SHRI SUNDER SINGH BHANDARI (Uttar Pradesh): This could be done after the Bill.

MR. DEPUTY CHAIRMAN: It was to be made. I have allowed him because he was to go somewhere.

STATEMENT BY MINISTER

Commencement of utilization of Bhaskara-II

THE MINISTER OF STATE IN THE DEPARTMENTS OF SCIENCE AND TECHNOLOGY AND ELECTRONICS AND ENVIRONMENT (SHRI CHANDRA NARAIN PRATAP SINGH): Sir, I have the honour to inform the House that Bhaskara-II, the second experimental earth resources survey satellite, was launched on November 20, 1981 at 1400 hours 32 seconds IST from a Soviet Cosmodrome. The poly-hedral shaped satellite weighing around 440 kg. was injected in a near circular orbit at a height of 525 km. and an inclination of 51 degrees and it is orbiting around the earth every 95 minutes. The satellite is being continuously monitored from ground stations at Sriharikota, Ahmedabad, Bangalore and also from Bears Lake near Moscow in the USSR. The satellite is functioning well and all the spacecraft systems are working satisfactorily.

Bhaskara-II is an improved version of its predecessor, Bhaskara-I, which was launched on June 7, 1979. The space segment of Bhaskara-II is essentially the same as Bhaskara-I and is designed for a nominal mission life of one year. Bhaskara-II carries two primary payloads viz., a TV camera system and a Satellite Microwave Radiometer (SAMIR) operating at 19, 22 and 31 Gigahertz (GHz). The data from these payloads are intended to be used for various studies of relevance relating to eath resources and meteorological application. The satellite also carries secondary payload systems such as Data Collection Platform (DCP) experiment, Solar Cell and Thermal Paint experiments. The Data Collection Platform envisages relay of meteorological data collected by unattended platforms located in different parts of the country. The Solar Cell and Thermal Paint experiments are continuing efforts for the qualification of indigenously developed Solar Cells and Thermal Paints initiated in Bhaskara-I.

After the launch on November 20, various sub-systems have been checked out systematically. On November 22 the satellite was spun up and communication from ground to spacecraft for transmitting commands established. The tape recorder aboard the satellite and two of the three microwave radiometers were switched on on November 23, 1981—the third day of the spacecraft's life. The third radiometer was switched on the next day. Of the two TV cameras one operating in the visible band was switched on on November 27, 1981 from Sriharikota during the 106th orbit. Six pictures were also received during the five minutes this camera was on. The second camera was switched on on November 28, 1981 during the 121st orbit and pictures over India were taken. Both the cameras were switched on from Sriharikota on November 29 for simultaneous operation during the 136th orbit. This mode of operation enables the two cameras which are aligned to take pictures of the same ground scene covering an areas of 341 km. x 341 km. in two spectral bands thus providing multi-spectral imageries. A total of 12 pictures was obtained in both the bands together of which four were relatively cloud-free. All the systems in the satellite have been successfully exercised Data has been collected from the TV cameras and Satellite Microwave Radiometers (SAMIR). Preliminary indications are that the quality of these data products is good. A Plan for systematic use of this information has already been drawn up in consultation with the concerned user agencies. TV data will be useful for forestry, land use, snow cover studies, flood and geological mapping. SAMIR data will

give information on the Sea State, Sea Surface temperatur and water vapour and liquid water content in the atmosphere over ocean areas.

The total amount spent on the Bhaskara-II project is about 1.6 crores. While some space qualified electronic components have been imported, all sub-system designing, engineering, development and testing have been done in the country. The USSR through the Academy of Sciences provided free of cost the launch vehicle and launch and tracking support. In addition the USSR also provided free of cost a few sub-systems like solar panels, parts of spin sub-system, chemical battery and magnetic tape recorder. Additional tracking support has been obtained from the German Space Agency DFVLR and the French Agency, CNES.

Bhaskara-II will mark the close of the first phase of the experimental system and lead to the semi-operational system of generating and utilising satellite based remotely sensed data; one vital component in this phase will be the Indian Remote Sensing Satellite Project for which considerable user coordination and design activity has been done during the past three years and project activities are about to commence.

After Aryabhatta and Bhaskara-I, Bhaskara-II marks another important milestone in the continuing Indo-Soviet cooperation in Space Research.

