Skylab-mission Images of Earth

By Don Hillger and Garry Toth

This article features images of the Earth taken during the Skylab mission. They feature the Skylab space station and a view of the Earth below the spacecraft as taken by astronauts from the various manned parts of the Skylab mission. (This article is not about the remote-sensing instrumentation on Skylab that was dedicated to imaging the Earth.) A summary of the images to be featured will be given first, and each NASA photo will be presented along with the best reproduction of that photo as found by the authors on postage stamps or covers.

The various parts of the Skylab mission

The following table summarizes the numbered parts of the Skylab mission, which lasted from the launch of the un-manned Skylab in 1973 to the re-entry of Skylab in 1979. Skylab-1 was the un-manned time between the launch of Skylab and the arrival of the first astronaut crew for Skylab-2. Three sets of 3 astronauts occupied Skylab, for Skylab-2 through Skylab-4 missions. (Some covers mistakenly mis-number the Skylab missions, with Skylab-1 being when the first astronaut crew was on board, but that is officially the Skylab-2 period according to NASA.) There was to be a Skylab-5 mission as well, but that extension was canceled, and Skylab eventually fell to Earth in 1979.

Skylab Mission	Dates	Events and Astronauts
The numbered Skylab missions		
Skylab-1 (SL-1)	14 May 1973	launch of the un-manned Skylab
Skylab-2 (SL-2)	25 May – 22 Jun 1973	Conrad, Kerwin, and Weitz
Skylab-3 (SL-3)	28 Jul – 25 Sep 1973	Bean, Garriot, and Lousma
Skylab-4 (SL-4)	16 Nov 1973 – 8 Feb 1974	Carr, Gibson, and Pogue
Skylab-5 (SL-5)	12 Jul 1979	re-entry of the un-manned Skylab

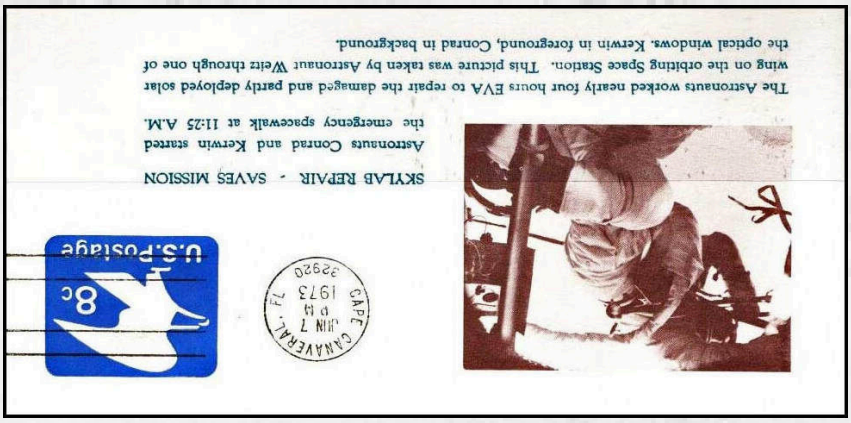
Skylab Earth imagery summary table

The following table summarizes the Skylab-mission Earth images that will be covered in this article. The authors have found 8 different Skylab-mission Earth images taken by the astronauts on the manned portions of Skylab: Skylab-2 through Skylab-4, which were also found on postal items. Only one example of a postal item for each Earth image will be presented. Readers should refer to the authors' website for examples of these Skylab images on other postal items.

Skylab mission	Date (dd-mm-yyyy)	NASA photo number	Approximate number of postal items (stamps + covers)
Skylab-2	07-06-1973	SL2-100-799	0 + 1 = 1
Skylab-2	22-06-1973	SL2-07-651	6 + 8 = 14
Skylab-3	28-07-1973	SL3-114-1682	1 + 1 = 2
Skylab-3	28-07-1973	SL3-114-1683	2 + 0 = 2
Skylab-3	03-09-1973?	SL3-121-2387	1 + 0 = 1
Skylab-4	08-02-1974	SL4-143-4704	0 + 1 = 1
Skylab-4	08-02-1974	SL4-143-4706	12 + 2 = 14
Skylab-4	08-02-1974	MSFC-7449835	1 + 0 = 1

NASA photo and postal item comparisons

The first comparison is from the Skylab-2 period when the first set of three astronauts occupied Skylab. NASA photo SL2-100-799 dated 7 June 1973 shows Astronauts Kerwin and Conrad as photographed by Astronaut Weitz during an EVA to free a jammed solar panel in the Skylab-2 mission (with Earth's surface in the background). This photo was reproduced on only one postal item found by the authors, the Astro Covers cachet of a Skylab-2 event cover cancelled on the same date as the EVA. The cover has a brown monochrome and inverted reproduction of the NASA photo, so the cover is presented rotated 180 deg for a better match.



(left) NASA photo SL2-100-799 from 7 June 1973.

(right) USA Skylab-2 event cover cancelled 7 June 1973 (rotated 180 deg).

