PPPL PRINCETON PLASMA PHYSICS LABORATORY

Remote-control plasma physics experiment is named one of top Webcams of 2018

By Larry Bernard • January 22, 2019

Want to create your own plasma? You can create and control a plasma from the comfort of your own device.

The Remote Glow Discharge Experiment (RGDX) at the Princeton Plasma Physics Laboratory (PPPL) allows you to turn on a plasma and change the gas pressure, the voltage, and the strength of the electromagnets surrounding it from wherever you are. From a web browser, you can control a plasma with a magnetic field, the same way scientists control a plasma in a tokamak, the magnetic devices that scientists use in fusion experiments.

Now, the RGDX has been named one of the “25 Most Interesting Webcams of 2018” by EarthCam – a website that collects webcams from thousands of sites across the globe and has been seen by 3.6 million viewers over the past six months. Judges from USA Today, CBS News, and elsewhere voted on “the most unique and interesting webcams of 2018” and ranked the RGDX in the top 25. You can find RGDX and the rest of the awardees here: https://www.earthcam.com/top25/2018/

“The Remote Glow Discharge Experiment can be used from anywhere in the world,” said Arturo Dominguez, Ph.D., senior program leader in the Science Education department at PPPL. “Create and control a 10,000-degree plasma housed at the lab from your phone or laptop and explore how magnets can be used to manipulate and confine it.”

Fusion, which releases boundless energy by fusing atomic nuclei in the state of matter known as plasma, could produce clean and virtually limitless power for generating electricity for cities and industries everywhere. Capturing and controlling fusion energy is therefore a key scientific and engineering challenge for researchers throughout the world.

“We are geeking out over this awesome live webcam at the Princeton Plasma Physics Laboratory in New Jersey,” the Earthcam judges said. “The interactive camera invites you to be a part of the Remote Glow Discharge Experiment. Control the pressure, voltage, and magnetic field inside the glass tube and watch how the plasma reacts. Oh, the power!”

You can visit the RGDX Lab at https://scied-web.pppl.gov/rgdx/. The Princeton Plasma Physics Laboratory is at www.pppl.gov.

PPPL, on Princeton University’s Forrestal Campus in Plainsboro, N.J., is devoted to creating new knowledge about the physics of plasmas — ultra-hot, charged gases — and to developing practical solutions for the creation of fusion energy. The Laboratory is managed by the University for the U.S. Department of Energy’s Office of Science, which is the largest single supporter of basic research in the physical sciences in the United States, and is working to address some of the most pressing challenges of our time. For more information, please visit science.energy.gov.