



The MOON
in the Age of
PHOTOGRAPHY
1859-1969

MILANEUM
VINTAGE PHOTOGRAPHY

The Moon in the Age of Photography 1859-1969

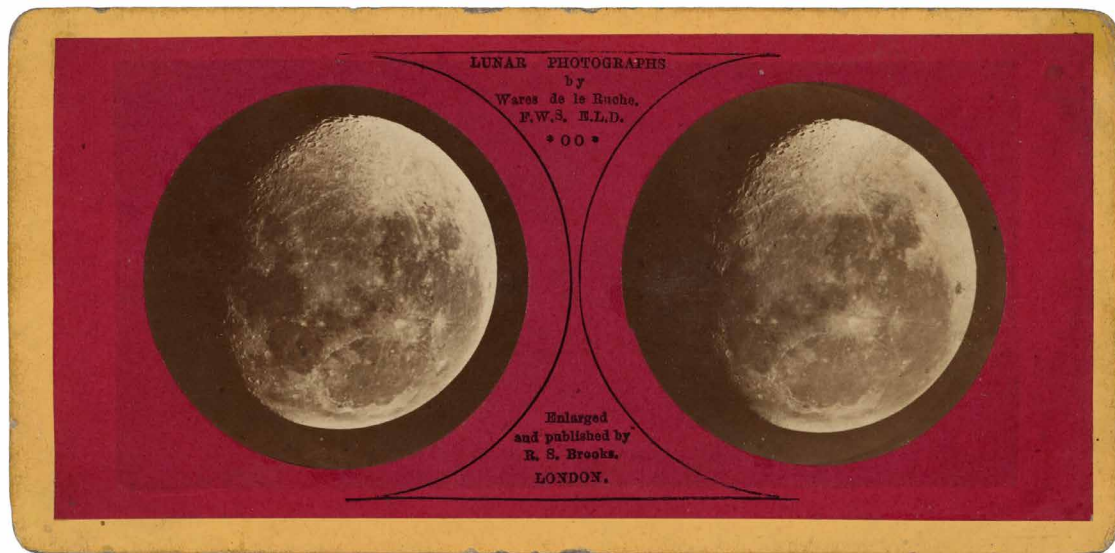
The photos of the moon landing on July 20, 1969 mark an important point in the history of the picture and have radically expanded the limits of human imagination. This exhibition takes place on the occasion of the 50th anniversary of the moon landing of Apollo 11. A wide range of photographs from NASA's Apollo Program 1961 -1972, published in Austria via the U.S. Information Service (USIS), highlight the culmination of technological development and international cooperation in space. (19-39)

Photographs by the Austro-Hungarian astronomer Ladislaus Weinek from the 1880s illustrate the efforts of the 19th century to accurately depict the lunar surface. (3-6) The attraction between astronomy and photography is natural, since both are concerned with the reflectance or absorption of light upon surfaces. Around 1900 even simple studio photographers tried to profit from the fascination for the moon. (13-15) Photomontage postcards convey bizarre fantasies about life on the moon. (12/16/17)

#MILANEUM
4/2019



details and prices on request: info@milaneum.com



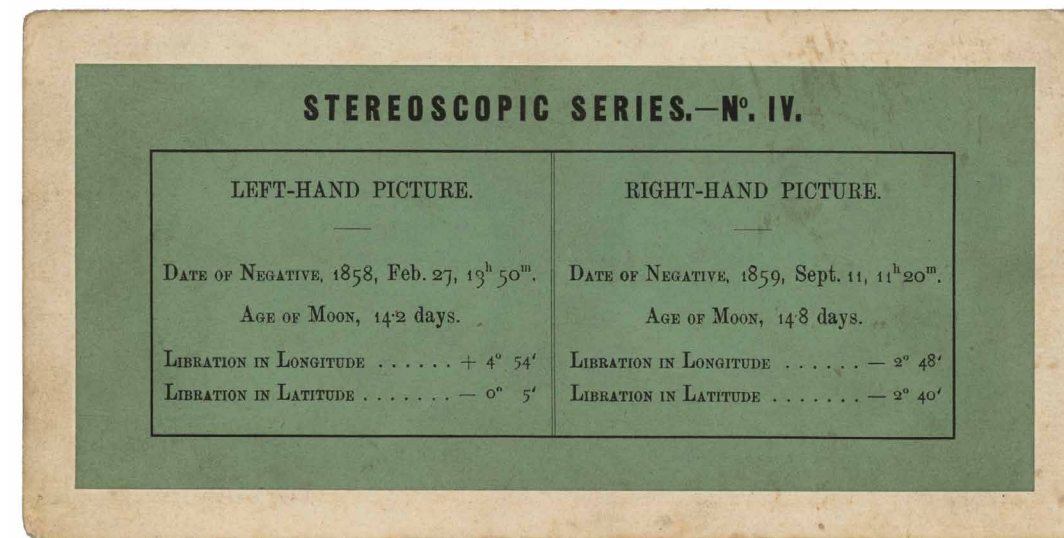
1/2 Warren De La Rue (1815-1889)

Moon, GB. ca. 1858

Stereoscopic photograph

Albumine print

Warren De La Rue was among the earliest astronomer-photographers and worked at Kew Observatory. De La Rue took the photos at different geographical locations and different times of year. Stereophotography gives an illusion of depth.

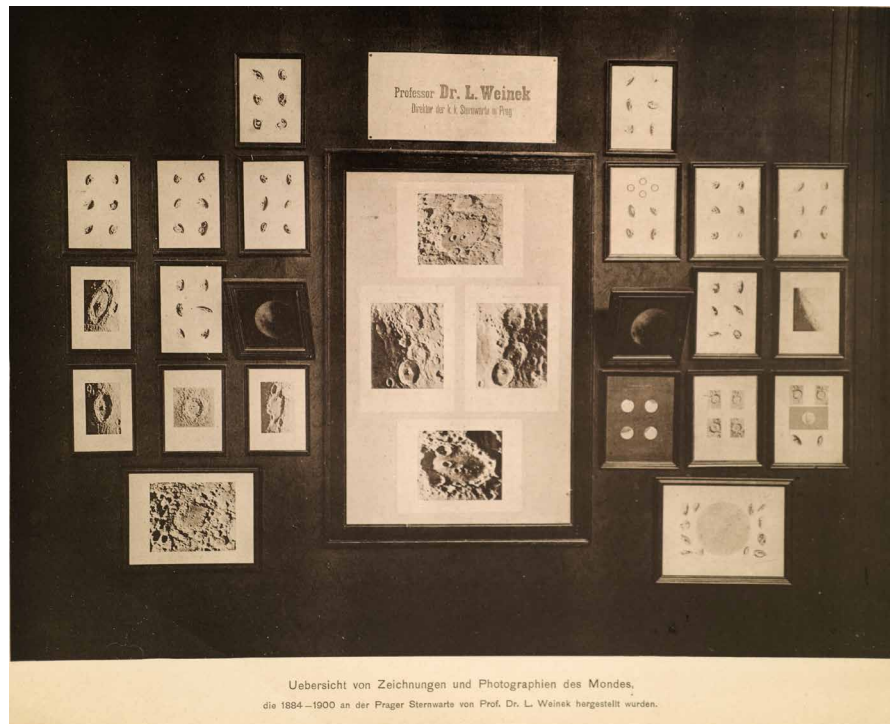


Lick
 1895 $\frac{9}{10}$, 16 20 2
 H_g = 24
 D = 10'
 Exp. = 0.5"



Lick
 1895 $\frac{9}{10}$, 16 20 2 P.C.
 H_g = 24
 D = 10'
 Exp. = 0.5"

3/4 Ladislaus Weinek
 Mondkrater
 (Archimedes)
 Lick Observatory
 Albumine print
 ca. 1888
 ca. 25 x 21,5 cm



WEINEK, Ladislaus (*1848 in Ofen, †1913 in Prag)

