SHUTTLE/SALYUT DOCKING FLIGHT PROPOSED

The Johnson Space Centre has put forward a recommenda-tion that Nasa and the Soviet Academy of Sciences together plan a rendezvous and docking mission employing the Shuttle and Salyut vehicles. This would take the form of a test docking to check the new androgynous system, verified so successfully earlier this year on the Apollo-Soyuz flight. Both vehicles would carry their full complement of personnel, and there is no question that the US craft would be used to ferry up a Soviet crew to the latter's space station. The Russians are not keen to have their crews or equipment flown in US vehicles because of the reciprocal concessions which, they feel, would be demanded of them. An inverted-T-shaped docking module is being developed by Rockwell for Shuttle/Spacelab missions. The cross-arm will connect the pressure bulkhead of the Shuttle with the Spacelab module, while a special fitting for the up-right stem of the "T" could accommodate another suitably equipped manned vehicle. This is a standard item of equip-ment and will be operational on the first flight if necessary. The feasibility of such a mission was discussed at a meeting between Nasa and the USSR Academy of Sciences held in the USA earlier this month.
Nasa announced on October 2 that arrangements were being made to fly the first US payload aboard a Russian satellite later this year. The four experiments— they are completely passive, and do not rely on the satellite's power, telemetry or data systems—will measure the growth of tumours on plants, the effect of weightless-ness on plant growth and the vestibular system of minnows, and the intensity of the radiation impinging on the satellite. Flight understands that the craft will be flown from Plesetsk.

INTERIM TUG R&D TO COST $100 MILLION

Development of the IUS, the Interim Upper Stage being acquired to deploy payloads from the Shuttle into high orbits, will take $100 million, and at least 100 vehicles will be required to support missions in the 1980-1991 period. Announcing this at the Los Angeles headquarters of the Space and Missile Systems Organisation on October 15, USAF officials also said that the vehicle would be managed on a design-to-cost basis, and that a develop-ment contract (either cost-plus-fee or cost-plus-incentive) would be awarded next summer. Requests for proposals would be issued about December 17, with responses due three months later. A second pre-proposal conference is scheduled for December 15 to bring the bidders and other interested parties up to date with the latest thinking.

Attending the session were two newcomers to the IUS competition, Fairchild and RCA. They joined the original five study contractors, Boeing, General Dynamics, Lock-heed Missiles and Space, Martin Marietta and McDonnell Douglas. Thirty organisations sent 155 representatives to the briefing.

GOES-A LAUNCHED

The first operational synchronous environmental observa-tory in space, designed to keep an eye simultaneously on Earth and Sun in order to give instant warning of the birth and progress of storms, was launched by a Delta rocket from Cape Canaveral on October 16. The 6471b satellite, designated GOES-A (Geostationary Operational

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The first operational geostationary metsat is GOES-A, built by Aero-nutronic Ford of Palo Alto, California. As Philco-Ford, the company built the two pre-operational Synchronous Meteorological Satellites which have been returning the first global weather pictures. The three GOES satellites (-8 and -C are to follow in 1977) are to be used for an international weather surveillance programme, the eventual objective
of which is the accurate forecasting of weather up to a fortnight ahead

Environmental Satellite-A), is identical with an earlier craft known as SMS (Synchronous Meteorological Satellite), two of which were built by Philco-Ford to meet a Nasa specification prepared on behalf of NOAA, the US Department of Commerce's National Oeeanographic and Atmospheric Administration. It will be stationed initially at 70°W for checking. The change in nomen-clature simply emphasises the operational, rather than experimental, nature of the new satellite.
SMS-1, SMS-2 and GOES-A were all built under the same $45 million contract. Two further satellites, GOES-B and -C, are being constructed under a $17 million agreement completed in September 1974.
GOES-A will provide day and night pictures of almost a quarter of the globe every 30min. Images produced in visible light by day and in infra-red by night will be relayed to NOAA's World Weather building at Suitland in Maryland to be processed and transmitted to weather stations for use by local forecasters. Weather pictures obtained from other satellites in low orbit and from ground weather stations and weather ships will also be relayed via the satellites to users with low-cost equipment. Radiation detectors on the satellite will at the same time keep an eye on solar flares. This information will be used by the NOAA organisation at Boulder, Colorado, for the prediction of solar storms, which may affect radio communication on Earth.

SMS-1, the first satellite in the SMS/GOES family, was launched in May 1974 and initially stationed over the eastern Atlantic to investigate storms as part of Global Atmosphere Research Programme. It provided the first nearly continuous day and night coverage of Hurricane Carmen in September of that year. The satellite was later