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**Ultra-high energy cosmic-rays: A fresh look at an old problem**

PATRICK YOUNK, Los Alamos National Laboratory — The nature of the ultra-high energy cosmic-rays (UHECR) is an old problem with many important issues still unresolved. The body of experimental evidence has increased significantly in recent years. Much of this new knowledge has come from the Pierre Auger Observatory and the Telescope Array Project, both are cosmic-ray observatories, but there are also interesting clues from gamma-ray and neutrino observatories. In this talk I will briefly outline the current experimental evidence. Then I will discuss several distinctly different pictures with regard to the nature of the UHECR. I will argue that there is no simple picture of the UHECR that is without difficulty. I will describe some possible ways forward on both the experimental and phenomenological fronts.

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