Abstract Submitted for the CUWIP22 Meeting of The American Physical Society

Making astroparticle and cosmological data easily accessible for education¹ GABRIELLA TAMAYO, MATTHEW BELLIS, Siena College — Since 2014, Siena College faculty and students have put together and maintained the website Particle Physics Playground (PPP), a site that provides simplified particle physics data for outreach and education. In the summer of 2020 it was decided to expand the website beyond particle physics to explore both particle astrophysics and astronomy. The IceCube Neutrino Observatory, in Antarctica, has released a small sample of their data for public use. The Sloan Digital Sky Survey (SDSS), provides large amounts of galaxy data that was used to introduce astronomy to the website and spark the interest of young and aspiring astronomers. The PPP website is also a place for high school and undergraduate students who have some exposure to, or willingness to learn, python. We utilized Plotly to create interactive 3D plots as a way to explain these experiments and observations by demonstrating how others can use these tools to create their own visualizations. The current status of these tools and tutorials will be presented.

¹This work was supported in part by a grant from the National Science Foundation, PHY-1913123.

Gabriella Tamayo Siena College

Date submitted: 10 Jan 2022

Electronic form version 1.4