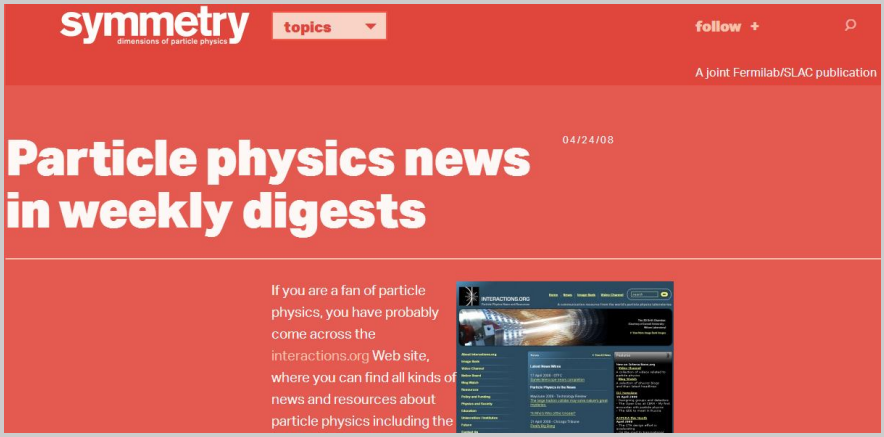
Name of the Tool	**Symmetry : Particle physics news in weekly digests**
Home Page	
Logo	symmetry dimensions of particle physics
URL	http://www.symmetrymagazine.org/breaking/2008/04/24/particle-physics-news-in-weekly-digests
Subject	Particle physics – Digest
Accessibility	Free
Language	English
Publisher	SLAC publication
Brief History	Symmetry is a joint publication of Fermi National Accelerator Laboratory and SLAC National Accelerator Laboratory. Symmetry receives funding through the US Department of Energy. It serves particle physics related information from 2004 onwards.
Scope and Coverage	This digest is designed to serve as central resource for information about particle physics, including press releases, articles, news, event listings and images. This is the only resource one needs to stay in touch with particle physics. This is the place where people can go to know what is happening, especially when they want to check out news coverage of particle physics from around the world.

Kind of Information

The particle physics Digest provides particle physics related articles, news, event listings and images. In this tool articles are available with its title, author name (posted by), date of publication and short description. Also articles are present with a theme photographs. Sometimes hyperlinked terms are available for more information. An example is given below.

A speed trap for dark matter
01/19/16
By Manuel Gnida
Analyzing the motion of X-ray sources could help researchers identify dark matter signals.

Dark matter or not dark matter? That is the question when it comes to the origin of intriguing X-ray signals scientists have found coming from space.
In a theory paper published today in *Physical Review Letters*, scientists have suggested a surprisingly simple way of finding the answer: by setting up a speed trap for the enigmatic particles.
Eighty-five percent of all matter in the universe is dark: It doesn't emit light, nor does it interact much with regular matter other than through gravity.
The nature of dark matter remains one of the biggest mysteries of modern physics. Most researchers believe that the invisible substance is made of fundamental particles, but so far they've evaded detection. One way scientists hope to prove their particle assumption is by searching the sky for energetic light that would emerge when dark matter particles decayed or annihilated each other in space.
Over the past couple of years, several groups analyzing data from two X-ray satellites—the European Space Agency's XMM-Newton and NASA's Chandra X-ray space observatories—reported the detection of faint X-rays with a well-defined energy of 3500 electronvolts (3.5 keV). The signal emanated from the center of the Milky Way; its nearest neighbor galaxy, Andromeda; and a number of galaxy clusters.
Some scientists believe it might be a telltale sign of decaying dark matter particles called sterile neutrinos—hypothetical heavier siblings of the known neutrinos produced in fusion reactions in the sun, radioactive decays and other nuclear processes. However, other researchers argue that there could be more mundane astrophysical origins such as hot gases.
There might be a straightforward way of distinguishing between the two possibilities, suggest researchers from Ohio State University and the Kavli Institute for Particle Astrophysics and Cosmology, a joint institute of Stanford University and the US Department of Energy's SLAC National Accelerator Laboratory.
It involves taking a closer look at the Doppler shifts of the X-ray signal. The Doppler effect is the shift of a signal to higher or lower frequencies depending on the relative velocity between the signal source and its observer. It's used, for instance, in roadside speed traps by the police, but it could also help astrophysicists "catch" dark matter particles.

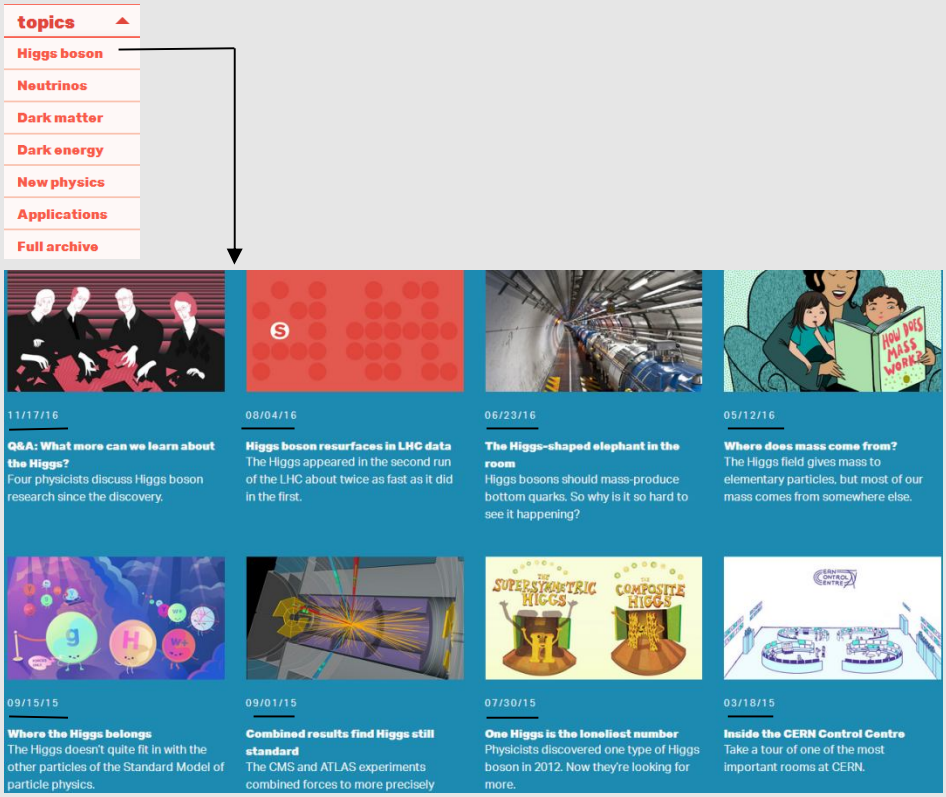
(not complete article)

Special Features

- Contact and feedback option available with proper form.
- Links to social networking sites like Facebook, Twitter, Google+ and so on. User can share each article via social networking sites.
- Latest articles are available.

Arrangement Pattern

The articles are arranged under some sub-topic of particle physics. Under different sub-topics entries are arranged according chronological order (newer to older). e.g.:



Remarks	Hear the latest news, meet the people behind the science, and get the background information you need to gain fluency in the language of particle physics.
Comparable Tools	➢ Open Medicine Digest (https://blogs.biomedcentral.com/on-medicine/tag/open-medicine-digest/) ➢ Biofuels Digest (http://www.biofuelsdigest.com/)
Date of Access	April 19, 2017