SAMOS Spacecraft Bogus Numbering

By Don Hillger and Garry Toth

Introduction

This article is primarily about SAMOS satellites and the numbering of the SAMOS launches. SAMOS was the acronym for **Satellite and Missile Observation System**. The first SAMOS missions were launched in the early 1960s and were numbered 1 through 11. The series then ended. However, the SAMOS name continued to be used in the 1970s, particularly on Space Voyage (or InterSpace Cover) cachets produced by Robert Rank. The authors have found SAMOS covers with most of the numbers from 81 through 112. As outlined below, we would be very interested in examining any other SAMOS-related covers that we are missing.

The bogus numbering of these 1970s SAMOS missions is likely related to the secrecy that surrounded military launches of the time. SAMOS was a convenient name to be added to cachets when the details of the launch were largely unknown. This resulted in the bogus numbering that is the focus of this article.

The numbering details discussed in this article are based on the authors' collection of SAMOS covers. These are available online (at the link at the end of this article) and are summarised in the table below. Many covers with "SAMOS" in their text also have SAMOS numbers that are a mystery since they start with SAMOS-81 and end with SAMOS-112. There also exist a few covers from the 1970s with "SAMOS" in text, but no SAMOS number.

The flow of this article will follow the table to help readers understand the authors' explanation of Robert Rank's numbering. The bogus SAMOS numbers are not found on covers/cachets produced by any other manufacturer. Rank must have had a numbering scheme in mind since he used what are bogus SAMOS numbers on at least 27 covers (only a few of which will be shown in this article).

Summary of SAMOS Cover Numbering

Table: SAMOS bogus numbering (and a few other SAMOS references) found on Robert Rank "Space Voyage"/"InterSpace Cover" launch covers

Table notes: The black font SAMOS covers have been found, while the ones in red font have not been found. A SAMOS number in bold font is known to exist on a cover, but there are gaps in the numbering that beg to be filled! The right-shifted red entries are matched with proposed launches to fill in those gaps.

SAMOS number references (in cachet or insert text)	Launch date (dd-mm-yyyy)	Spacecraft (or possible spacecraft) launched
SAMOS-1/11 (11 legitimate SAMOS numbers, none on Space Voyage/InterSpace covers)	11-10-1960 / 11-11-1962	SAMOS-1/11 (11 spacecraft)

SAMOS number references (in cachet or insert text)	Launch date (dd-mm-yyyy)	Spacecraft (or possible spacecraft) launched
"SAMOS project" (no SAMOS number)	07-12-1960	Discoverer-18
SAMOS-12 / 49 (38 numbers)	12-07-1963 / 04-06-1967	KH7-1 / KH7-38 (38 spacecraft)
SAMOS-50 / 78 (29 numbers)	29-07-1966 / 23-10-1970	KH8-1 / KH8-29 (29 spacecraft)
SAMOS-79	06-11-1970	DSP-1
SAMOS-80	18-11-1970	KH4B-12
SAMOS-81 (also mention of **SAMOS-80**)	21-01-1971	KH8-30
SAMOS-82 (also mention of **SAMOS-81**)	22-04-1971	KH8-31
SAMOS-83	05-05-1971	DSP-2
"Advanced SAMOS" (no SAMOS number)	15-06-1971	KH9-1
SAMOS-84	16-07-1971	Strawman-4
SAMOS-85	12-08-1971	KH8-32
SAMOS-86	23-10-1971	KH8-33
"Advanced SAMOS" (no SAMOS number)	20-01-1972	KH9-2
SAMOS-87 (also mention of **SAMOS-80** and **SAMOS-85**)	17-03-1972	KH8-34
"SAMOS ... fails" (no SAMOS number)	20-05-1972	KH8-35
"May 20 ... SAMOS ... failed" (no SAMOS number)	25-05-1972	KH4B-17
SAMOS-88	07-07-1972	KH9-3
SAMOS-89	01-09-1972	KH8-36
SAMOS-90	10-10-1972	KH9-4
SAMOS-91	21-12-1972	KH8-37
SAMOS-92	09-03-1973	KH9-5
SAMOS-93	16-05-1973	KH8-38
"SAMOS ... fails" (no SAMOS number)	26-06-1973	KH8-39
SAMOS-94	13-07-1973	KH9-6
SAMOS-95	27-09-1973	KH8-40
SAMOS-96	10-11-1973	KH9-7
SAMOS-97	13-02-1974	KH8-41
SAMOS-98	10-04-1974	KH9-8
SAMOS-99	06-06-1974	KH8-42
SAMOS-100	14-08-1974	KH8-43
SAMOS-101	29-10-1974	KH9-9
SAMOS-102	18-04-1975	KH8-44
SAMOS-103	08-06-1975	KH9-10
SAMOS-104	09-10-1975	KH8-45
SAMOS-105	04-12-1975	KH9-11
"SAMOS" and "exact mission not known" (no SAMOS number)	18-02-1976	DMSP-5C-F3
SAMOS-106	22-03-1976	KH8-46
SAMOS-107	08-07-1976	KH9-12
SAMOS-108	15-09-1976	KH8-47
SAMOS-109	19-12-1976	KH11-1
SAMOS-110	13-03-1977	KH8-48
SAMOS-111	27-06-1977	KH9-13
SAMOS-112	23-09-1977	KH8-49
"SAMOS" (no SAMOS number)	16-03-1978	KH9-14

