Providing advanced concepts and powerful multidiscipline systems analysis, Marshall Space Flight Center’s Advanced Concepts Office (ACO) specializes in high-fidelity pre-Phase A and Phase A concept definition studies for space exploration systems. For today’s competitive environment, the ACO provides a rigorous, expedient, and cost-effective way to achieve every mission’s design goals. The ACO is unique throughout NASA for its breadth of experience in both space system conceptual analyses and integrated architecture. The office has studied Earth-to-orbit and in-space transportation systems and elements of exploration and discovery missions, including landers, habitats, planetary surface systems, and science systems. Start by marking "Advanced Space System Concepts and Technologies" as Want to Read: Want to Read saving… Want to Read. The book presents an imaginative view of what space could be in the next several decades if new technologies are developed and bold new innovative applications are undertaken. It discusses the following concepts: a future environment for space activities very different from the predominant conditions of the past and present; a dozen critical technologies with the potential The book presents an imaginative view of what space could be in the next several decades if new technologies are developed and bold new innovative applications are undertaken. Advanced Space System Concepts and Technologies: 2010-2030+ by Ivan Bekey Aerospace Corporation/AIAA, 2003 Softcover, 293 pp., illus. ISBN 1-884989-12-8 US$34.95. Broadly speaking, there are two kinds of visionaries. There are those who mostly study history and derive their lessons from what has gone before, and there are those who study science and technology and base their ideas on what is possible. After a long career at both the Aerospace Corporation and NASA, where he was head of the Advanced Concepts Office, Bekey has put together some of the ideas, possibilities and principles that, as he sees it, will guide future American space projects. Some of the ideas are well known while others are mind-bogglingly original. Bekey, I., Advanced Space System Concepts and Technologies: 2010–2030+, AIAA/Aerospace Press, 2003. 04.07.12. ESA ACT 10 Years Anniversary. B. 3: On-Ground Testing Requirements. 1g testing (with gravity off-loading system): • Sag and kinematic friction due to loading • Non-linearities and poor repeatability • Wrong initial and boundary conditions • Facilities limited in size. The requirement for ground-test-ability results in an order of magnitude or more depth in the structure than is required by the on-orbit loads.