

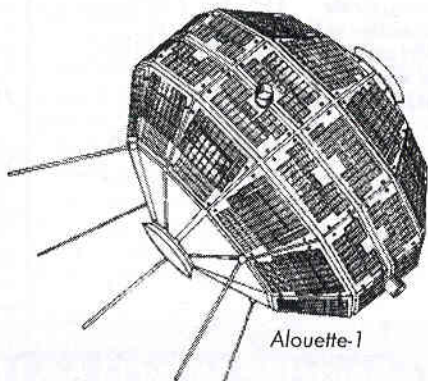
23. The Alouette & ISIS Series

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and Garry Toth

This is the twenty-third in a series of articles about un-manned satellites on postage stamps. This article features two Canadian satellite series: Alouette and International Satellite for Ionospheric Studies (ISIS). Two Alouettes were launched, in 1962 and 1965. ISIS-X, ISIS-1 and ISIS-2 were launched in 1965, 1969, and 1971 respectively. A fourth in the series, ISIS-C, was canceled and never built.


Alouette-1 and 2 were small ionospheric observatories with various detectors and experiments, to study the effects of the ionosphere on communications. The bodies of these two spacecraft were similar, polyhedron in shape, about 1 m in diameter, but a bit flattened at the poles. They spacecraft were spin-stabilized at a slow rotation rate. Among the several antennas were two dipole antennas, one pair of them up to 73 m long. The satellites had highly-inclined (80°) near-polar orbits: nearly circular at approximately 1000 km for Alouette-1, and elliptical (500 km perigee / 3000 km apogee) for Alouette-2.

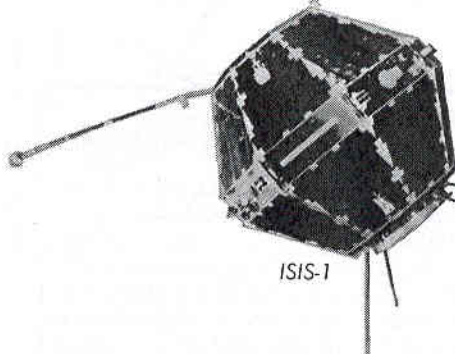
Alouette has been featured on postal items from many countries besides Canada, but ISIS appears on only one stamp issued by Canada in 2000 (Scott 1831c).



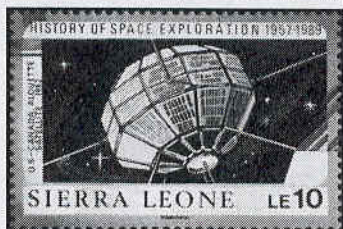
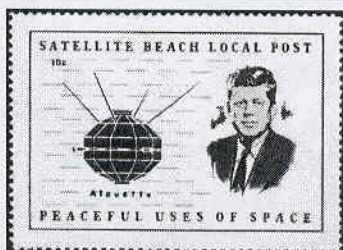
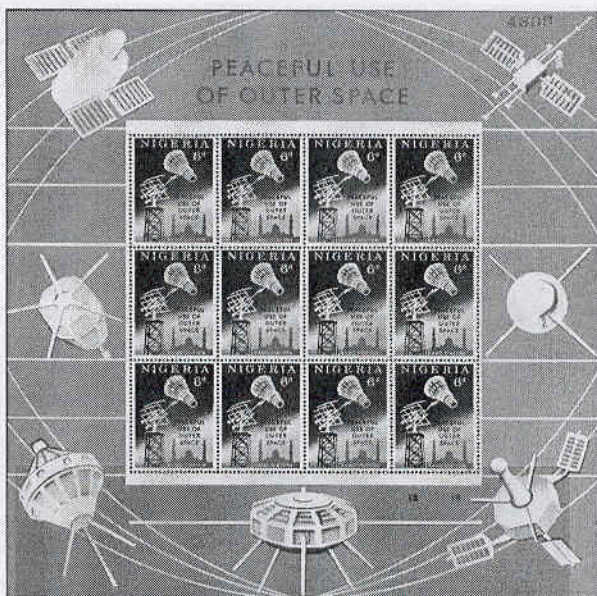
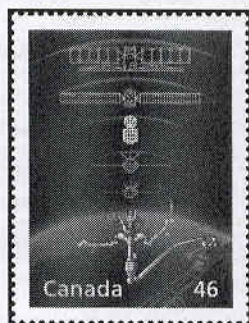
Alouette-1