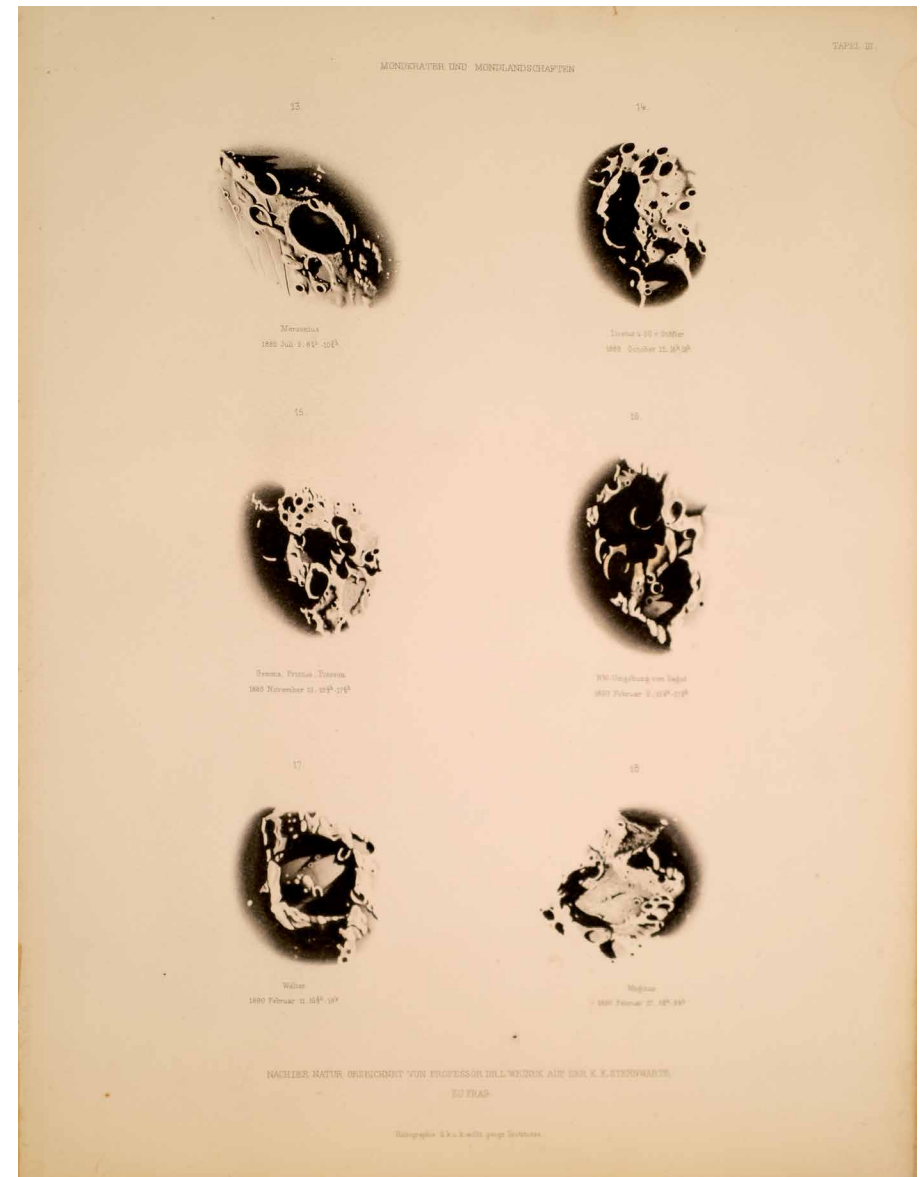
Weinek was educated in Vienna, and worked at the photography laboratories in Schwerin. In 1874 he joined a German expedition to the Kerguelen Islands to observe a transit of Venus across the face of the Sun. His results from the expedition were published in *Nova Acta Leopoldina*. In 1883 he became a professor in Prague and director of the Klementinum observatory. In 1884 he began to draw lunar topographic features, with a preparation time of up to 225 hours per drawing, partly based on his analysis of photographs of the Moon taken at the Lick Observatory, the Columbia College Observatory, and the Paris Observatory.

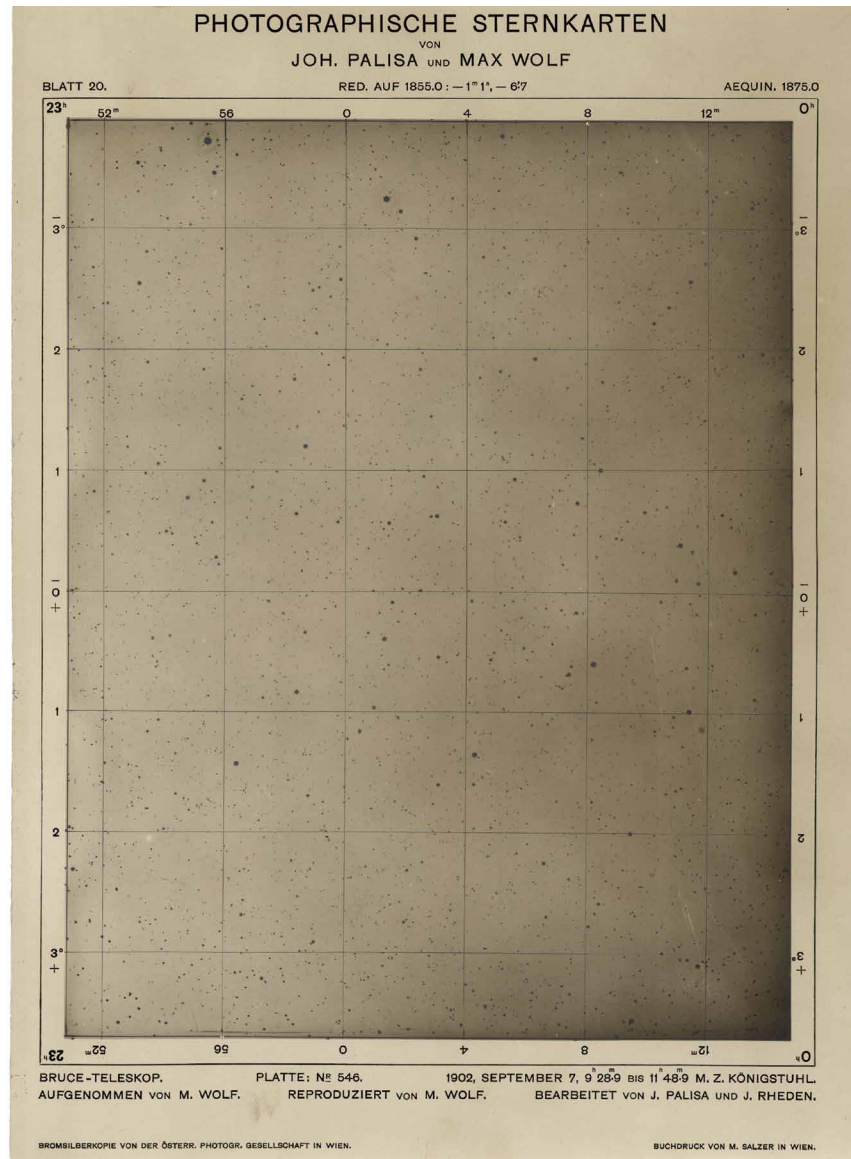
5/6 Übersicht der von Weinek in Prag 1884-1891 nach der Natur gezeichneten Mondkrater und Mondlandschaften

Heliogravure

from:

III. Astronomische Beobachtungen an der k.k. Sternwarte zu Prag in den Jahren 1888, 1889, 1890 und 1891, nebst Zeichnungen und Studien des Mondes.
K.k. Hofbuchdruckerei A. Haas - Selbstverlag, Prague, 1893, ca. 30x24 cm, 90 pp., 9 plates





7 Johann Palisa, 1848-1925
Max Wolf 1863-1932
Photographische Sternkarte
Blatt 20, 1902
 gelatin silver print
 36.2 x 25.4 cm

Palisa-Wolf star atlas

This is the first photographic star atlas (produced between 1900 - 1916). The 210 leaves represent the entire starry sky visible in Europe. It was edited by the Viennese astronomer Johann Palisa and Max Wolf to facilitate the discovery and tracking of new asteroids. Palisa had already discovered about 100 of these minor planets by visual observation at the Great Refractor of the University Observatory in Vienna, while Wolf was the first researcher to start using astrophotography for this purpose at the new Heidelberg-Königstuhl Observatory.

Palisa's aim was not just to facilitate the discovery of the many anticipated minor planets, but also to be able to rediscover "lost" asteroids and thereby pinpoint their orbits. For a few decades, the star atlas became an important tool for the planetoid researchers.

