Observations of the Crab Nebula with H.E.S.S. Phase II

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The High Energy Stereoscopic System (H.E.S.S.) phase I instrument has been an array of four $100\,\mathrm{m}^2$ mirror area Imaging Atmospheric Cherenkov Telescopes (IACTs) that has very successfully mapped the sky at photon energies above $\sim 100\,\mathrm{GeV}$. Recently, a $600\,\mathrm{m}^2$ telescope was added to the centre of the existing array, which can be operated either in standalone mode or jointly with the four smaller telescopes. The large telescope lowers the energy threshold for gamma-ray observations to several tens of GeV, making the array sensitive at energies where the *Fermi*-LAT instrument runs out of statistics. At the same time, the new telescope makes the H.E.S.S. phase II instrument the first hybrid IACT array, as it operates telescopes of different size (and hence different trigger rates) and different field of view. In this contribution we present results of H.E.S.S. phase II observations of the Crab nebula, compare them to earlier observations, and verify the performance of the new instrument by comparing the data to Monte Carlo simulations.

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