



Absorbing the news at the reception in honour of Maj Yuri Gagarin in the Grand Kremlin Palace in Moscow on April 14: from the left, Mrs Gagarin, Maj Gagarin, Mr Khrushchev and Mrs Khrushchev

Missiles and Spaceflight . . .

APRIL 12 AND AFTER

At the time of going to press, few further details had been officially divulged concerning the first manned orbital flight by Maj Yuri Gagarin on April 12. Official reports in the days following the launch announced that the CPSU Central Committee and the USSR Council of Ministers had promulgated a decree for the award of decorations to scientists, workers, technicians and engineers who had worked on the *Vostok* spaceship; Ministries and Departments concerned had been instructed to make recommendations for awards.

Chief Marshal of the Air Force Vershinin was stated to have awarded the title of Military Flier First Class to Gagarin and to have received from him as a gift the watch worn by Gagarin during his flight. The Tsiolkovsky Commemoration Medal was also reported to have been awarded to Gagarin. Decrees of the Supreme Soviet Praesidium awarded the title Hero of the Soviet Union "with the presentation of the Order of Lenin and the Gold Star Medal" to Gagarin; instituted the new title "Pilot-Cosmonaut of the USSR"; and awarded the new title also to the major.

UK SCOUT 2: CONTENTS DECLARED

Britain and the United States have agreed on the contents of the second joint Anglo-American satellite, which should be launched by Scout rocket in some two years' time. The scientific instruments will be designed and provided by British scientists, and the US National Aeronautics and Space Administration will be responsible for the satellite in which they are carried and for the launch vehicle and its firing. The experiments chosen are:

Galactic Noise. Measurement of radio emissions from the galaxy in the frequency range 0.75-3Mc/s which do not normally penetrate the Earth's atmosphere, and investigation of electron density in the upper regions of the ionosphere, by Dr F. Graham Smith, Mullard Radio Astronomy Observatory, Cavendish Laboratory, University of Cambridge.

Atmospheric Ozone. The measurement of the vertical distribution of atmospheric ozone by (a) a spectrum scanning method and (b) a method in which a broad band of the spectrum is observed, by Dr R. Frith and Dr K. H. Stewart of the Air Ministry Meteorological Office.

Micrometeorite Flux. Detection and measurement of micrometeorites using a technique in which the holes formed in a thin metallic film by the impact of micrometeorites will be detected optically, by Dr R. C. Jennison, Nuffield Radio Astronomy Laboratories, University of Manchester, Jodrell Bank.

SPACE COMPANY GETS ORGANIZED

A revised list of founder members, names of Board members, and initial plans for action have been announced by the British Space Development Company. A technical committee has been set up under the chairmanship of Mr G. K. C. Pardoe of de Havilland to "examine and prepare plans designed to achieve British participation in space with the minimum of delay" and, as a first step, to submit proposals for communications satellites. The company states that its directors intend to examine ways and means by which this country shall assume a significant role in space technology.

The founder members are Associated Electrical Industries Ltd,

Associated Television Ltd, British Insulated Callender's Cables Ltd, Decca Radar Ltd, Hawker Siddeley Aviation Ltd, the Plessey Co Ltd, Pye Ltd, Rank Television and General Trust Ltd, and Rolls-Royce Ltd. Plessey is a newcomer to the BSDC since its formation earlier this year, and de Havilland has been replaced by the parent Hawker Siddeley Aviation.

Board members of BSDC are Sir Robert Renwick (chairman), Mr J. R. Brinkley of Pye, Gp Capt E. Fennessy of Decca, Mr G. C. I. Gardiner of Hawker Siddeley, Mr A. A. Rubbra of Rolls-Royce, and Gp Capt D. Saward of Bush, a Rank company.

Members of the technical committee are Messrs G. K. C. Pardoe (de Havilland, chairman), D. E. Burchett (AEI), A. V. Cleaver (Rolls-Royce), J. M. C. Dukes (Plessey), W. F. Hilton (Hawker Siddeley), W. M. Lloyd (Rank), L. F. Mathews (ATV), K. Milne (Decca), T. P. Blott (Pye), and G. A. Dodd (BICC).

UNMANNED MERCURY ORBIT PLANNED

The US National Aeronautics and Space Administration announced on April 23 that the first attempt to place a Project Mercury spacecraft in orbit would be made "during the next several days." The launch would be made by means of an Atlas booster, and an attempt to recover the capsule would be made at the end of one orbit.

Two special instrumentation items were to be carried aboard the spacecraft: a "crewman simulator" to place the same loads on the environmental control systems as would a man; and two playback tape recorders, each with a pre-recorded 45min voice message, to test the communication system. It was intended that the spacecraft should be recovered in an area about 300 miles east of Bermuda, after a 110min flight. Mercury tracking stations in Bermuda, the Canary Isles, Africa, Australia, Canton Island, Mexico, the USA and on a ship in the Atlantic were to monitor the flight.

An X-15 research aircraft flown by Maj Robert White achieved a speed of 3,140 m.p.h. over California on April 21. The LR99 engine was stated to have been at full throttle.

Neutron-density measurements were made by instruments carried by a Blue Scout rocket launched from Cape Canaveral on April 12.

An attempt on April 11 to recover the capsule of the Discoverer 22 satellite, launched by the USAF from Vandenberg AFB on April 8, was unsuccessful.

Joint technical talks on possible West German participation in the European space launch-vehicle programme proposed by Britain and France at Strasbourg are to begin in Bonn tomorrow (April 28). Sir Stuart Mitchell, Controller of Guided Weapons and Electronics, Ministry of Aviation, will lead the British delegation.

By order of the US Defense Secretary the USAF has been given control of the operation as well as the development of military satellites for reconnaissance and geographic survey. Responsibility for high-performance manned aircraft with similar functions has also been allocated to the Air Force. The US Army will be responsible for processing the photographic and electronic data obtained by satellites and aircraft and for preparing maps for use by any of the three Services.



Recovering from the news at a House Space Committee hearing in Washington on April 13: from the left, Rep Overton Brooks, NASA Administrator James E. Webb and Mr George M. Low, chief of NASA's manned spaceflight programme, examine a model of a Project Apollo capsule. It was stated that NASA expected to place a man in orbit next December or January