The "photo pioneer" Wolf surpassed Palisa in the number of discovered asteroids (123 or over 200) in following decade, because these small bodies on the sky photographs quickly revealed themselves by a short trace of line, while Palisa found them through the telescope by comparison with the star map.

Über die photographischen Sternkarten von Johann Palisa und Max Wolf.

Die in den letzten Jahren in immer schnellerer Aufeinanderfolge der Entdeckungen wachsende Zahl der kleinen Planeten erheischte auch neue Hilfsmittel zur Sicherung der Neuentdeckungen durch eine hinreichende Zahl von visuellen Ortsbestimmungen. Die Abzüge seiner die neuentdeckten Planeten enthaltenden Aufnahmen, die Prof. Wolf einer kleinen Anzahl von Beobachtern zur Verfügung stellte, dienten diesem Zweck in vortrefflicher Weise. Sie konnten aber noch erheblich in ihrem Werte gesteigert werden und eine allgemeinere Verwendung finden, wenn ihnen eine Gestalt gegeben wurde, die den Beobachter in den Stand setzte, sich auf der Aufnahme schnell zu orientieren. Aus diesem Gesichtspunkt heraus sind als ein Ergebnis mühsamer Versuche die photographischen Sternkarten entstanden, von denen eine erste Serie, wie aus der beigelegten Anlage ersichtlich ist, jetzt der Vollendung entgegen geht. Jede der Karten bringt auf einem Raum von 22 x 28 cm die in einer Fläche von 50 Quadratgraden stehenden Sterne bis etwa zur 14^{ten} Größe zur Anschauung. Das Netz der Karten stellt die Grade der Deklination und jede vierte Minute der Rektaszension dar und schließt sich also eng an die erprobten Bonner Sternkarten an. Die Karten sind auf einem festen Papier hergestellt, das so gewählt wurde, daß man unmittelbar am Fernrohr Eintragungen in dieselben vornehmen kann; sie erleichtern die Auffindung der Objekte ganz wesentlich und tragen im übrigen in jeder Hinsicht den Bedürfnissen der Beobachter nach Möglichkeit Rechnung, so daß eine sehr erhebliche Förderung der Beobachtung der kleinen Planeten von ihnen erwartet werden darf.

Kb.

Inhalt zu Nr. 4256-57. J. Palisa. Beobachtungen von Planeten und Kometen. 121. — A. Antoniazzi. Osservazioni di pianeti. 147. — L. de Ball. Zur Theorie der Sonnenfinsternisse. 149. — Über die photographischen Sternkarten von Johann Palisa und Max Wolf. 151.

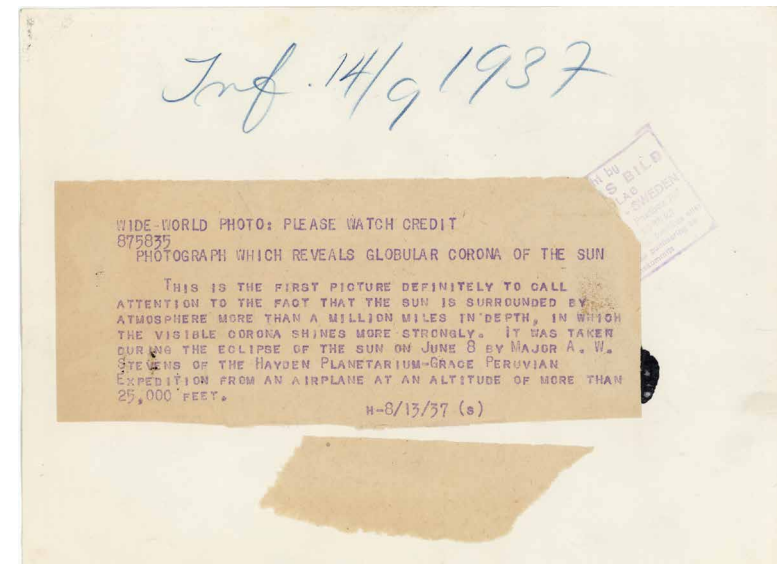
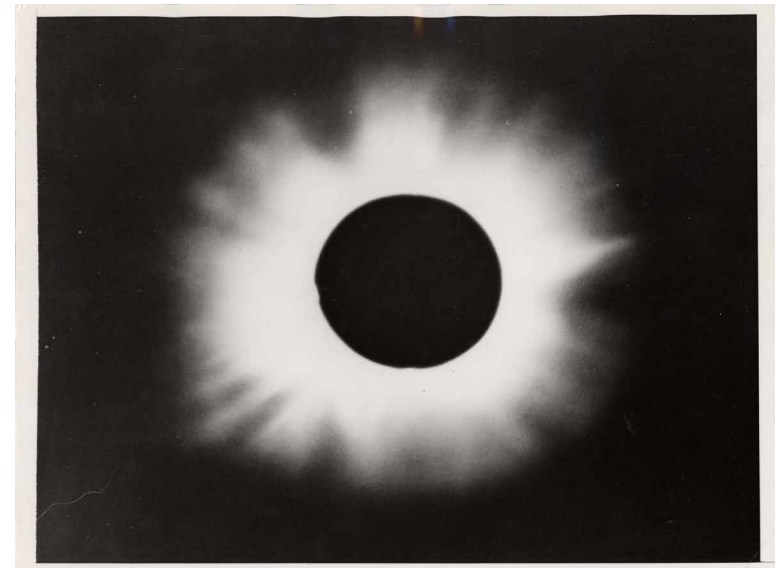
Geschlossen 1901 Juni 25. Herausgeber: H. Kobold. Druck von C. Schaidt. Expedition: Kiel, Mollkestr. 10.

