UFO UpDates Mailing List

Re: Satellite Question

From: **David Rudiak <DRudiak@aol.com>**
Date: Fri, 16 Jul 1999 03:17:36 EDT
Fwd Date: Fri, 16 Jul 1999 08:47:45 -0400
Subject: Re: Satellite Question

From: Scott C. Carr <sardonica@erols.com>
Date: Tue, 13 Jul 1999 12:37:39 -0400
Fwd Date: Wed, 14 Jul 1999 00:44:23 -0400
Subject: Satellite Question

>Why is it that we can see satellites? (Or at least some
>satellites?) Do they reflect the light of the Sun? Or do they
>have lights of their own? If they do have lights, why? What
>purpose do they serve?

Nearly all satellites are passively visible from reflected
sunlight. The only satellites that I'm aware of that carried
their own lights for visibility were the GEOS series of geodetic
mapping satellites launched between 1965 and 1975, which had
flashing beacons.

Source: http://nssdc.gsfc.nasa.gov/multi/explorer.html

NASA web site on GEOS I (Explorer 29) and GEOS II (Explorer 36):

GEOS 1
NSSDC ID: 65-089A

Other Name(s)

•Explorer 29 •GEOS-A •01726

Launch Date/Time: 1965-11-06 at 18:43:00 UTC
On-orbit dry mass: 387.00 kg

Description

The GEOS 1 (Geodetic Earth Orbiting Satellite) spacecraft was a
gravity-gradient-stabilized, solar-cell powered unit designed
exclusively for geodetic studies. It was the first successful
active spacecraft of the National Geodetic Satellite Program.
Instrumentation included:

(1) four optical beacons

(2) laser reflectors

(3) a radio range transponder

(4) Doppler beacons, and

(5) a range and range rate transponder.

These were designed to operate simultaneously to fulfill the objectives of locating observation points (geodetic control stations) in a three dimensional earth center-of-mass coordinate system within 10 m of accuracy, of defining the structure of the earth's irregular gravitational field and refining the locations and magnitudes of the large gravity anomalies, and of comparing results of the various systems onboard the spacecraft to determine the most accurate and reliable system.

Acquisition and recording of data were the responsibility of the GSFC Space Tracking and Data Acquisitions Network (STADAN).

Ten major observing networks were used.

GEOS 2
NSSDC ID: 68-002A

Other Name(s)

•Explorer 36 •GEOS-B •03093

Launch Date/Time: 1968-01-11 at 16:19:00 UTC
On-orbit dry mass: 469.00 kg

Description

The GEOS 2 (Geodetic Earth Orbiting Satellite) was a gravity-gradient-stabilized, solar-cell-powered spacecraft that carried electronic and geodetic instrumentation.

The geodetic instrumentation systems included

(1) four optical beacons

(2) two C-band radar transponders

(3) a passive radar reflector

(4) a sequential collation of range radio range transponder

(5) a Goddard range and range rate transponder

(6) laser reflectors, and

(7) Doppler beacons.

Non-geodetic systems included a laser detector and a Minitrack interferometer beacon.

The objectives of the spacecraft were to optimize optical station visibility periods and to provide complementary data for inclination-dependent terms established by the Explorer 29 (GEOS 1) gravimetric studies.

The spacecraft was placed into a retrograde orbit to accomplish these objectives. Operational problems occurred in the main power system, optical beacon flash system, and the spacecraft clock, and adjustments in scheduling resulted in nominal operations.

David Rudiak

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