ISIS-1 and 2 were also ionospheric observatories with numerous instruments, continuing the research successfully begun by the two Alouettes regarding the influence of solar activity on the ionosphere which directly affects communications. The spacecraft bodies were again similar, polyhedron in shape, but a bit larger and less flattened than the Alouettes. Long dipole antennas similar to those on the Alouettes were used on ISIS as well. The satellites had highly-inclined (88°) near-polar orbits: elliptical (600 km perigee/1500 km apogee) for ISIS-1, and nearly-circular at 1400 km for ISIS-2.

The earliest **ISIS**, ISIS-X, is better known as **Explorer-31**. ISIS-X was launched in 1965 in conjunction with Alouette-2. Several instruments on board made direct measurements of selected ionospheric parameters. The spacecraft was an octagonal prism about 0.7 m in diameter, launched into an elliptical orbit (500 km perigee and 3000 km apogee). The Explorer-series satellites were covered in the sixteenth article in this series. 



ISIS-1



A chart of Alouette & ISIS satellite postal items appears on the following page. ▶

Checklist of Alouette/ISIS Series Satellites Postal Items

Country	Catalog #*	Type of Item**	Year	Notes
Alouette (Canada)				
Canada	445	Stamp	1966	Alouette-2
Canada	445	FDC Cachet on FDC	1966	Alouette-2
Canada	445 sc	Souvenir Card	1966	Alouette-2
Canada	1831c	One of MS4 (1831a-d) Alouette is at bottom in red	2000	Alouette
Nicaragua	1153		1982	Alouette
Nigeria	143a In	margin of MS [12x #143]	1963	Alouette
Nigeria	144a In	margin of MS [12x #144]	1963	Alouette
Philippines	BL2	SS1	1968	Alouette
Philippines	BL2 (o/p)	SS1 overprinted "SNV"	1968?	Alouette
Poland	1471	Stamp	1966	Alouette
Satellite Beach Florida USA	Set-C1 (blue)	Local Issue stamp	1964	Alouette
Satellite Beach Florida USA	Set-C1 (blue) overprinted in gold	Local Issue Stamp	1965	Alouette
Sierra Leone	1069g	One of MS9 [1069a-i]	1989	Alouette-1 (by 1962)
Umm Al Qiwain	Mi83	Stamp	1966	Alouette
Umm Al Qiwain	BL5A/BL5B	SS2 (Mi83-84)	1966	Alouette
Umm Al Qiwain	Mi94	Mi83 overprinted new currency	1967	Alouette
Umm Al Qiwain	BL6A/BL6B	SS2 (Mi94-95), BL5 overprinted new currency	1967	Alouette
Yugoslavia	1045	Stamp	1971	Alouette
ISIS (Canada)				
Canada	1831c	One of MS4 [1831a-d] ISIS is second from bottom in orange	2000	ISIS

* Scott catalog number, unless prefixed with Mi or BL for Michel; "I" prefix denotes imperforate version.
 SS# = souvenir sheet, MS# = miniature sheet # is number of stamps in sheet; numbers in parentheses are catalog numbers of the stamp(s).
 Readers are referred to the authors' website for images of Alouette and ISIS satellites, as well as launch covers and postal items featuring these satellites. A checklist is presented both here and on the Website, to accompany this series of articles, at: www.cira.colostate.edu/ramm/hillger/Alouette.htm E-mail correspondence is welcome. Don Hillger can be reached at hillger@cira.colostate.edu and Garry Toth at garry_toth@hotmail.com.



While you're on the Internet...

Visit SPACE UNIT's Website:

<http://stargate.1usa.com/stamps/>