



JPL's role in Advancing Imaging Technology for Planetary Exploration

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JPL Historian

23 Sept 2022

CL#22-4776

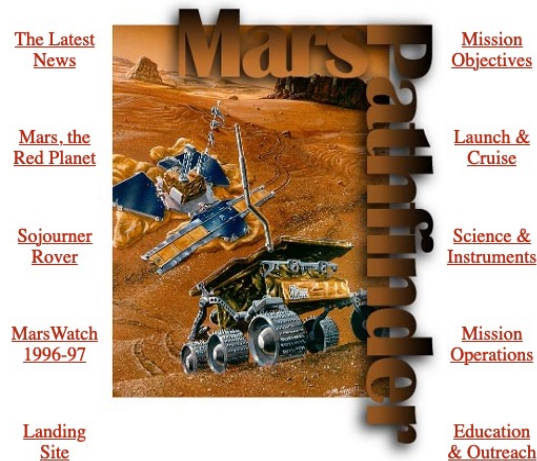


Jet Propulsion Laboratory
California Institute of Technology

For required markings, please visit <https://mh.jpl.nasa.gov>

MPF Website on Landing Day

Here is an [all text](#) version of this page.



[CD Navigator](#)

[Images of Mars from the surface of the Red Planet!](#)

What do the Mars Pathfinder spacecraft and the landing site look like in 3-D? [Virtual Reality models and animations galore!](#)

[Rover Telecommunications \(HIGH GRAPHIC VERSION\)](#) - how does it work? (Also included: movies of the Rover...)

[Rover Telecommunications \(TEXT ONLY VERSION\)](#)

Join our friends at the National Space Society for "[Mars Madness!](#)"

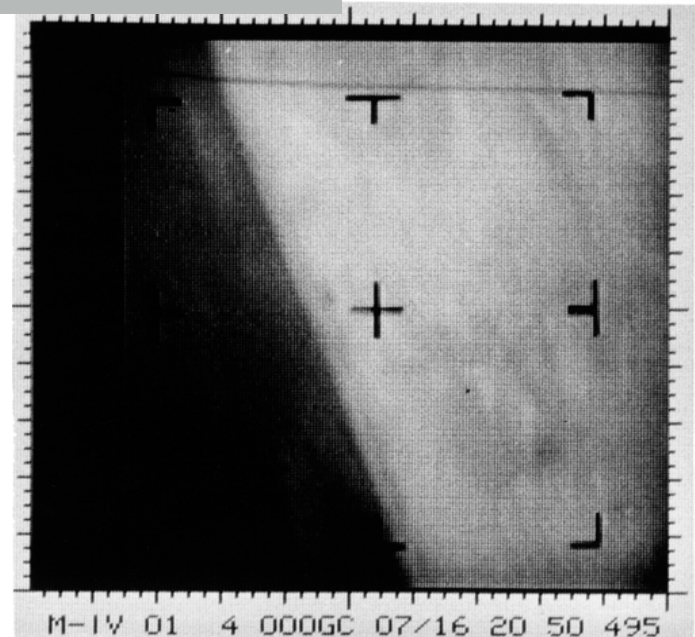
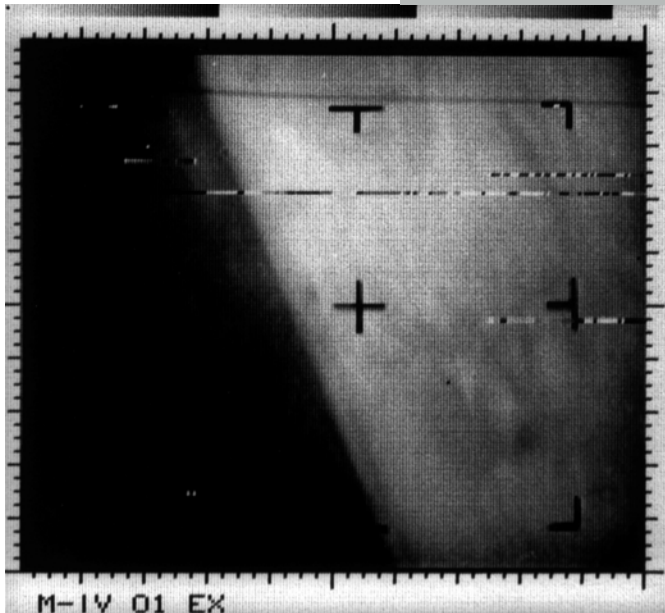
[Who are the Mars Pathfinder team members?](#) Watch extensive interviews courtesy of documentary makers [States of Art!](#)