The Purpose of SAMOS

The SAMOS series from the early 1960s was shrouded in secrecy, so most reference images showed only the launch rocket with no spacecraft details. For example, the cachet on a SAMOS-1 cover from 11 October 1960 shows only a rocket. (An image of the Atlas-LV3 Agena-A launch rocket for SAMOS-1 is also provided.) The manufacturer of the green printed and black rubber-stamp cachet is unknown. The cachets on most of these legitimate SAMOS covers were similarly devoid of launch details. Covers have been found by the authors for SAMOS-1 through SAMOS-11, except for SAMOS-3. (Three of these eleven launches were failures.) These are the only valid/legitimate SAMOS numbers: it is the later SAMOS covers produced by Robert Rank that contain the large and bogus SAMOS numbers.

(left): SAMOS-1 [failed] launch cover, 11 October 1960;
(right): Atlas-LV3-Agena-A launch rocket for SAMOS-1.

The SAMOS satellites were heavier versions of the Discoverer/Corona series reconnaissance spacecraft. The SAMOS series, with launches from 1960 to 1962, filled in between Discoverer and the initial Keyhole KH7/Gambit series, the first of which was launched in 1963. SAMOS reconnaissance was performed with film cameras and television surveillance from low altitude polar orbits, with either film canister returns or signal transmissions. (Postal covers for other legitimate SAMOS launches are available on the authors' website, as noted at the end of this article.) Rather, the focus of this article is the SAMOS numbering mystery for a group of covers issued by Robert Rank in the 1970s, about 10 years after the initial SAMOS series.

Bogus SAMOS Numbering

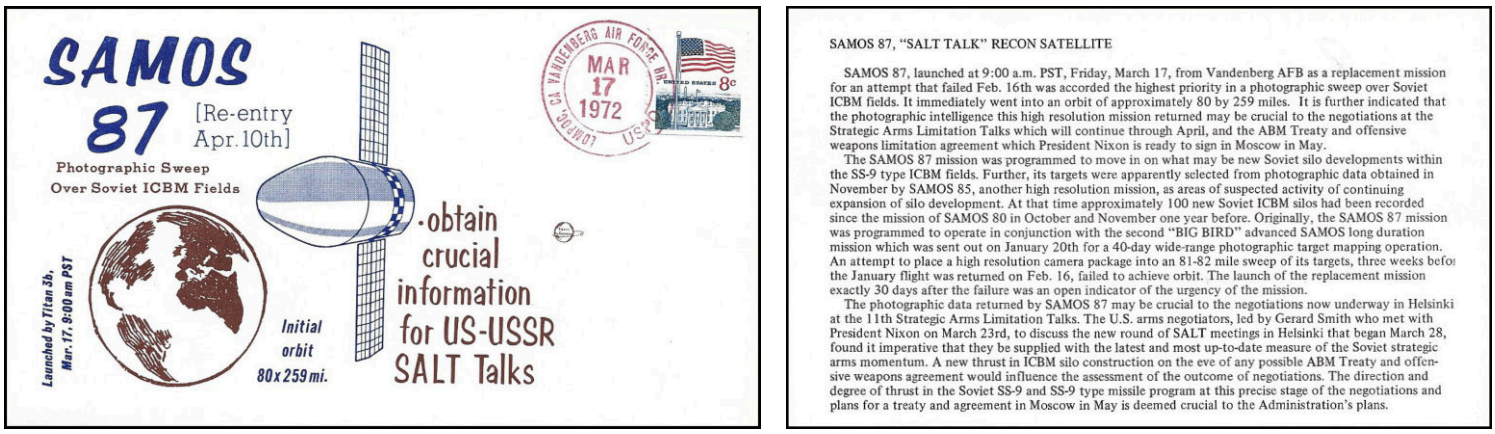
We start to examine the mystery with the Space Voyage cover for the launch of Keyhole KH8-30 on 21 January 1971. "SAMOS-81", as is incorrectly found in the cachet, is the lowest number of the known bogus-numbered SAMOS covers. Rank used this SAMOS number for KH8-30 (which was classified at the time, so the real spacecraft was not mentioned on the cachet). It is perhaps significant that the cachet mentions that this SAMOS launch "continues SAMOS-80". However, the authors have not found a prior Space Voyage cover designated as SAMOS-80.

