



## The Navigators: A History of NASA's Deep-Space Navigation

By Dr Andrew J Butrica

Createspace, United States, 2014. Paperback. Book Condition: New. 254 x 178 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.This is the story behind NASA's successful exploration of the solar system. For a half century, NASA has sent one probe after another into space, achieving scientific and technological successes along the way and adding to humanity's knowledge of the solar system. NASA has reaped these great rewards thanks to a small investment in deep-space navigation. With rare exceptions, navigation's great achievements-and scientific accomplishments-have gone unobserved. The failures of the Mars Climate Orbiter and Mars Polar Lander shed navigation (wrongly) in a negative light. Yet, the indispensable role of navigators behind NASA's many successes over the past half century has not come to light-until now. The institutional home of deep-space navigation is the NASA's Jet Propulsion Laboratory. JPL navigation originated long before it became part of NASA, when the lab developed and tested missiles for the nation's military space effort. From the start, deep-space navigation was an endeavor built on science and mathematics and dependent on the Deep Space Network for tracking spacecraft and on digital computers and software for processing data....



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The Navigators: A History of NASA's Deep-Space Navigation. iii + 367 pp., illus., index. San Bernardino, Calif.: Andrew J. Butrica, 2014. To See the Unseen: A History of Planetary Radar Astronomy by Andrew J. Butrica. [REVIEW] Steven Dick - 1998 - Isis 89:364-365. Historical Collections in Jeopardy: The Societe d'Encouragement Pour l'Industrie Nationale. The Navigators: A History of NASA's Deep Space Navigation. CreateSpace.Google Scholar. Byers, Bruce K. 1977. "Hypersonics and the Space Shuttle," in Facing the Heat Barrier: A History of Hypersonics. Washington, DC: NASA SP-2007-4232.Google Scholar. Heppenheimer, Tom. In order to navigate out of this carousel please use your heading shortcut key to navigate to the next or previous heading. Back. Sunburst and Luminary: An Apollo Memoir. Dr. Butrica book is a well researched history book on deep space navigation and the people who navigated spacecraft. The book also covers JPL's multimission navigation team, spacecraft navigation and the Deep Space Network—an interesting read. Read more. Helpful. For NASA and the Deep Space Network, deep space starts just past the Moon's orbit and includes the solar system and beyond. For others, like astronomers, deep space might mean what is beyond our galaxy. Explore More. Ranger 3 ».

Such a spacecraft navigates using precisely timed radio signals sent back and forth to Earth. Navigators on Earth track its location and speed and transmit course adjustments. These techniques allow navigators to guide a probe to a planetary rendezvous or a pinpoint landing. Navigating a spacecraft to distant locations in the solar system requires a team of scientists and engineers using sophisticated radios, large antennas, computers, and precise timing equipment.