Subscribe to the [Mars Pathfinder Mission Status](#) mailing list! Or, if you just need a list of past and present [Mars Pathfinder Mission Status reports...](#)

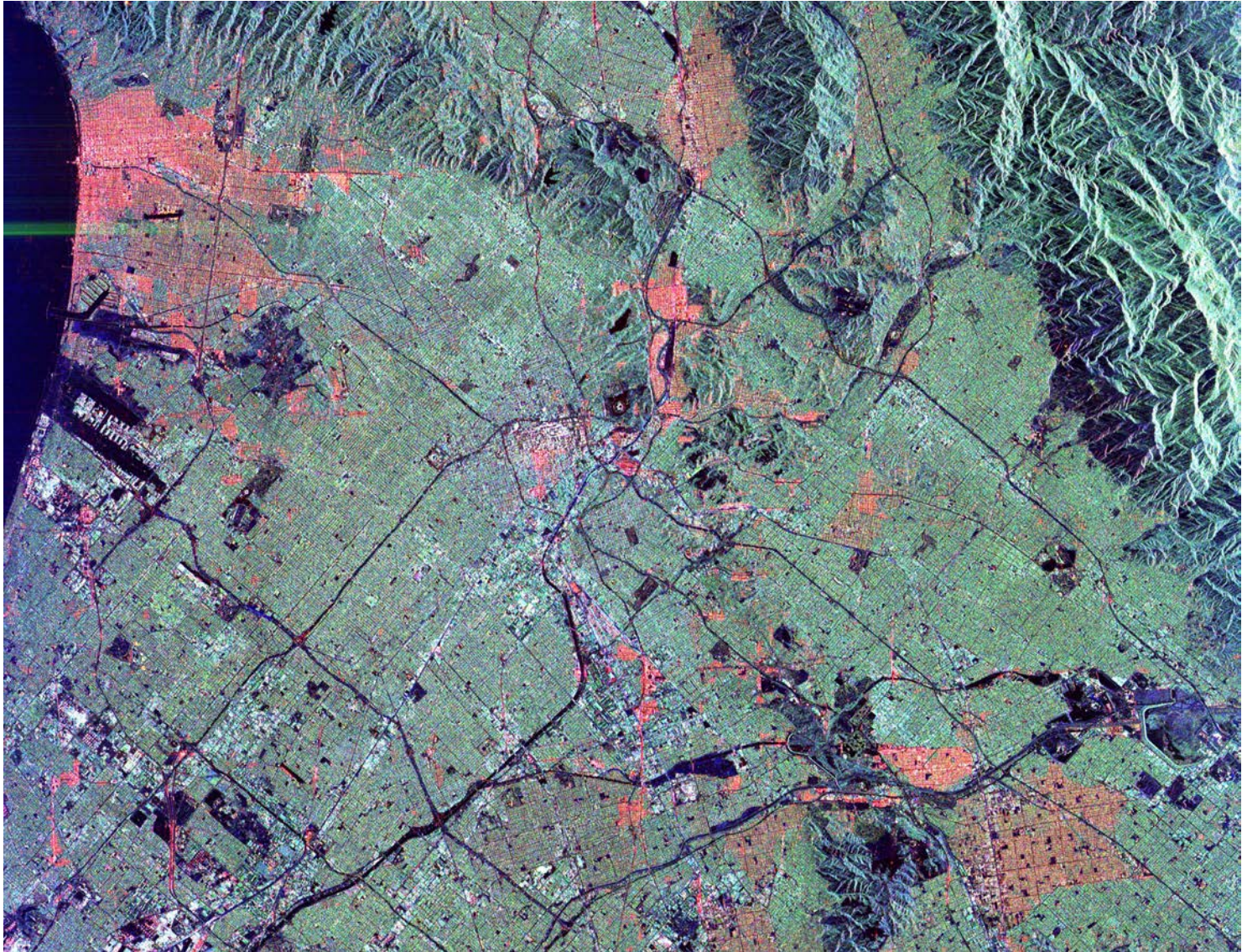
[For a Project Status Report by telephone, please call 1-800-391-6654 and follow the instructions.](#)