from: *Astronomische Nachrichten* 1908, volume 178, Issue 8, p.151

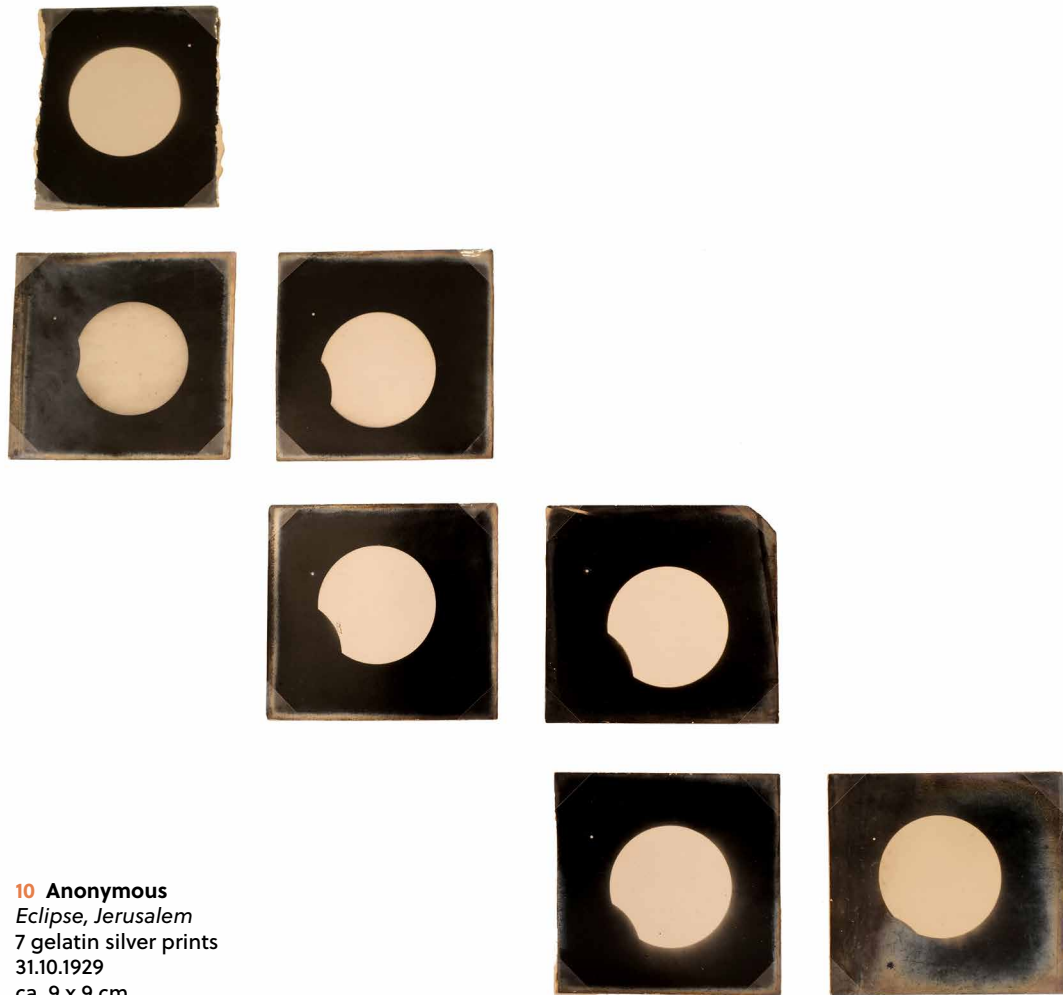


8 Carlo Naya
(Italian, 1816–1882)
Night View of San Marco
Albumen silver print
ca. 1875, 26 x 18 cm

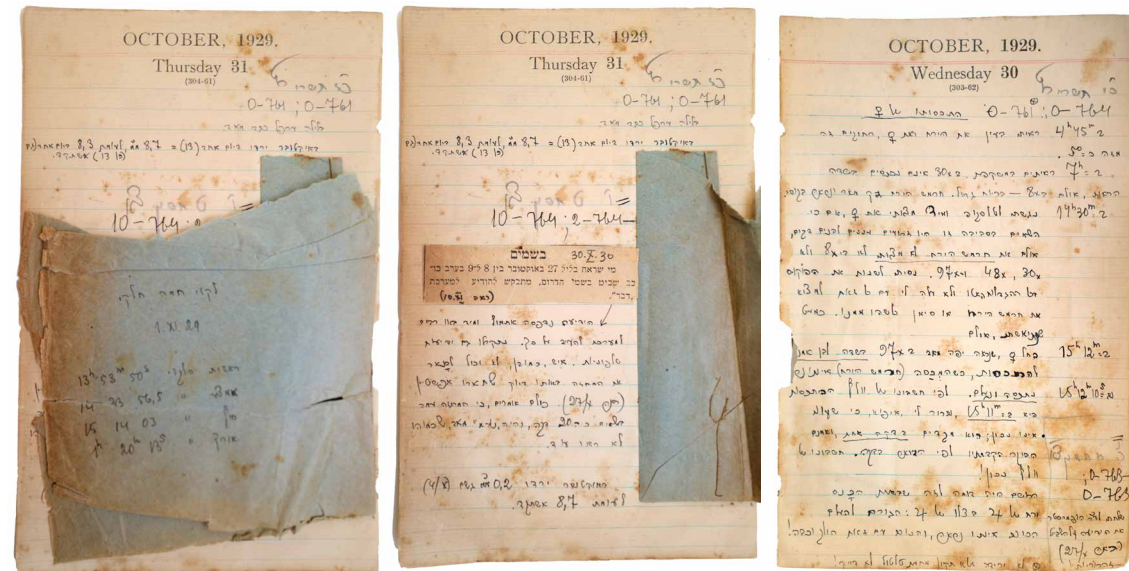
Naya operated a commercial photography studio in Venice specializing in Romantic moonlit views of architectural landmarks. Because emulsions were not sensitive enough to record images at night, he made photographs during the day, then created the illusion of moonlight through a variety of darkroom tricks. In this day-for-night image, the sun masquerades as a gently glowing moon and hand-painted highlights glitter on the water and cathedral domes.

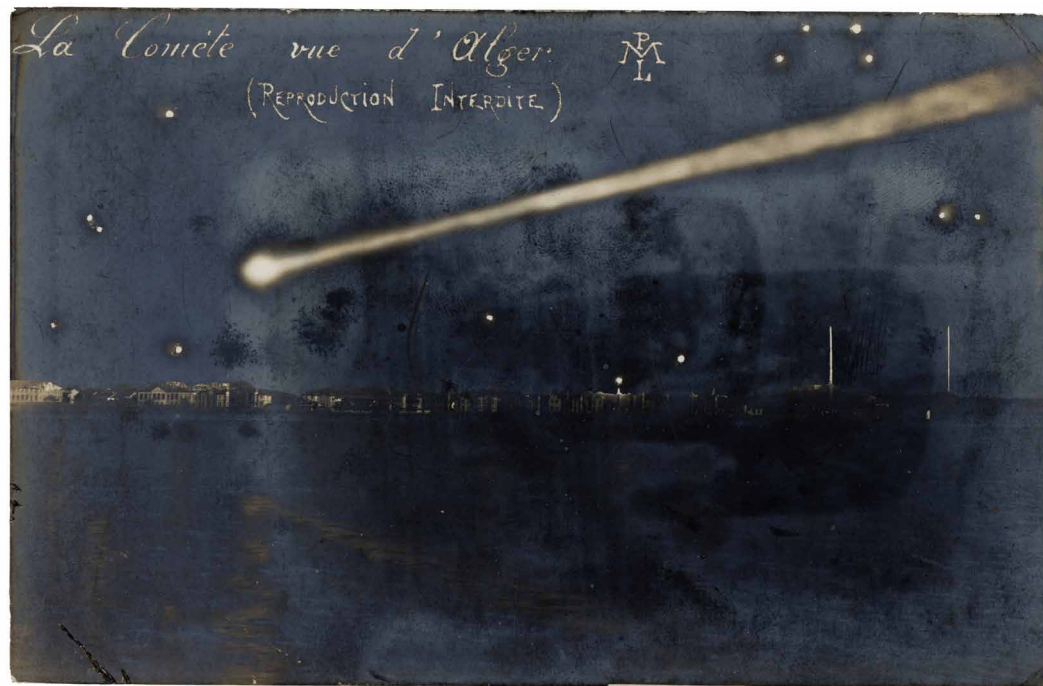


9 Anonymous
Eclipse
gelatin silver print
8.13.1937
23,5 x 18 cm



10 Anonymous
Eclipse, Jerusalem
7 gelatin silver prints
31.10.1929
ca. 9 x 9 cm





11 PML
Comete seen from Alger
 Mai 1910
 gelatin silver print
 postcard, 8,5 x 14 cm



12 Schubert
Studio-moon
 Munsterlager ca.1907
 gelatin silver print
 postcard, 8,5 x 14 cm



13 Paul Fink Berlin
Moon Photomontage
 gelatin silver print
 postcard, 8,5 x 14 cm



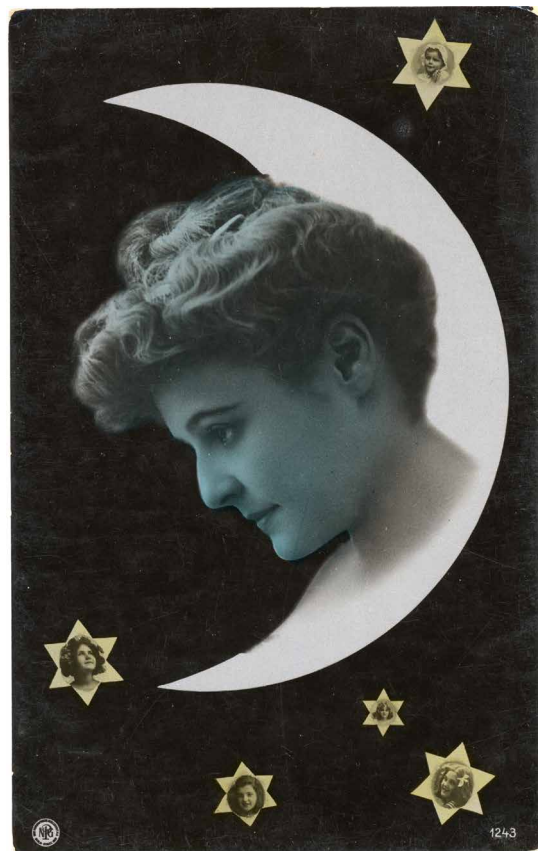
14 a/b Anonymous
Studio-moon
 ca.1910
 gelatin silver prints
 postcards, ca. 8,5 x 14 cm



