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The New Big Science: What's New, What's Not, and What's the Difference

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This talk will start with a brief recap of the development of the "Big Science" epitomized by high energy physics, that is, the science that flourished after WWII based on accelerators, teams, and price tags that grew ever larger. I will then explain the transformation that started in the 1980s and culminated in the 1990s when the Cold War ended and the next big machine needed to advance high energy physics, the multi-billion dollar Superconducting Supercollider (SSC), was cancelled. I will go on to outline the curious series of events that ushered in the New Big Science, a form of research well suited to a post-Cold War environment that valued practical rather than esoteric projects. To show the impact of the New Big Science I will describe how decisions were "set into concrete" during the development of experimental equipment at the Thomas Jefferson National Accelerator Facility in Newport News, Virginia.