Early Digital

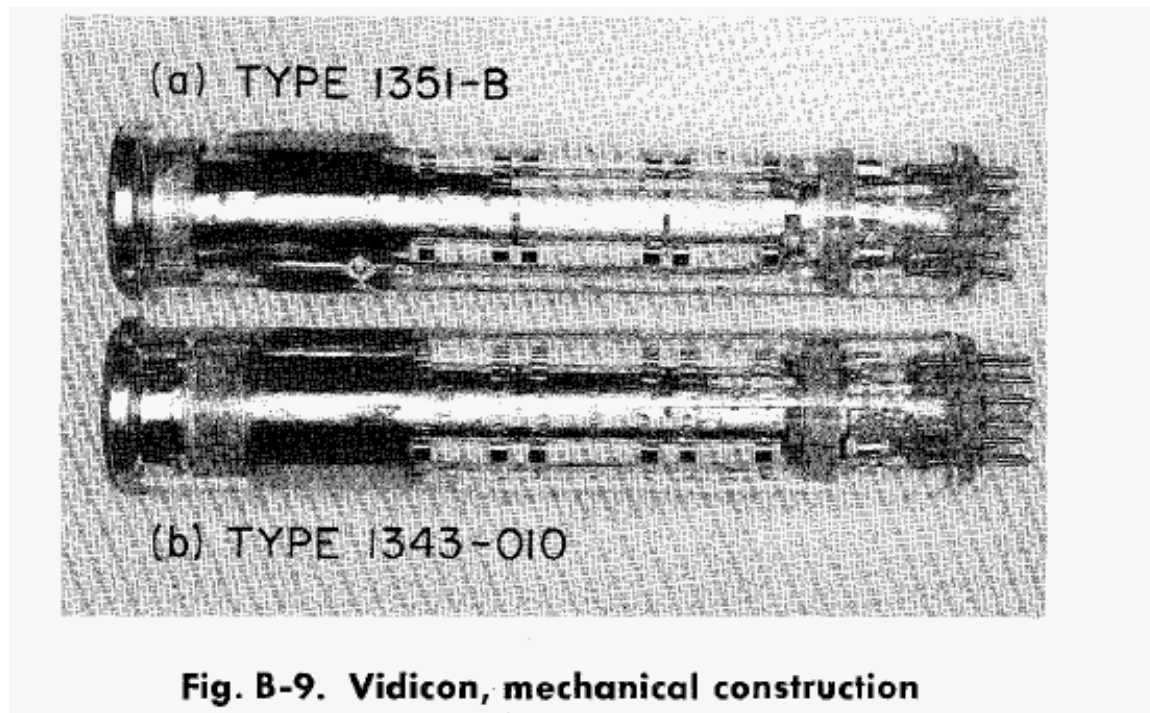
Three views of the first image from Mars







Solid State Revolution



Mariner 4's Vidicon (lower).



WFPC 2 CCD

of the Grand ring particles comes as somewhat of a surprise.

This work was supported in part by NASA (grant NGL 03-002-002) and JPL (contract 954057). I thank F. Landauer of JPL for the availability of the CCD camera; J. Janesik and L. Hoveland of JPL and S. Larson and J. Fountain of LPL for observing assistance.

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Care, feeding, and use of charge-coupled device (CCD) imagers at Palomar Observatory

James E. Gunn

Astrophysical Sciences, Princeton University
Peyton Hall, Princeton, New Jersey 08540

James A. Westphal

Geological & Planetary Sciences, California Institute of Technology
Mail Stop 170-25, Pasadena, California 91125

- Westphal and Gunn proposed a CCD-based camera to HST
- Won in 1977
- Built at JPL as WFPC
- Neither Galileo nor Hubble launched before 1989



Charles Elachi with Westphal, 1991.

