Sea Launch fails with first ICO

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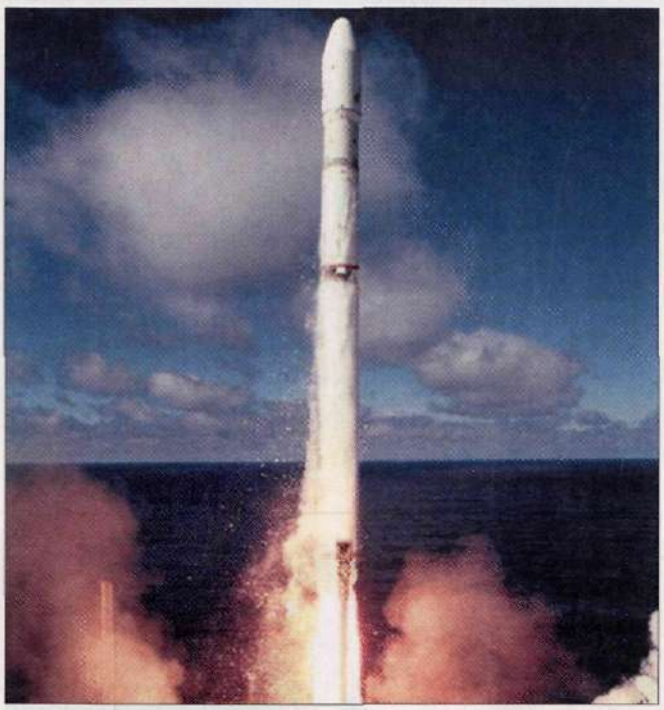
THE THIRD FIRING of the international Sea Launch booster failed on 13 March, with the loss of the first ICO Global Communications satellite. The lift-off, from the Odyssey platform in the mid-Pacific, 2,240km (1,390 miles) south-east of Hawaii, was the second commercial launch by the Boeing-led venture.

The booster was launched in a tight, 1s, window. The flight computer shut down the second stage engine 450s into the flight when it sensed the booster was not functioning correctly, giving rise to unconfirmed reports that a computer error just after lift-off allowed a pressure valve on the second stage to remain open. The booster and its 2,745kg (6,780lb) HS-601 fell into the Pacific, 4,160km downrange.

The failure "will have no significant adverse impact" on ICO's plans, says chief executive Richard Greco. ICO, due to be operational in 2002, had been rescued from threatened bankruptcy by an investment team led by Craig McCaw's Eagle River company, which has agreed to provide up to $1.2 billion. Following the experiences of its competitor Iridium, which is facing bankruptcy, ICO will restructure its services with an emphasis on global data transmissions and Internet connectivity.



Sea Launch record is two successes and one failure

The Hughes Space and Communications ICO craft use phased-array antennas and a state-of-the-art digital beam-forming processor, with the computing power of 600 Pentium IIIs. Ten prime and two back-up craft are being built, based on the HS-601 bus. They are 5m (16ft) higher, to fit the communications antennas. They will operate in 10,390km circular, 45°-inclination orbits.

Sea Launch's first launchers carried a dummy satellite and DirecTV 1R satellite last March and October, respectively. It had planned to launch up to four more commercial missions this year, carrying PanAmSat's PAS 9, two Thuraya communications satellites for the United Arab Emirates and a craft for XM Satellite Radio.

The failed launch was the only Sea Launch ICO flight planned. The rest will fly on five Delta IIIs, four International Launch Services (ILS) Russian Protons and two ILS Atlas 2AS. ❑

Proton success is boost for Russians

RUSSIA SCORED a morale-boosting second consecutive launch on 12 March from the Baikonur Cosmodrome of the four-stage Proton booster, with its DM upper stage, after suffering two failures last year.

The launch carried an Express A communications satellite, which was injected into a parking orbit of 226x195km (140x120 miles). The DM stage restarted, transferring the craft into geostationary orbit.

NASA International Space Station (ISS) chief engineer Frank Buzzard has expressed confidence in the Proton, which is to carry the Russian Zvezda ISS service module into orbit between 8 and 14 July. After a visit to the Voronezh manufacturing plant, Buzzard says problems with the booster's second stage have been solved and manufacturing processes improved. ❑

Slow service take-up hits Globalstar/Iridium

LORAL SPACE and Communications is considering selling all or part of its 45% stake in the Globalstar worldwide mobile-communications satellite system following slower than expected sales of the telephone service.

Meanwhile, Iridium prime investor Motorola has notified customers of its worldwide satellite mobile-telephone and paging services that it will cease operations on 17 March unless a buyer is found.

Loral has invested $48 million in the operational 48-satellite system, but is rethinking its investment in an effort to avoid possible losses after a slow take-up of the service.

Fellow global voice and paging communications-service provider Iridium filed for Chapter 11 bankruptcy protection last August. Iridium recently secured $3 million to keep it afloat until 17 March, but the prospect of a life-saving investment by Craig McCaw's Eagle River group disappeared earlier this month when McCaw decided not to pursue further investment in Iridium to concentrate on data service providers such as ICO Global Communications and Teledesic.

If the Iridium system is scrapped, users will be unable to use their $3,000 telephones with another satellite system. Each of the 78 Iridium satellites in low Earth orbit may be de-orbited over three months to reduce the amount of space debris and the danger of in-orbit collisions. ❑

Magnetosphere deal for UK company

THE UK'S SURREY Satellite Technology (SSTL) has won a $120,000, 100-day, Magnetosphere Multiscale Mission (MMS) study contract to investigate the range of suitable concepts for a five-spacecraft mission to study the Earth's magnetosphere.

Planned for launch in 2005, the five-spacecraft MMS fleet will involve formation flying and two lunar swing-bys from gravity-assisted flightpath alterations over two years. The mission will investigate the interaction of the Earth's magnetic field with the solar wind.

The contract follows the selection of SSTL's 350kg (770lb) mini-satellite platform for potential use with the NASA RAPID II programme. Meanwhile, SSTL's 65kg UoSat 2 has passed 16 years in orbit, providing digital store-and-forward communications. ❑