15 D.P.
New-Moon
 France, ca. 1910
 gelatin silver prints
 postcards, 8,5 x 14 cm



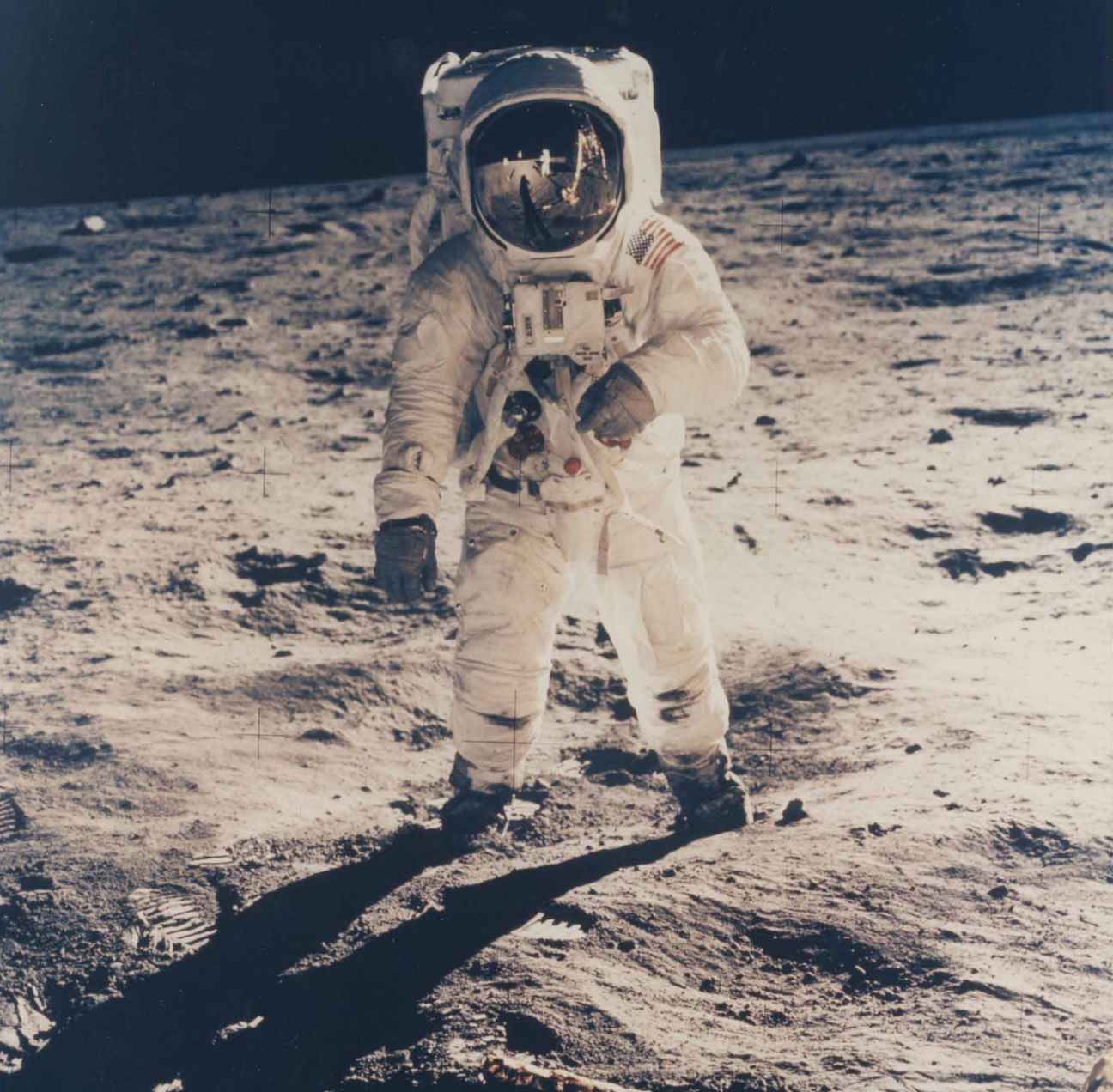
16 Anonymous
Moon Photomontage
 New York ca.1910
 gelatin silver print
 postcard, 8,5 x 14 cm



17 Neue Photographische Gesellschaft m.b.H. (NPG)
Moon Photomontage
 Schöneberg ca.1910
 gelatin silver print
 postcard, 8,5 x 14 cm



18 Gaudenzio Marconi
 (Italien, 1841-1885)
Nude with Sphere
 albumen print, ca.1875
 ca. 26 x 19,5 cm



APOLLO MISSIONS

Apollo 1-17

Project Apollo's goals went beyond landing Americans on the moon and returning them safely to Earth. They included:

Establishing the technology to meet other national interests in space.

Achieving preeminence in space for the U.S.

Carrying out a program of scientific exploration of the Moon.

Developing human capability to work in the lunar environment.

Apollo 11

On July 20, 1969, the Apollo 11 crew successfully completed the national goal set by President John F. Kennedy eight years prior: to perform a crewed lunar landing and return to Earth.

Crew: Neil Armstrong, Edwin E. Aldrin Jr., Michael Collins

Launch: July 16, 1969; 9:32 a.m. EST

Landing: July 24, 1969; 12:50 p.m. EST

https://www.nasa.gov/mission_pages/apollo/missions/index.html

22-39 NASA, Apollo Missions

1961 - 1972, *vintage* gelatin silver prints

ca. 26 x 20,5 cm



19 Nasa. Apollo 11.

Saturn V rocket, July 16 1969

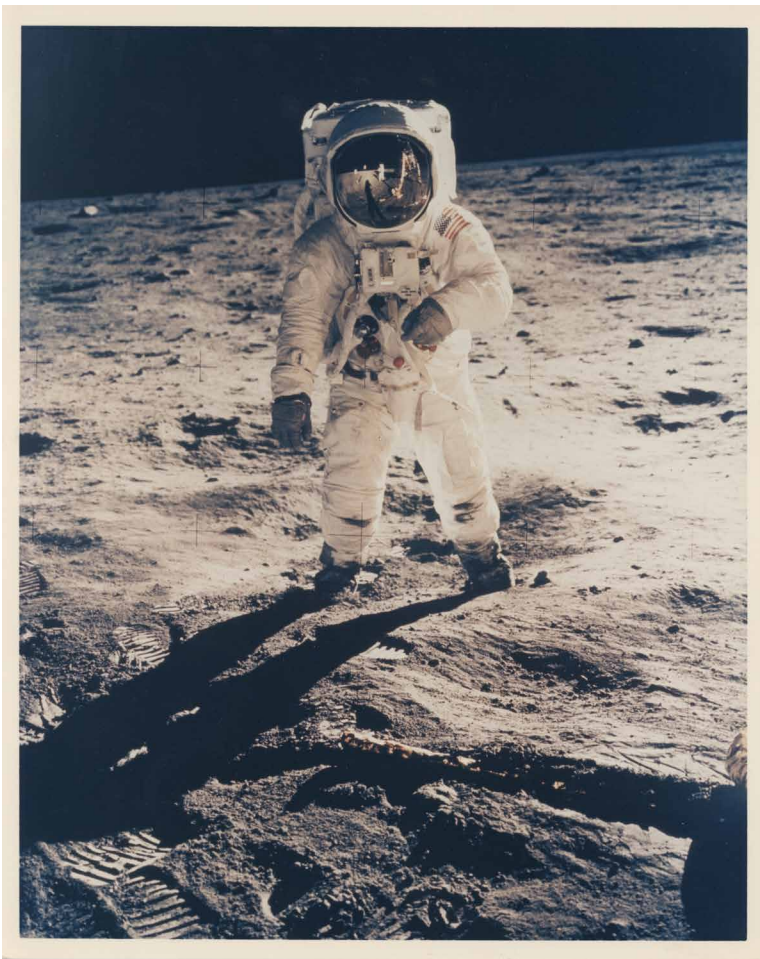
This photograph is part of a sequence of three iconic images realized through the affixing of a camera to the top of the tower firing of the rocket by renowned photographer Ralph Morse.

vintage chromogenic print
watermark: A KODAK Paper
NASA stamp, 25 x 20,5 cm

20 Neil Armstrong
Buzz Aldrin on the Moon
Apollo 11, 20 July 1969

The „MUST HAVE“ photographs of the Space Conquest and one of the most iconic photographs of the twentieth century. Due to the reflection this photograph is the only one that shows even the first two men who walked on an alien soil.