The next comparison is also from the Skylab-2 period, NASA photo SL2-07-651 dated 22 June 1973, showing Skylab with Earth below (photographed from the Skylab-2 Command and Service Module (CSM) during the final fly-around inspection by the CSM before returning home). This photo was reproduced on 14 postal items found by the authors. One of the best reproductions is a stamp issued by the Isle of Man (Great Britain) in 2020. In this case, the colour reproduction of the NASA photo is excellent. Some of the other reproductions are also in colour, but older items often reproduce the photos in monochrome colours.

(Far left) NASA photo SL2-07-651 from 22 June 1973 (cropped from original).

*(left) Isle of Man (Great Britain) **Scott 2078** **Michel 2556 (2020)***

The next three comparisons are for the Skylab-3 period when the second set of three astronauts occupied Skylab. NASA photo SL3-114-1682 from 28 July 1973 shows Skylab above the jungle of northern Brazil (photographed from the Skylab-3 Command and Service Module (CSM) during station-keeping prior to docking). This photo was reproduced on 2 postal items found by the authors, one being a Zaso silk/IASP no. 20 cachet on a cover for the end of the Skylab mission, dated 11 July 1979, six years after the reference photo, when Skylab burned up in its fall to Earth. That cover had to be flipped horizontally to match the orientation of the NASA photo.

(Far left) NASA photo SL3-114-1682 from 28 July 1973.

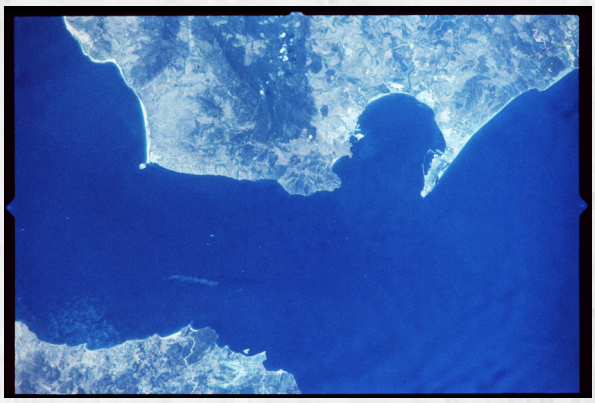
(left) USA Skylab re-entry cover cancelled 11 July 1979 (flipped horizontally).

Another comparison from the Skylab-3 period shows Skylab above the Amazon River at Ilha Grande de Garupá (photographed from the Skylab-3 Command and Service Module (CSM) during station-keeping prior to docking). This is NASA photo SL3-114-1683 from 28 July 1973, a photo taken immediately after the NASA photo in the previous comparison. Skylab looks identical, but the Earth's background has changed as the Skylab orbits southbound from northern Brazil to cross the Amazon River, which is a prominent feature on the Earth below Skylab. Two postal items have been found by the authors, one being a stamp issued by the Bahamas in 2008. The true colour reproduction on the stamp is excellent.

(Far left) NASA photo SL3-114-1683 from 28 July 1973.

*(left) Bahamas **Scott 1257 Michel 1333** (2008)*

The third comparison from the Skylab-3 period is an Earth view centered on Gibraltar as photographed from Skylab-3 (almost completely cloud-free). This is NASA photo SL3-121-2387 from 3 September 1973. The only postal item found by the authors is a stamp issued by Gibraltar in 1978. The NASA photo presented here has been cropped to match the reproduced image on the stamp. The stamp design incorporated purple for the sea surfaces that are blue in the NASA photo, and brown for the land surfaces that have blue and white tones in the photo.



(left) NASA photo SL3-121-2387 from 3 September 1973 (cropped).

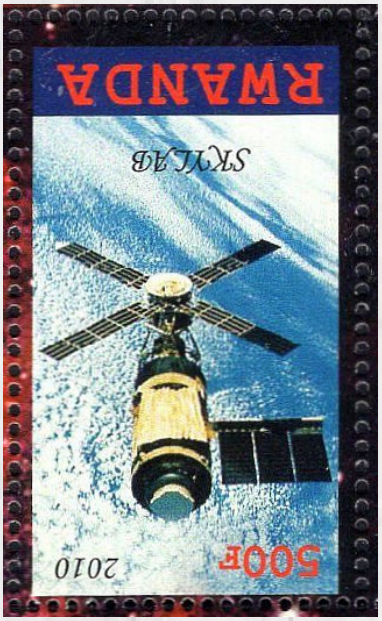
*(right) Gibraltar **Scott 364 Michel 372 from BL5** (1978).*

The last three comparisons are for the Skylab-4 period when the third set of three astronauts occupied Skylab. The first is NASA photo SL4-143-4704 from 8 February 1974, showing Skylab with Earth below (photographed from the Skylab-4 Command and Service Module (CSM) during the final fly-around inspection by the CSM before returning home). This photo was reproduced on only one postal item found by the authors, a Skylab-1 anniversary-of-launch cover from 2018, marking the 45th anniversary of the launch of Skylab. The cover has a Coverscape cachet showing Skylab above the Earth, but the cover is flipped horizontally to match the orientation of the NASA photo.