KH8-30 launch cover (with a Space Voyage cachet with bogus text for "SAMOS-81", and a mention of "SAMOS-80").

Interestingly, a second mention of "SAMOS-80" is found on the insert for a Space Voyage cover designated as "SAMOS-87". That cover was actually for the launch of KH8-34 on 17 March 1972. That second mention of SAMOS-80 reinforces the idea that there exists a launch cover with this bogus number that has yet to be discovered. Also, the mention of "SAMOS-85" on the insert is interesting, because a launch cover has not been found with this designation.

Robert Rank produced many Space Voyage / InterSpace covers with bogus SAMOS numbers. The authors have found a Space Voyage cover (not shown here) with text for "SAMOS-82", which by the way has a mention of "SAMOS-81", the lowest-numbered SAMOS cover the authors have found. Then, there is a gap of four in the bogus SAMOS numbering, with the numbering starting again with a cover designated as "SAMOS-87" (which was already shown). This SAMOS-87 cover then starts a sequential bogus SAMOS numbering that continues through SAMOS-112, less a single number (SAMOS-95, for which the authors have not found a cover). The Space Voyage SAMOS-112 cover is the highest bogus-numbered SAMOS found by the authors. This cover is for the launch of KH8-49 on 23 September 1977, but mention of that satellite is absent, since this Keyhole series was classified at the time. (The details of the KH7, KH8, and KH9 series were not declassified until 2012.)

The table that accompanies this article includes proposals for declassified military-related launches to fill in the gaps for bogus SAMOS-83 through SAMOS-86 as well as SAMOS-95. These are probably Keyhole or other military launches that took place on what are appropriate dates for those number



(left): KH8-34 launch cover (with a Space Voyage cachet with bogus text for "SAMOS-87"); (right): Insert from KH8-34 cover (with additional bogus text for both "SAMOS-80" and "SAMOS-85").

gaps. The interested reader can refer to the table and/or the authors' website for additional details not discussed in this article.

The Large Gap in SAMOS Numbering

Another part of the puzzle is why the bogus SAMOS numbering started with a cover designated for SAMOS-81. There is a large gap (69 missing numbers) between the SAMOS-11 and SAMOS-81 covers. After examining and counting covers for military satellite launches between the dates of those two covers, the authors propose that the Keyhole 7 series (KH7-1 through KH7-38, 38 in total) are a large fraction of the gap, and the Keyhole 8 series (KH8-1 through KH8-29, 29 of them) fill in most of the remainder. Those two series add up to a total of 67 of the 69 missing SAMOS numbers. The "SAMOS-81" cover cancel date indicates that it was for KH8-30 (the first bogus-numbered SAMOS cover that was discovered).

KH8-49 launch cover (with a Space Voyage cachet with bogus text for "SAMOS-112).

This leaves two SAMOS numbers, 79 and 80, to be filled in (as discussed above, we know that SAMOS-80 exists from its mention on the SAMOS-81 cover and the SAMOS-87 insert). The table suggests two military satellites (DSP-1 and KH4B-12) that could correspond to those bogus SAMOS numbers, since their launch dates fall between those of the KH8-29 and KH8-30 launches. This is speculation by the authors, a proposal that brings us to the SAMOS-81 (KH8-30) cover.

That large initial SAMOS numbering gap may never be fully resolved since it covers many years and many different satellites, and there is no indication that any bogus SAMOS numbers exist before SAMOS-80. However, readers may be able to help solve the mystery of the later gaps, as outlined above. We would be delighted to receive images of Robert Rank's Space Voyage / InterSpace covers for SAMOS-80, SAMOS-83 through -86, and SAMOS-95.

Summary

This article proposes an explanation for the SAMOS bogus numbering found on Robert Rank's 1970s Space Voyage / InterSpace covers by filling in the missing number gaps (including the large initial numbering gap) with military satellites with launch dates that fall in between the dates of the known SAMOS covers. The authors would appreciate hearing from anyone who has additional information related to this SAMOS numbering mystery.

Online and Author Contact Information

A checklist of postal items showing SAMOS-related postal covers is available at http://rammb.cira.colostate.edu/dev/hillger/SAMOS.htm. The bogus SAMOS numbers are in the "SAMOS (on other than SAMOS launch covers)" section. 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.