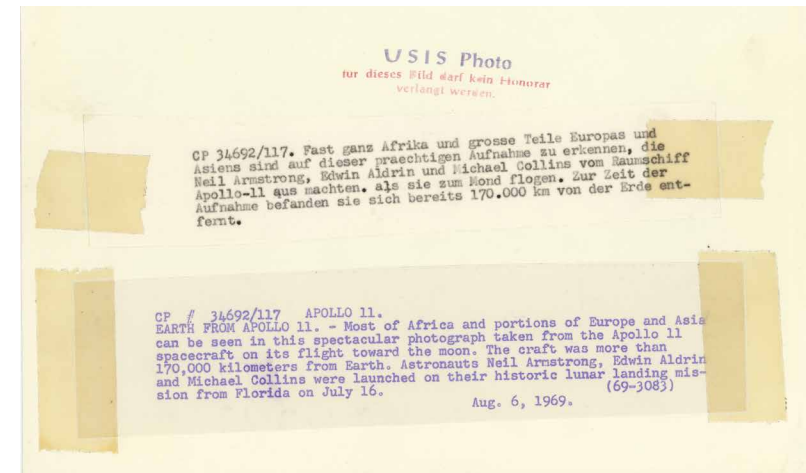
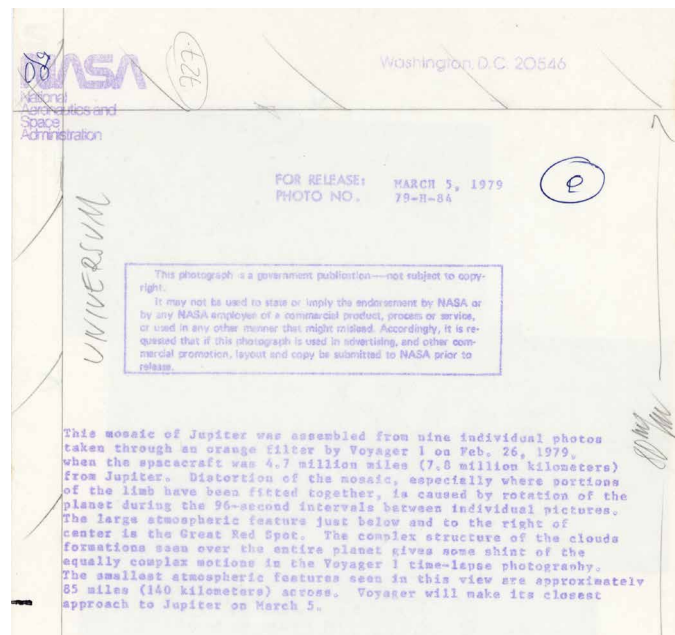
vintage chromogenic print
watermark: A KODAK PAPER
NASA stamp, 25 x 20,5 cm



21 Neil Armstrong
Moon walk of Buzz Aldrin
Apollo 11, 20 July 1969

vintage chromogenic print
watermark: A KODAK PAPER
NASA stamp, 25 x 20,5 cm







CP 33346/14. Aus dem Fenster des unbemannten Apollo-Raumschiffes machte die automatische Kamera bei dem Flug am 9. November aus 15.200 km Höhe diese Aufnahme von der Erde in Blickrichtung Südwesten ueber den Atlantik. Ein umfangreiches Niederdruckgebiet liegt ueber dem Sudatlantik zwischen Afrika und Suedamerika.

USIS Photo
für dieses Bild darf kein Honorar
verlangt werden.

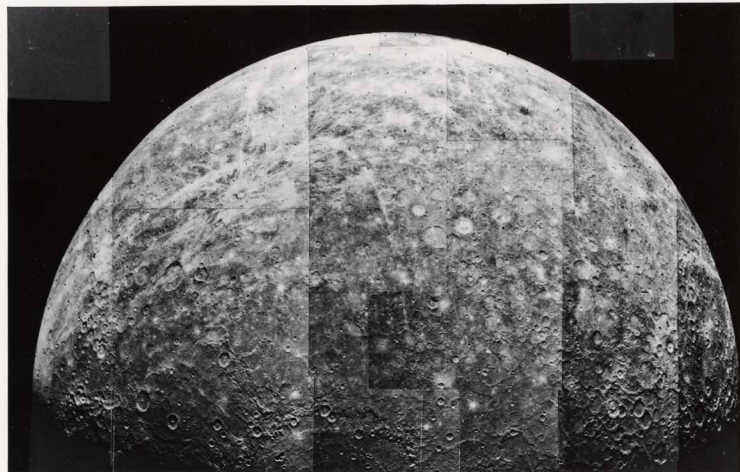
33346/14



~~CP 33346/14~~: Die Erde von einem Satelliten aus 35.600 km Entfernung photographiert. Aufnahmen wie diese ermöglichen den Meteorologen eine globale Wetterbeobachtung.

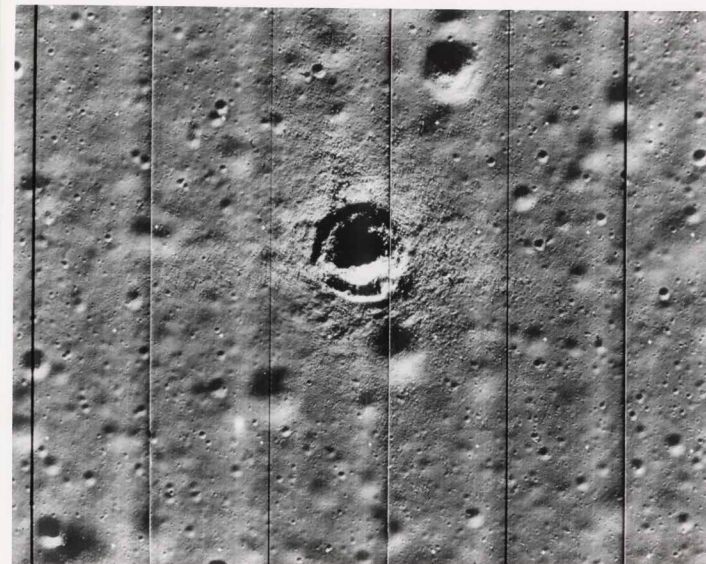
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verlangt werden.

34002/2



USIS Photo
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verlangt werden.

38919/5
This photomosaic of Mercury was constructed of 18 photos taken at 42-second intervals by Mariner 10 six hours after the spacecraft flew past the planet on March 29. The north pole is at the top and the equator extends from left to right about two-thirds across from the top. A large circular basin, about 1300 kilometers in diameter, is prominent in this view of Mercury. One such ray seems to join in both east-west and north-south directions. Taken from a distance of about 210,000 kilometers, the pictures were computer-enhanced at the Jet Propulsion Laboratory.
Credit: NASA. April 30, 1974



This portion of a telephoto photograph made by Lunar Orbiter III in February shows one of 12 primary photo sites assigned to the mission. The unusually well-defined crater in the center of the picture is about 500 feet (150 meters) across. The double-walled appearance is due to a continuous landslide around the circumference of the crater. This slide probably occurred shortly after the crater was formed. Blocks and boulders averaging about three feet (one meter) in diameter which were ejected from the crater form a symmetrical pattern of rays. The area shown is approximately 3,600 feet by 2,800 feet (1,100 meters by 850 meters). The sun lights the western wall of the crater, which is about 35 miles (56 kilometers) north of the lunar equator.

Lunar Orbiter is managed for NASA by the Langley Research Center. The Boeing Company is the prime contractor, and the photographic subsystem was designed and built by the Eastman Kodak Company. (NASA Photo)



GP 33447/8. Telesaufnahme des Kraters Kopernikus, von Lunar Orbiter II aus 45 km Höhe aufgenommen, wobei die Flugbahn des Mondsatelliten etwa 240 km südlich des Kraterzentrums verlief. Die Aufnahme zeigt einen Teil des 96 km weiten, bis zu 3,2 km tiefen Grosskraters, sowie den 52,8 km vom Rand des Kopernikus entfernten Krater Fauth im Vordergrund. Das wellige Terrain im Vordergrund der Aufnahme wurde durch den Auswurf von Gestein aus dem Kopernikus anlässlich eines Meteoriteneinschlages geformt; die dreieckige Einsenkung am linken Bildrand ist ein Bruchgraben, der von jungem Vulkangestein ausgefüllt wurde. Der Fauth-Krater hat rund 20,8 km Durchmesser und 1350 m Tiefe. Die Aufnahme wurde am 25. November gemacht und am 28. November von der kalifornischen Bodenstation Goldstone empfangen.

