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Pathfinder to EXIST: ProtoEXIST A.B. GARSON III, Washington University in St. Louis, B. ALLEN, Harvard-Smithsonian Center for Astrophysics, R.G. BAKER, S.D. BARTHELMY, NASA Goddard Space Flight Center, M. BURKE, Harvard-Smithsonian Center for Astrophysics, J. BURNHAM, California Institute of Technology, N. CHAMMAS, Harvard-Smithsonian Center for Astrophysics, J. COLLINS, Lawrence Livermore National Laboratory, W.R. COOK, California Institute of Technology, A. COPETE, Harvard-Smithsonian Center for Astrophysics, N. GEHRELS, NASA Goddard Space Flight Center, T. GAURON, J. GRINDLAY, Harvard-Smithsonian Center for Astrophysics, F.A. HARRISON, California Institute of Technology, J. HONG, J. HOWELL, Harvard-Smithsonian Center for Astrophysics, H. KRAWCZYNSKI, Washington University in St. Louis, S. LABOV, Lawrence Livermore National Laboratory, B. SAID, Harvard-Smithsonian Center for Astrophysics, S. SHEIKH SHEIKH, NASA Goddard Space Flight Center — We describe the ProtoEXIST instrument, our fist-generation wide-field hard X-ray imaging (20 - 600 keV) balloon-borne telescope. The ProtoEXIST program is a pathfinder for the Energetic X-ray Imaging Survey Telescope (EXIST), a candidate for the Black Hole Finder Probe. ProtoEXIST consists of two independent coded-aperture telescopes using pixellated (2.5mm pitch) CZT detectors. The two telescopes will provide performance comparison of two shielding configurations, for optimization of the EXIST design. We report on the science goals and designs of both ProtoEXIST and EXIST and their implications for hard X-ray astronomy and astrophysics.

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