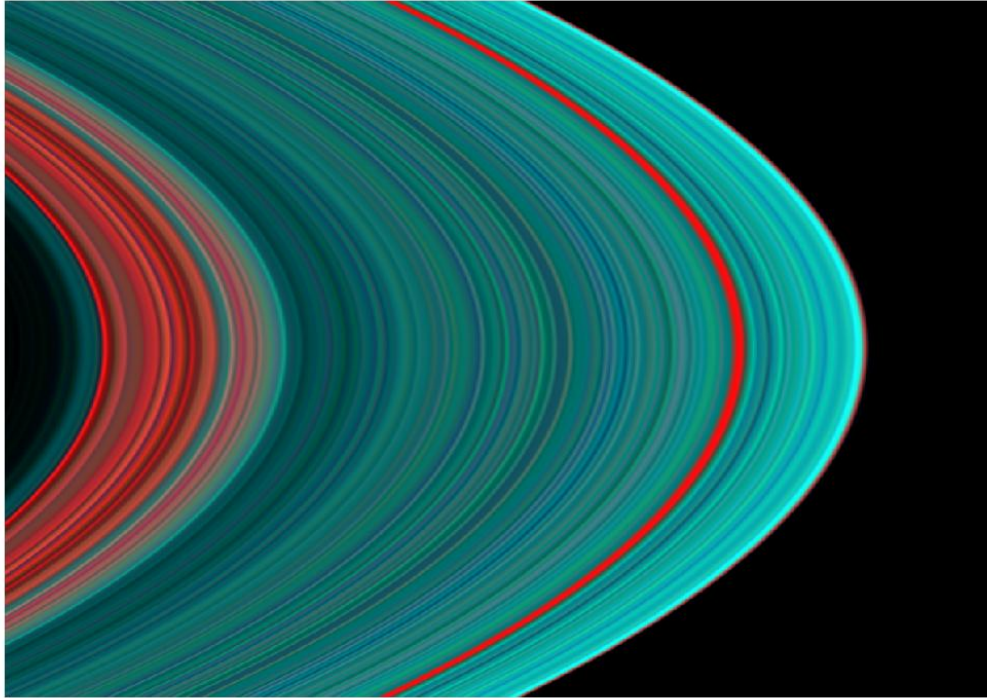


Image Credit: NASA/JPL/University of Colorado

NASA, probably wisely, insists that only institutional credit be given for images from its funded missions, but I can still tell you that this famous picture was made by a Stetson grad.

In the midst of Cassini planning I was busy with a number of other projects. I spent a year as a Senior Fullbright Research Scholar in Toulouse, France, studying the thermal evolution of comets. When I returned to Boulder in 1996 I led the development of a small experiment that flew two times on the Space Shuttle. This experiment was built by engineering students at CU. That led to further experiments on NASA's infamous "vomit comet", the airplane that flies parabolic trajectories to provide researchers 15-20 seconds of weightlessness. The only problem: it does that 40-50 times per flight, with a pull-out maneuver of about 2 g's. I'll just say that for me the airplane lived up to its nickname and leave it at that. You can find out more about these research projects at my web site: <http://lasp.colorado.edu/~colwell>

—Josh Colwell

Dr. Colwell has given us permission to post his contact info,  
and he would welcome contact from Stetson students (past, present, or future)...

**UNIVERSITY OF COLORADO AT BOULDER**

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