USIS Photo
für dieses Bild darf kein Ho
verlangt werden.

33447/8





CP 14692/11
HUMAN FOOTPRINT
strong and Edw
view out the d
shadow is visi
on another cel

CP 14692/112. Teilweise überdeckt von dem Schatten der Apollo-11
Landefähre "Eagle" die Fußspuren der beiden Astronauten im Vordergrund
des 21. Juli unter dem Ritz einer Fernerkundungs- und 2 Stunden
unverändert.

1. Footprints of Apollo 11 astronauts Neil Arm-
strong and Edwin "Buzz" Aldrin are clearly visible on the surface of the moon in this
nearby landing vehicle. Part of the vehicle's
shadow is visible in the foreground. The American space-
craft made man's first step on July 20. (69-3077)

Aug. 5, 1969.

USIS Photo
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verlangt werden.



USIS Photo
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verlangt werden.

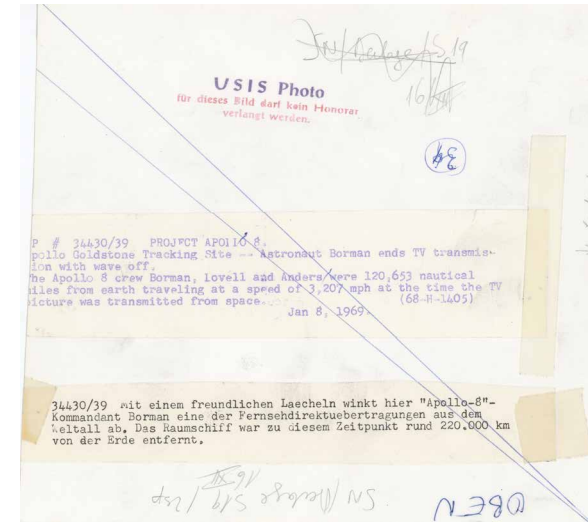
38462/30 VIKING.
This is the first photograph ever taken on the surface of Mars. It was obtained by
Viking 1 after the spacecraft landed successfully. The center of the image is about
1.4 meters from the Viking Lander. We see both rocks and finely granulated material,
sand or dust. Many of the small foreground rocks are flat and have angular facets.
Several larger rocks exhibit irregular surfaces with pits and the large rock at top
left shows intersecting linear cracks. Extending from that rock toward the camera
is a vertical linear band which may be due to a one-minute partial obscuration of the
landscape due to clouds or dust intervening between the sun and the surface. Asso-
ciated with several of the rocks are apparent signs of wind transport of granular
material. The large rock in the center is about 10 centimeters across and shows
three rough facets. To its lower right is a rock near a smooth portion of the Martian
surface probably composed of very fine-grained material. It is possible that the rock
was moved during Viking 1 descent maneuvers, revealing the finer-grained beneath
substratum; or that the fine-grained material has accumulated adjacent to the rock.
There are a number of other furrows and depressions and places with fine-grained
material elsewhere in the picture. At right is a portion of footpad #2. Small
quantities of fine grained sand and dust are seen at the center of the footpad near
the strut and were deposited at landing. The shadow to the left of the footpad clearly
exhibits detail, due to scattering of light either from the Martian atmosphere or
from the spacecraft, observable because the Martian sky scatters light into shadowed
areas.

August 5, 1976



CP / 33908/21 PROJECT APOLLO
 SATURN SEPARATION IN FLIGHT -- The second stage of the huge Saturn V rocket starts to pull away from the first stage connection ring some three minutes after lift-off April 4 from Cape Kennedy, Florida. Altitude is about 85km and vehicle speed about 9,000kph. Camera was later ejected from the second stage and was recovered in the Atlantic. The unrunned Apollo 5 capsule was re-shutdown of two of the five engines of the second stage caused an early termination of this second flight of the Saturn V. The rocket made a highly successful first flight in November, 1968. It is under development to send Apollo astronauts to the Moon. (68-1580) April 24, 1968

USIS Photo
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CP # 31974 GEMINI ASTRONAUTS -
The second group of U.S. astronauts poses around a model of the Gemini spacecraft. They will join with astronauts from the original Mercury group for future flights in the two-man capsule. Counter-clockwise from upper left are: Neil Armstrong, Edward White, Elliot Sess, James Lovell, James McDevitt, Charles Conrad, Thomas Stafford, John Young and Frank Borman. (64-981) March 26, 1964



CP 30594/15. Astronaut Carpenter studiert das Armaturenboard seiner Weltraumkapsel, um sich die Bedeutung jedes Hebels, jedes Knopfes und jedes Kontrolllichts aneignen zu können. (P.Nr.29137)

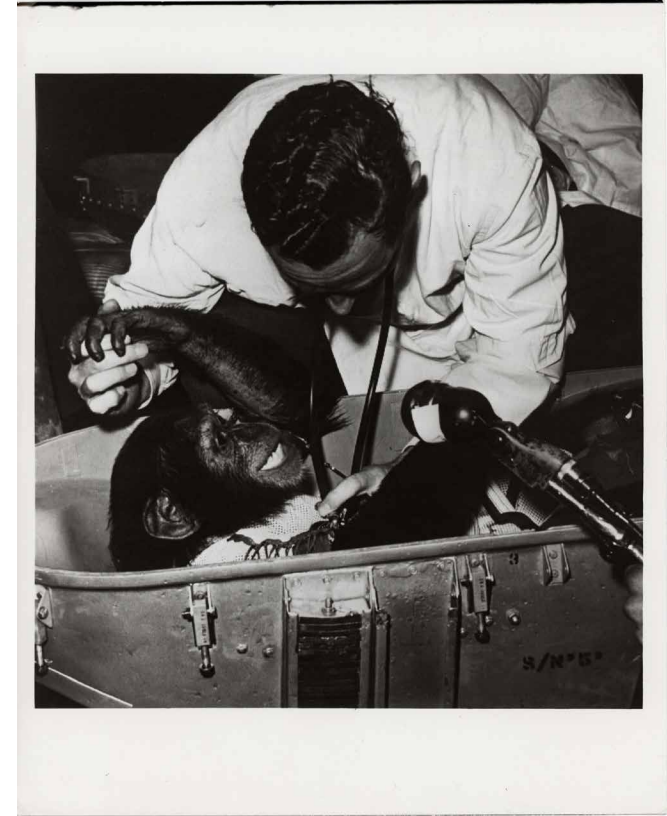
CP # 30594/15

USIS Photo
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verlangt werden.

4031



CP # 32838/17 GEMINI-5
Astronauts Gordon L. Cooper (left) and Charles Conrad being in-
serted into the space capsule by NASA technicians. (no #)
Aug. 24, 1965



CHIMPANZEE HEALTHY AFTER SPACE RIDE IN MERCURY ASTRONAUTS' CAPSULE
EXAMINATION -- Dr. Richard A. Benson, a Project Mercury veterinarian,
conducts a preliminary examination before Han the chimpanzee is removed
from his space couch after his historic 420-mile (676-kilometer) flight
down the Atlantic missile range from Cape Canaveral, Florida January 31.
The Mercury capsule in which he rode was recovered by the USS Ronner less
than three hours after launching. (61-83)

CP#29997/30/5

FEATURES



Photo from IPS (71-2094)

*Apollo 15-Commander David Scott startbereit
im Mondauto*

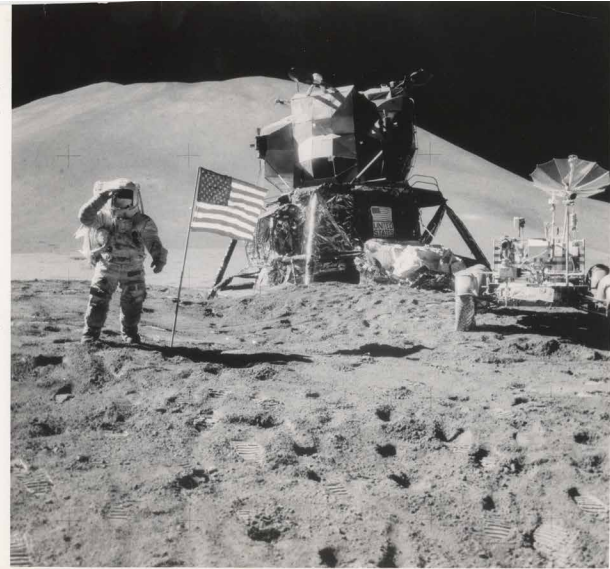
16.

