FOR THE CRATER GOOD: DIGITIZATION IN A SPACE RACE AGAINST TIME

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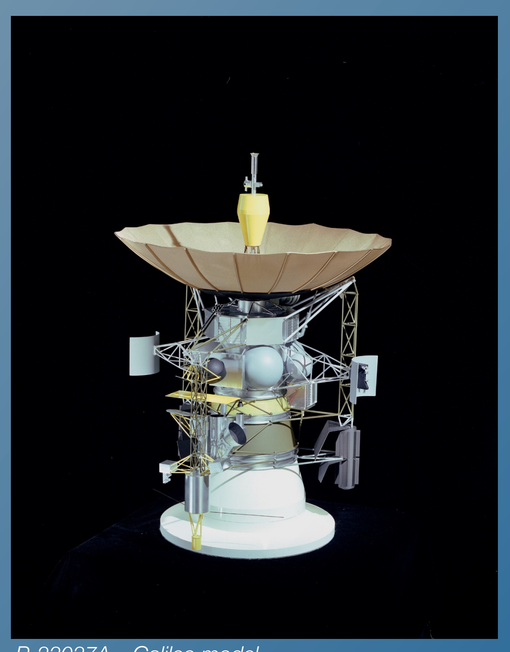
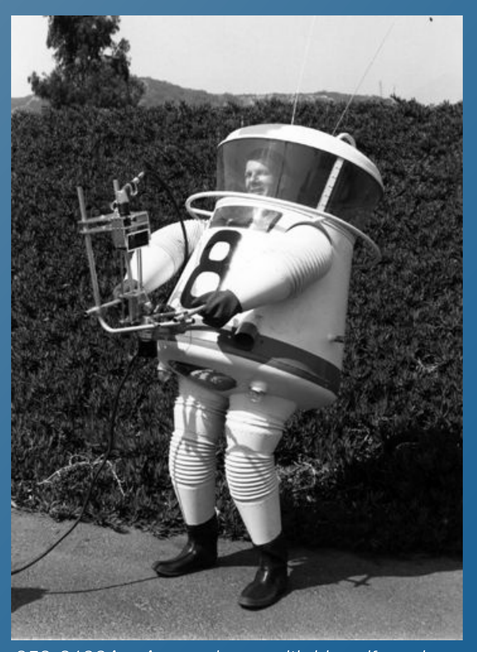
BACKGROUND

JPL is bringing its robust visual history to wider audiences by prioritizing its digitization efforts toward its collection of 350,000+ images. The collection houses images detailing mission history, instrumentation, launches, JPL personnel, and coverage of events and visits to the Lab. These preservation efforts are twofold and concurrent – to save negatives from physical damage, and to preserve detailed image metadata for digital and intellectual representation.

A portion of the photographic collection underwent testing for damage from 2015-2016. Due to small staff numbers, this testing took a large amount of time and was not exhaustive within the entire collection. Archives interns performed in-house digitization during the summers of 2014-2017. From 2018-present, over 150,000 images were digitized by a third party vendor. Metadata documentation and digital processing of these images is continuous and done in-house.



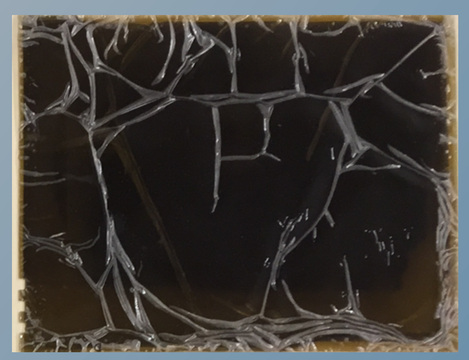
P-23037A – Galileo model



352-3192A – An employee with his self-made space suit

CHALLENGES

Regardless of industry or content, digitization efforts are plagued by challenges of advocacy, labor, funding, and technological advancement.



Channeling, a symptom of vinegar syndrome

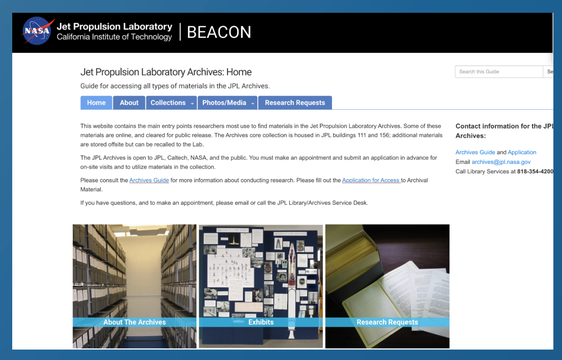
DAMAGE

Thousands of negatives from the 1940s and 1950s suffer from physical damage (vinegar syndrome, channeling, silvering), which can worsen over time if unaddressed, resulting in the total loss of the image. Testing on photo negatives and film reels has been done periodically over the last five years.

In-house Canon camera stand

LABOR

Despite having one of the largest archives staff of any NASA affiliated institution, it is difficult to manage large-scale digitization efforts while still managing other projects. The Records Management & Archives group will be focusing on federally mandated projects that must be completed within the next three years. Knowledge management and long-term digital asset management is part of this effort, but will take time and labor.



JPL Archives LibGuides website

TECHNOLOGY/COST

Best-practice necessities like climate control, digital asset management tools, and digital and physical storage often come at a high price, heavily affecting labor allocation and budgets. JPL Archives is still in the beginning stages of broaching many digital solutions, including archival management systems and a public-facing accessible web presence.

PHYSICAL PROCESSING

Physical packaging of negatives

Our physical processing workflow includes removing the negatives from excess glassine, mylar, and paper, and documenting metadata details using a schema developed in-house. It is important to remove the excess glassine because it makes the materials vulnerable to acid migration and other potential damages. This type of processing work is crucial to creating the safest possible preservation environment for the negatives.

DIGITAL WORKFLOW

This multi-phase project required the creation of a metadata scheme that includes image description, date, attribution, project name, damage markers, keywords, and clearance information. This also includes image adjustments and the creation of digital files that can be migrated to a digital asset management system.

The spreadsheets created during this process also afford us the opportunity to update existing finding aids and indices with more accurate and complete information.

JPL Photo Lab photo album page

Photo Number/Identifier (Ac Bc)	Film Size 4 (4x5), 120, or 35.	Black & White or Color BW or C	Barcode or # range	Date	Updated Title	Project	Ordered By	Taken By	Original Title (Envelope)	Keywords

Example of metadata fields collected

TO INFINITY AND BEYOND

Further processing plans include:

- More digitization of negatives and film reels.
- Ad-hoc derivative creation for image clearance and public viewing.
- Relocation of finding aids and images into content management system.
- Continuation of Caltech and JPL joint digitization projects.
- Necessary digitization of paper records in preparation to adhere to new NARA standards, effective in 2022.

CONTACT

Inquiries to the JPL Archives can be made to:
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jpl-nasa.libguides.com/archives

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