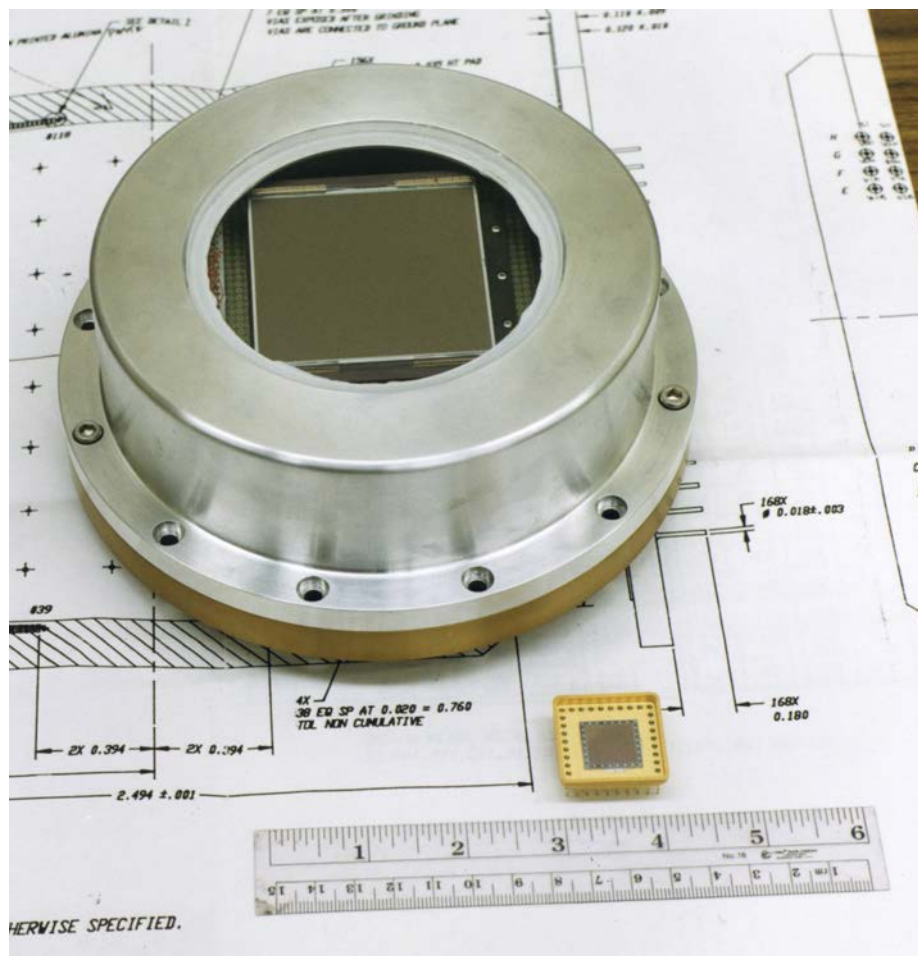
NEAT

NEAR-EARTH ASTEROIDS



Eleanor F. Helin
Near-Earth Asteroid Tracking (NEAT)
Jet Propulsion Laboratory

62nd Annual Caltech Seminar Day
Saturday, May 15, 1999



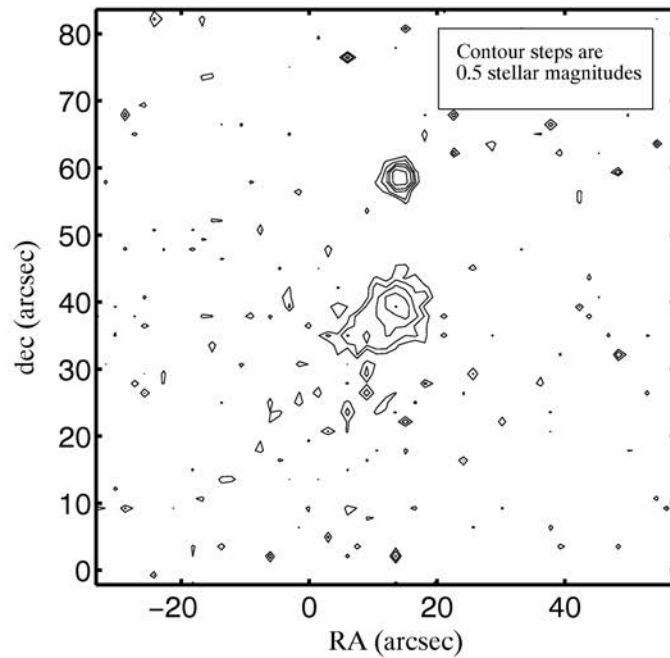
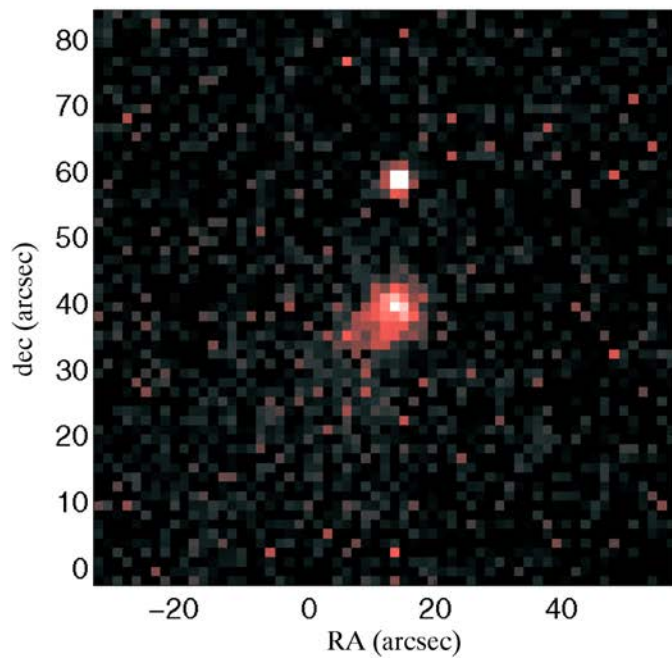


AMOS in 1996.