35829/111

per Lt. 7. 28.

LUNAR DRIVER -- Ready for a spin on the Moon is Apollo-15 commander David Scott. He and partner James Irwin traveled some 24 kilometers with the battery-powered rover during their three-day stay on the lunar surface. They also used the vehicle to transport rocks and soil samples back to the lander Falcon. The television camera above the front wheel provided live coverage for viewers on Earth during the frequent stops. Mounted at center is a 16mm movie camera, and attached to Scott's spacesuit is a 70mm still camera.

(71-2094)



35829/96 APOLLO 15.
IRWIN SALUTES. - Astronaut James Irwin salutes beside the U.S. flag implanted in the moon's East layer. The Lunar Module is in the center and the Lunar Rover at right. In the background, looking almost due south is Hadley Delta. St. George Crater is behind the rover about 3kms away. (71-2066). Aug. 19, 1971.

USIS Photo
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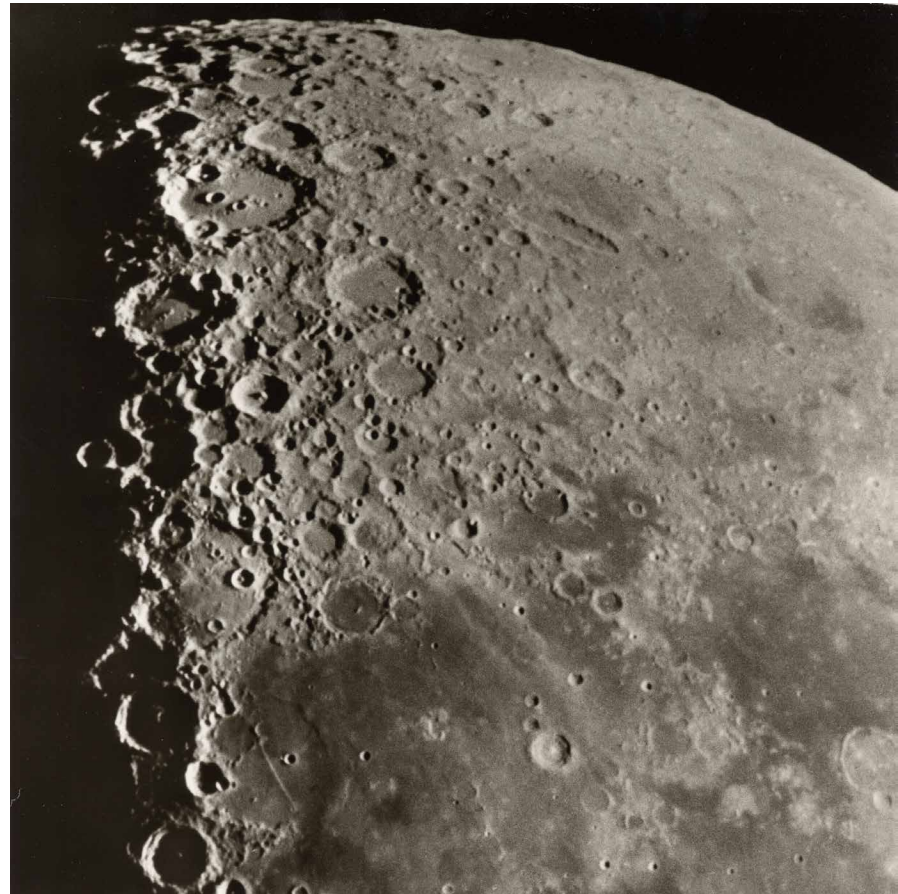


40 a/b Apollo 18
 Celebration of the Apollo Soyuz Test Project (ASTP) which was the first US-Soviet space cooperation. Commander Alexei Leonov (first spacewalk) and flight engineer Waleri Kubassow. 1975

vintage chromogenic print, 25 x 36 cm

vintage gelatin silver print, 27 x 39,5 cm

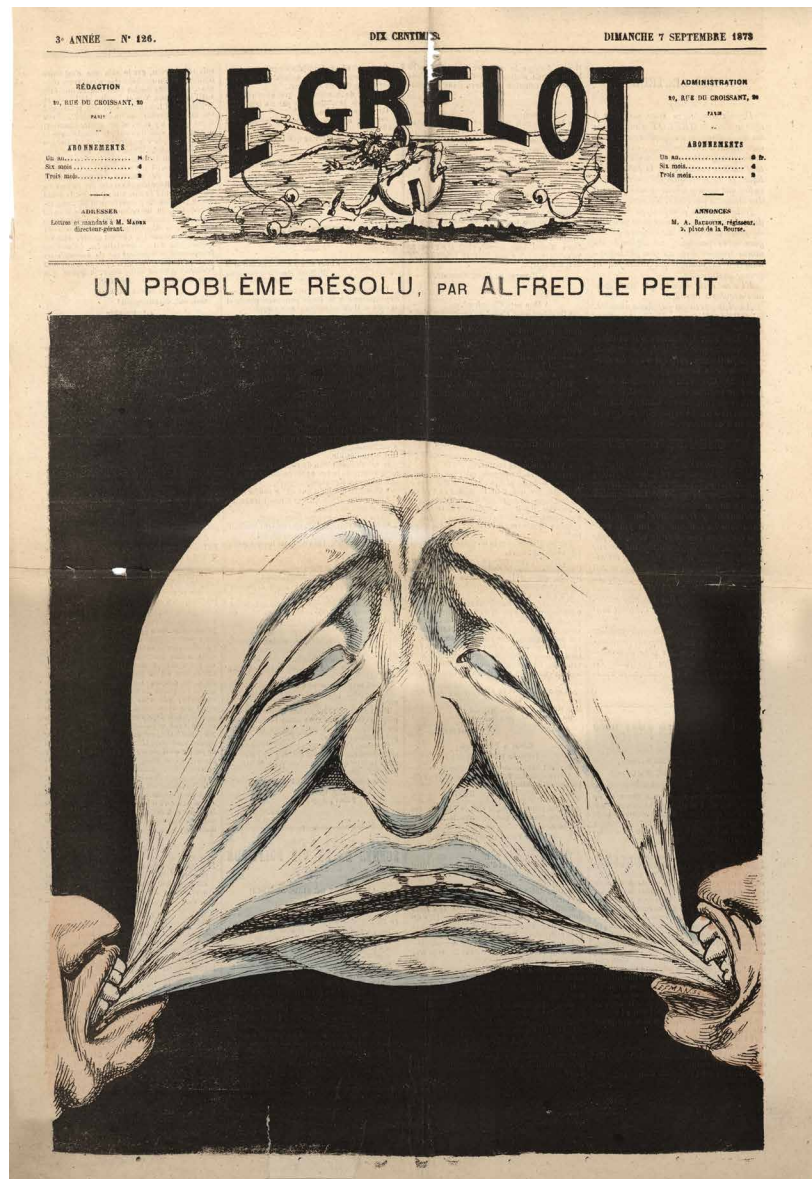




Lage des Terminators: Bei $+ 56^\circ$ Länge
 Beleuchteter Teil: 0,94
 Mond-Alter: $18^d, 0$
 Scheinbare Mond-Mitte gemäß Libration:
 Länge = $- 4^\circ, 6$ Breite = $+ 2^\circ, 0$
 Datum der Aufnahme: 13. 10. 1965

Lage des Terminators: Bei 0° Länge
 Beleuchteter Teil: 0,55
 Mond-Alter: $22^d, 3$
 Scheinbare Mond-Mitte gemäß Libration:
 Länge = $- 5^\circ, 2$ Breite = $- 1^\circ, 2$
 Datum der Aufnahme: 18. 9. 1965

41 a/b Anonymous
 gelatin silver prints
 1965, 21 x 21 cm



IMPRINT

exhibition catalog:

The Moon in the Age of Photography 1859-1969

15.11.2019 - 18.1.2020

Hrsg. Mila Palm

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