

GENESIS OF LASER SATELLITE TRACKING AT THE NASA GODDARD SPACE FLIGHT CENTER.

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The proposal to equip the Beacon Explorer satellites (S-66) with cube-corner retroreflectors and to measure reflected laser pulses time-of flight was submitted in 1962. It was intended initially as an upgrade to the operational NASA Tracking and Data Network, which was generally responsible for supporting all the Earth Science and Astrophysics space missions and to tag their observations with position information. The astounding later refinement of the early crude technology and the amount of significant scientific content that talented teams have subsequently been able to extract from the continually evolving precise knowledge of system geometry were completely unanticipated. The origins of the idea for LST, the first equipment configurations, and the dedicated team that succeeded in demonstrating its power will be described.

The picture below is of Plotkin looking at the Beacon Explorer A before it was integrated onto the spacecraft at the JHU Applied Physics Laboratory in 1964.

