feature
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Nobel predictions favor Higgs pioneers

Two physicists who helped shape Higgs theory should expect a call from the Swedish Academy next week, says a media firm famous for its Nobel predictions.

By Kathryn Jepsen

Speculators have begun to wonder, in the days leading up to the announcement of the 2013 Nobel Prize for Physics, whether the Swedish Academy will recognize the most celebrated particle physics discovery of 2012: the Higgs boson.

Media and information firm Thomson Reuters recently intensified the buzz by predicting that Francois Englert, a Belgian physicist associated with Chapman University in California, and Peter Higgs, a British physicist associated with the University of Edinburgh, will receive the honors this year. Both scientists helped develop the

theory of the famed boson.

The Higgs boson is a particle associated with the Higgs field, an essential component of our universe that gives mass to elementary particles. Theorists first predicted the existence of the particle and field in 1964, and two large, international teams of scientists working on experiments at the Large Hadron Collider finally announced its discovery on July 4, 2012. Nearly 2000 scientists from the United States helped make the discovery happen.

Thomson Reuters studies citations of individuals' research to determine likely Nobel winners, a technique that has resulted in 27 successful predictions in a dozen years, including seven for physics. In 2012, a representative of the firm rejected the idea of a Higgs-related win, arguing that the discovery took place too late in the year to be recognized through the prize.

This year, however, Thomson Reuters is all in, mentioning Englert and Higgs at the top of their 2013 Nobel-predictions press release.

They could have picked an additional possible winner; the Nobel Prize for Physics can be shared among up to three recipients. But it's understandable that they didn't; choosing a third person from the group of dozens of theorists and thousands of experimentalists who contributed to theorizing and finding the Higgs would have been no easy task. Many think deceased Belgian theorist Robert Brout, who collaborated with Englert on his Higgs paper in 1964, could have rounded out the group, but the Nobel Prize cannot be awarded posthumously.

The winner of the Nobel Prize for Physics will be announced on Oct. 8 sometime after 4:45 a.m. CDT (11:45 a.m. in Stockholm).

If you'd like to brush up on your Higgs know-how before the possible big announcement, check out the following resources and information from symmetry *and from other publications and institutions.*

Higgs articles from *symmetry*

Feature: Ten things you may not know about the Higgs boson
http://www.symmetrymagazine.org/article/march-2012/ten-things-you-may-not-know-about-the-higgs-boson

Deconstruction: US participation in the Higgs discovery
http://www.symmetrymagazine.org/article/october-2013/us-participation-in-the-higgs-discovery

Logbook: Higgs-like particle
http://www.symmetrymagazine.org/article/february-2013/higgs-like-particle

Contest winners: *Symmetry* readers find the Higgs boson
http://www.symmetrymagazine.org/article/august-2012/symmetry-readers-find-the-higgs-boson

Signal to background: Q&A with Fabiola Gianotti, Higgs hunter
http://www.symmetrymagazine.org/article/april-2013/qa-with-fabiola-gianotti-higgs-hunter

Feature: What else could the Higgs be?
http://www.symmetrymagazine.org/article/october-2012/what-else-could-the-higgs-be

Feature: What's next for the Large Hadron Collider?
http://www.symmetrymagazine.org/article/february-2013/whats-next-for-the-large-hadron-collider

FeatureA bouquet of options: Higgs factory ideas bloom
http://www.symmetrymagazine.org/article/november-2012/a-bouquet-of-options-Higgs-factory-ideas-bloom

Higgs information from around the Web

US LHC: The US and the Higgs boson
http://www.uslhc.us/The_US_and_the_Higgs_boson

US LHC: Search for Higgs boson at Large Hadron Collider reveals new particle
http://www.fnal.gov/pub/presspass/press_releases/2012/Higgs-Search-LHC-20120704.html

CERN: The Higgs boson
http://home.web.cern.ch/about/physics/search-higgs-boson

Reuters: Two Higgs boson scientists tipped for Nobel prize
http://www.reuters.com/article/2013/09/25/us-nobel-higgs-idUSBRE98O03N20130925

Smithsonian: How the Higgs boson was found
http://www.smithsonianmag.com/science-nature/How-the-Higgs-Boson-Was-Found-213876841.html#Higgs-boson-ATLAS-detector-1.jpg

New York Times: Higgs boson
http://topics.nytimes.com/top/reference/timestopics/subjects/h/higgs_boson/index.html

Fermilab video: What is a Higgs boson?
http://www.youtube.com/watch?v=RIg1Vh7uPyw

Fermilab video: Higgs boson: The inside scoop
http://www.youtube.com/watch?v=CwMq_xqif8k

TED-Ed video: The Higgs field, explained
http://www.youtube.com/watch?v=joTKd5j3mzk

TED Ed video: The basics of the Higgs boson
http://ed.ted.com/lessons/the-basics-of-boson-dave-barney-and-steve-goldfarb

PHD Comics video: The Higgs boson explained
http://www.phdcomics.com/comics/archive.php?comicid=1489

TIME video: Particle of the year: Higgs boson
http://poy.time.com/2012/12/19/the-higgs-boson-particle-of-the-year/