(left) NASA photo SL4-143-4704 from 8 February 1974.

(right) USA Skylab-1 anniversary-of-launch cover was cancelled on 14 May 2018 (flipped horizontally).

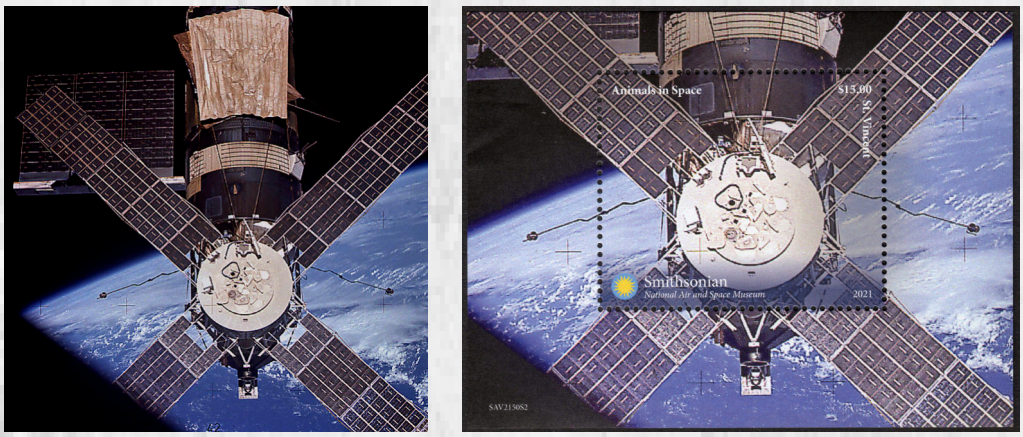
The next comparison for the Skylab-4 period is for a NASA photo that is 2 photo numbers after the NASA photo in the previous comparison. Although Skylab looks the same, the background clouds have changed. This is NASA photo SL4-143-4706, from 8 February 1974, again showing Skylab with Earth below (photographed from the Skylab-4 Command and Service Module (CSM) during the final fly-around inspection by the CSM before returning home). For this photo, the authors have found reproductions on 14 postal items. One of the postal item reproductions is a 2008 stamp from Rwanda, a known illegal issue, not listed by any major stamp catalog. The stamp is rotated 180 deg to match the NASA photo.



(left) NASA photo SL4-143-4706 from 8 February 1974 (cropped).

(right) Rwanda known illegal issue from 2008 (rotated 180 deg).

The third comparison for the Skylab-4 period is a closeup of Skylab with Earth below (photographed from the Skylab-4 Command and Service Module (CSM) during the final fly-around inspection by the CSM before returning home). This is NASA photo MSFC-744983 from 8 February 1974. A single postal item was found by the authors with a reproduction of this photo, a souvenir sheet of one stamp issued by St. Vincent in 2021. The comparison is excellent.



(left) NASA photo MSFC-744983 from 8 February 1974.
(right) St. Vincent ***Scott 4234 (2021).***

In this article, a total of 8 comparisons have been made between NASA photos and reproductions of those photos on postal items. Readers are encouraged to look at the authors' website for additional postal items for cases in which the photo was reproduced on more than one postal item.

Online and author contact information

A checklist of postal items showing Skylab-mission images is available at **http://rammb.cira.colostate.edu/dev/hillger/Skylab-images.htm**, with a separate section for each Skylab image. The authors would like to hear from anyone who knows of additional reproductions of the Skylab-mission images on postal items, as the authors will update the online details as new information is received. E-mail correspondence with the authors is welcome. Don Hillger can be reached at **don.hillger@colostate.edu** and Garry Toth at **gmt.varia@gmail.com**.

Biosatellite III and Bonny

Biosatellite 3, also known as Biosat 3 and Biosatellite D, was the third and final mission in the Biosatellite programme. It was launched aboard a Delta N rocket from Cape Canaveral Air Force Station on 29 June 1969.

The purpose of the flight was to place a 6 kg (13 lb) male southern pig-tailed macaque, 'Macaca nemestrina', named "Bonny", in low Earth orbit for 30 days. It was an orbital test to determine the effects of confinement and weightlessness on future humans manning space laboratories. Biosatellite III was in an orbit of 221x240 km (137x150 miles). However, after only 8.8 days in orbit, the mission was aborted on 7 July 1969 due to the subject's deteriorating health. In order to maximise the scientific return from the mission, the scientific objectives had become overly ambitious over time, and a large number of measurements were made on the single subject that was flown. Although the mission was technically very successful, the scientific results appear to have been compromised. Bonny, dubbed an "astromonk" by the American press (in contrast to the chimpanzees of earlier American missions, who were nicknamed "chimponauts"), died on 8 July, the day after the successful recovery of the biological capsule from the Pacific Ocean.

This Navy space cover commemorated the recovery of Biosatellite III and Bonny.

(Left) The Navy space cover for the Biosatellite III and recovery of Bonny.
(Right) Cover commemorating the Biosatellite 3.

BY Nick Steggall