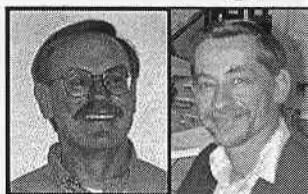


UN-MANNED SATELLITES ON POSTAGE STAMPS 10: THE ERS SERIES

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Don Hillger

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This is the tenth in a series of articles about un-manned satellites on postage stamps. This article features the low-earth, polar-orbiting environmental-observing satellites in the European Remote Sensing Satellite (**ERS**) series, operated by the European Space Agency.

The ESA-ERS series is not to be confused with the U.S. Air Force ERS series of scientific satellites launched in the 1960s. Only two ESA-ERS have been launched, the first one on 16 July 1991 and ERS-2 on 20 April 1995. ERS-2 provided data continuity until ESA's Envisat-1 was launched on 1 March 2002. (Envisat-1 will be discussed in a future article.)

ERS contains both active (radar-like) and passive (receive-only) microwave instrumentation, as well as passive infrared instrumentation similar to that used on other environmental and weather satellites. The longer-wavelength microwave signals are sent and received by large antennas on one end of the satellite. At the other end of the spacecraft is a large two-part solar panel.

The spacecraft instrumentation was designed for monitoring sea-wave heights and wavelengths, sea-surface wind speed and direction, precise sea altitudes, ice parameters, sea-surface and cloud-top temperatures, cloud cover, and atmospheric water vapor content.

ERS-1 and 2 are virtually identical and indistinguishable. However, a large number of postal items showing ERS were issued between 1991 and 1993. Many of these older issues specifically publicize ERS-1 and are designated as such in the table on the next page. While none of the postal items specifically mention ERS-2, the remaining ones without any number designation are noted in the table as ERS-1/2.

A table and images of several postal items showing these satellites are presented both here and on the Website developed by the authors (<http://www.cira.colostate.edu/ramm/hillger/satellites.htm>). E-mail correspondence is welcome. Don Hillger can be reached at hillger@cira.colostate.edu and Garry Toth at garry.toth@ec.gc.ca []

Checklist of Postal Items Showing ERS

Country	Catalog Number*	Type of Item **	Year	Notes on Content
Australia	1260a	In margin of SS3 (1258-1260)	1992	ERS-1/2
Australia	1260b	In margin of SS3 (1258-1260) overprinted	1992	ERS-1/2
	Austria 1535		1991	ERS-1
	Chile 1043		1993	ERS-1/2
	Chile 1043a	SS1 (1043)	1993	ERS-1/2
Congo (People's Republic)	961		1992	ERS-1/2
Congo (People's Republic)	961ss	SS1 (961)	1992	ERS-1/2
Congo (People's Republic)	959+961-2 MS3	Part of MS3 (959+961-962)	1992	ERS-1/2
Dominica	1533		1992	ERS-1/2
	Germany 1642		1991	ERS-1
	Gibraltar 586		1991	ERS-1/2
	Gibraltar 586 MS10	MS10 (10x586), both on stamps and in margin	1991	ERS-1/2
	Gibraltar 586 fdc	Cancel on FDC	1991	ERS-1/2
	Gr. Britain 559 (Jersey)		1991	ERS-1
	Guinea 1189		1992	ERS-1
	Guinea 1189a	SS1 (1189)	1992	ERS-1
Guinea	1189-94 MS6	SS6 (1189-1194)	1992	ERS-1

Austria 1535

Germany 1642

Gibraltar 586



Dominica 1533

Country	Catalog Number*	Type of Item **	Year	Notes on Content
Malagasy Republic	1416g	Part of MS9 (1416a-i) plus 3 labels	1999	Possible ERS-1/2
Mali	847	In margin of SS4 (847a-d)	1996	ERS-1/2
Niger	BL84	SS1	1991	ERS-1/2
Niger	BL84a	SS1 (BL84) over-printed in silver	1996	ERS-1/2
Niger	BL84b	SS1 (BL84) over-printed in gold	1996	ERS-1/2
Norway	989		1991	ERS-1/2
Norway	989 fdc	Cancel on FDC	1991	ERS-1/2
Norway	None	Cancel	1991	ERS-1/2



Portugal (Madeira) 151

Portugal (Madeira)	151	Part of SS4 (152 (2x(151,152a)))	1991	ERS-1
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Portugal (Madeira)	151 fdc	Cancel on FDC	1991	ERS-1
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San Marino 1224

San Marino	1224		1991	ERS-1
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Sweden	1893Bk	On book-let cover	1991	ERS-1/2
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* Scott number, unless indicated with Mi or BL for *Michel*.

** FDC = first day cover; SS# = souvenir sheet, MS# = miniature sheet, where # = number of stamps in sheet, and the numbers in parentheses are the catalog numbers of the stamps in the sheet.



Guinea 1189



Jersey 559



Chile 1043



Norway 989