High-school students dive into Particle Physics

Studying theoretical models. Analyzing data. Working in groups. Plotting distributions. Discussing results. These are the skills that particle physicists working on the ATLAS experiment at CERN employ on a daily basis. And they are exactly what eight students and their teachers from nearby Metea Valley and Nequa Valley high schools spent the day doing at NIU’s recent particle physics Mastersclass program. A part of NIU’s Quarknet program, the Mastersclass invites students to campus to hear lectures on particle physics and to analyze real collision data from the ATLAS detector. The group discussed and collaborated on their results, and later connected to a meeting with another Quarknet program in Canada to compare findings. The program ended with a discussion with particle physicists from nearby Argonne and Fermilab. Though the students narrowly missed coming away with a Nobel prize in physics, the goal of the Mastersclass, to excite young students and scientists about basic science and physics research, was a clear success.