Comet Discovered with NEAT

3/15/96

RA = $9^{\text{h}}01^{\text{m}}13.55^{\text{s}}$ dec = $18^{\circ}58'39.3''$

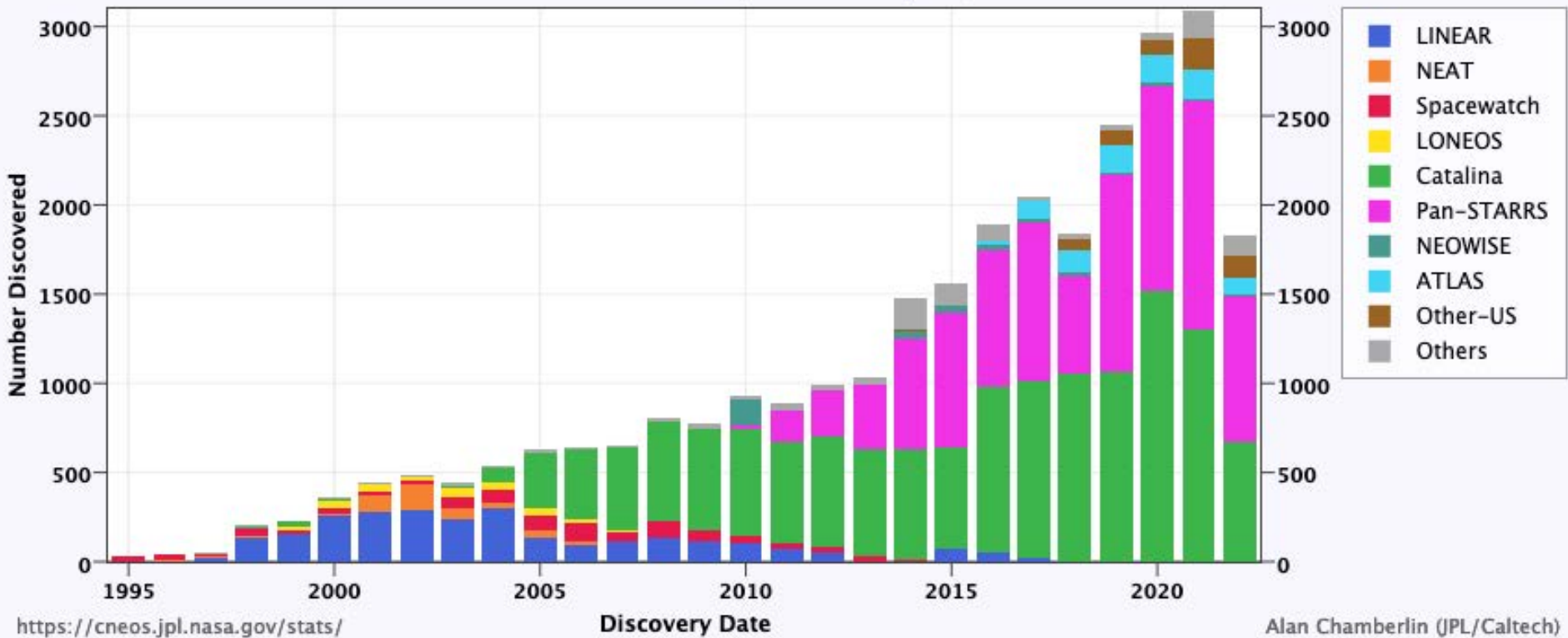




“Glo” Helin presenting JPL spectroscopist Barney Farmer with a newly discovered asteroid.

Near-Earth Asteroid Discoveries by Survey

All NEAs (as of 2022-Sep-13)



From JPL's Center for Near Earth Object Studies.

CMOS APS







Jet Propulsion Laboratory
California Institute of Technology

jpl.nasa.gov

Digitization of Astronomy beyond the fence

- JPL was 'in family' with other digitization efforts in astronomy
- By 1968, Palomar's Hale telescope recorded many of its observing runs digitally

