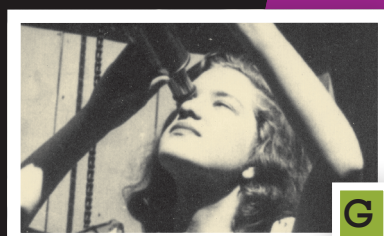


Guess Who?

STUDENT SCIENTISTS FLASHBACK

These SPS-age physics students turned into some of the most influential physicists and astronomers in history. Can you match these distinguished scientists' photos from their college years with more recent photos on page 15?



Women's Words

What is it like to be a woman in your physics department? We wanted to know what you think, so we compiled your answers from Facebook, Twitter, and email. The larger the word or phrase, the more common (or more liked) it was. Keep the conversation going by following us on Twitter: @SPS_physicsnews & @SPSwebster; or by liking us on Facebook: www.facebook.com/SPSNational.

Reaching for the top shelf
Undervalued | I love defying the odds!
I was doubted, then accepted

Like being male, so far | Stressful | Humiliating

Swamped | Proud to be | Challenges abound, along with possibilities

Damn good | Fascinating

The few, the proud

Collaboration | Fabulous and well supported | I love it here

Gender hasn't been an issue | Physics will become more colorful

Like one of the guys | Opportunity

One of the team members | Physics is more interesting | Degrading

Completely alone, I stand out

Support and opportunity abounds | Bullied | Trivial | I'm one of many

Awesome environment for a woman | Showing the boys who's best

Sometimes empowering, others irritation inducing

As a student, I'm outnumbered

I love breaking gender roles

PHYSICS FOR ALL

continued from page 2

we serve, to encourage dialogue in the study rooms and lounges and dorm rooms across the country, where all kinds of students struggle to define personal identities as contributors to science. We hope to be that quiet whisper that gives cause for young colleagues who come from different backgrounds, with different perspectives on science, different priorities, different cultural traditions, and maybe less importantly, with different genders—to engage in a simple conversation of inclusion and to be drawn in safely enough to wonder “why?” or “how?”. Moreover, we hope to encourage everyone to become informed enough to begin to formulate a response to that question. Our aim is to have some influence in reshaping physics culture so that it naturally embraces

and values inclusivity as critical to the success of the field. As all groups who have struggled in any position of “underrepresentation” know—this is a long, slow, tricky process. And, like all valid scientific processes, in order to make any progress, we must proceed by standing firmly grounded in the work of those who have come before us by studying the issue in great detail, by contributing to support networks, and by living it.

It is our responsibility to ensure that all our constituents and their friends and peers in physics are invited into the discussion that will, with the well-guided efforts of many, eventually become extinct as we all find common ground in the unity that physics is fascinating and fantastic and difficult and maddening and frustrating and sometimes even crushing and yet hauntingly inescapable — for lots of us, no matter our differences. //

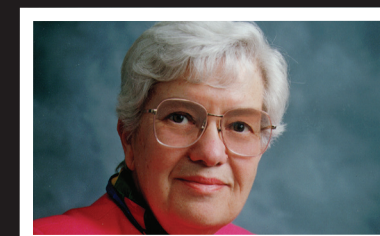
FEATURE

01 MARIA MITCHELL (1818-1889) One of the first recognized female astronomers in the United States, she made a name for herself by discovering a comet at age 29. She spent much of her career on the faculty at Vassar College studying Jupiter and Saturn. Photo credits: page 14, US National Oceanic and Atmospheric Administration photo library; page 15, AIP Emilio Segrè Visual Archives.



02 LISE MEITNER (1878-1968) A physicist known for her work in radioactivity and nuclear physics, she was part of the team that discovered nuclear fission. Her colleague Otto Hahn received the 1944 Nobel Prize in Chemistry for this discovery. Photo credits: page 14, US Department of Energy Public Affairs; page 15, photograph by Lotte Meitner-Graf, London, courtesy AIP Emilio Segrè Visual Archives.

03 LISA RANDALL (1962-PRESENT) The first tenured female physics professor at Princeton University, this well-cited theoretical physicist has also written popular science books on hidden dimensions and other mysteries of particle physics and cosmology. Photo credits: page 14, Society for Science & the Public; page 15, AIP Emilio Segrè Visual Archives.



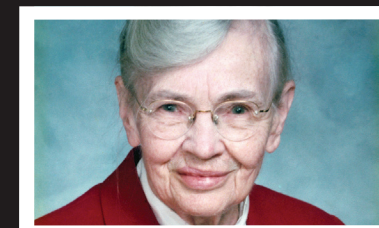
04 VERA RUBIN (1928-PRESENT) The work of this astronomer and honorary member of Sigma Pi Sigma on the orbital rates of hydrogen clouds in over 60 galaxies is often cited as the discovery that led to investigations into the existence of dark matter in the universe. Photo credits: page 14, Archives & Special Collections Library, Vassar College; page 15, AIP Emilio Segrè Visual Archives, Gallery of Member Society Presidents.

05 SAU LAN WU (1940s-PRESENT) This particle physicist played a key role in identifying the charm quark and the gluon, and more recently the Higgs particle announced in 2012. Photo credits: page 14, Archives & Special Collections Library, Vassar College; page 15, photo by Bob Palmer, courtesy of AIP Emilio Segrè Visual Archives.



06 JOCELYN BELL BURNELL (1943-PRESENT) An astrophysicist best known for her work on radio pulsars, the subject of the 1974 Nobel Prize in Physics, she is a longtime friend of SPS and Sigma Pi Sigma and has spoken at two Quadrennial Physics Congresses. Photo credits: page 14, Daily Herald Archive/ Science & Society Picture Library; page 15, photo by Ken Cole.

07 CHARLOTTE MOORE SITTERLY (1898-1990) This astronomer worked extensively on solar and atomic spectroscopy, responding to requests for data from colleagues into her eighties. Her books and tables on atomic energy levels and spectral lines are still widely used reference materials. Photo credits: pages 14 and 15, AIP Emilio Segrè Visual Archives, gift of Michael A. Duncan.



08 SHIRLEY ANN JACKSON (1946-PRESENT) This president of Rensselaer Polytechnic Institute was the first African American woman to earn a physics doctorate from MIT. She has done research at Fermilab, CERN, SLAC, and Bell Laboratories, and became the first woman and first African American to serve as chairman of the US Nuclear Regulatory Commission. Photo credits: page 14, The MIT Museum; page 15, AIP Emilio Segrè Visual Archives.

THANK YOU TO THE AIP EMILIO SEGRÈ VISUAL ARCHIVES, a part of the Niels Bohr Library & Archives of the American Institute of Physics, for helping research and compile many of these photographs. Special thanks to Lindsey Gumb. To see more photographs of your favorite physicists, visit the visual archives at <http://photos.aip.org/>.

KEY: 01: D 02: H 03: A 04: G 05: C 06: E 07: F 08: B