TeV Astronomy with HAWC-VERITAS synergy

ANUSHKA ABEYSEKARA, The University of Utah, HAWC COLLABORATION, VERITAS COLLABORATION — Very high energy astrophysics is on the verge of entering a golden era. The most sensitive TeV gamma-ray survey experiment, High Altitude Water Cherenkov (HAWC), already started surveying for TeV emission with the partially built detector. The galactic plane already became visible to the partially built HAWC experiment. In the near future HAWC data set will be able to produce an unbiased survey of the TeV sky. In the same time the major upgrade in Summer 2012 done in the Very Energetic Radiation Imaging Telescope Array System (VERITAS) gamma-ray observatory gives an unprecedented sensitivity, energy resolution and angular resolution for pointed observations. However, pointed VERITAS observations are inherently limited by its small field of view, 3.5°. Therefore, a synergy program between HAWC and VERITAS collaborations is the key aspect of discovering new TeV sources and measure their properties in detail. Science capabilities and the current status of the HAWC-VERITAS synergy program will be presented.