The entire nation is proud of the contributions and achievements of our scientists, technologists, engineers and the workers who have made this project a success and I hope this august House will join me in congratulating them.

SHRI SUNDER SINGH BHANDARI (Uttar Pradesh): Sir, I want to seek one clarification.

MR. DEPUTY CHAIRMAN: But before you seek the clarification, I would like to add to what the Minister has said that this House and . .

श्री नरसिंह प्रसाद नन्द (उड़ीसा) : हमें कह लेने दीजिए । मैं क्लेरिफिकेशन नहीं माग रहा हूं । मुझे इस पर थोड़ा बोल लेने दीजिए इस से पहले कि आप . . .

श्री उपसभापति : अच्छा कहिए ।

SHRI NARASINGHA PRASAD NANDA: Mr. Deputy Chairman, Sir, I fully associate myself with the feelings expressed by the hon. Minister in paragraph 7 of the statement. I would have liked the Minister to come with this statement a little earlier because the Satellite was launched on 20th November, and it was successfully launched and we were expecting this statement at the earliest. Anyhow, better late than never and he has now come with a statement.

Sir, this achievement is a distinct advance in the space science. Somebody the other day jocularly said that a time will come when even the space would be so overcrowded that it would be very difficult to move a satellite in the space. And since we have already joined that community in acquiring a place in the space, I congratulate, along with the Minister, all our scientists, technologists, engineers and workers who have made this project a success. And I also express our gratitude to the USSR who provided us the launch vehicle and the launch and the tracking support and gave other support which is indicated in the Statement. I again congratulate our scientists, engineers, technicians and workers.

श्री सुन्दर सिंह भंडारी : श्रीमन्, भास्कर-2 के सफल परीक्षण के लिए मैं बधाई देता हूं । जिन वैज्ञानिकों ने इस में परिश्रम किया है वे सभी बधाई के पात्र है । मुझे आशा है कि अगली बार जब फिर इस प्रकार का उपग्रह छोड़ने का अवसर आये तो भारत स्वयं इस उपग्रह को छोड़ने की व्यवस्था कर सके । इस उपग्रह में भी प्रारम्भिक आपरेशन रूस के केन्द्रों से हुआ है । मुझे विश्वास है कि मंत्री जी अब इस

[श्री सुन्दर सिंह भंडारी]

बात के लिए आश्वस्त करेंगे कि भास्कर-2 की सभी प्रक्रियाएं केवल भारत द्वारा संचालित हैं और उस के द्वारा प्राप्त किये गये चित्र और उस के द्वारा प्राप्त की गयी जानकारी हम ही को मिलती है। हमारे द्वारा फिर किसी को दी जाये और उस का उपयोग हो, यह व्यवस्था होनी चाहिए ? मैं ने इस लिए इस बात का उल्लेख किया क्यों कि प्रारंभ में कुछ दिनों तक इस का संचालन और इस की सारी प्रक्रियाओं का परीक्षण रूस के लांचिंग स्टेशन से हुआ था। मुझे विश्वास है कि अब उस की कोई आवश्यकता नहीं रही होगी और सारा कुछ संचालन श्रीहरिकोटा से हो रहा होगा। मैं यह चाहूंगा कि मंत्री जी वैज्ञानिकों को इस बात के लिए पूरा अवसर दें कि अगली बार जब इस प्रकार का लांचिंग हो तो भारत की धरती से हो और भारत के वैज्ञानिक अपने साधनों से इस का लांचिंग कर सकें। मैं फिर से भारत के सभी वैज्ञानिकों को इस सफल परीक्षण के लिए बधाई देता हूं।

DR. (SHRIMATI) NAJMA HEPTULLA (Maharashtra): Mr. Deputy Chairman, Sir...

SHRI AMARPROSAD CHAKRABORTY (West Bengal): Sir ...

MR. DEPUTY CHAIRMAN: I would like to express the sense of the whole House who join me in appreciating and congratulating the scientists for the wonderful achievement that they have done and we hope and pray for their further successes also.

THE CINE-WORKERS AND CINEMA THEATRE WORKERS (REGULATION OF EMPLOYMENT) BILL, 1981— *Contd.*

MR. DEPUTY CHAIRMAN: The Minister will now reply.

THE MINISTER OF INFORMATION AND BROADCASTING (SHRI VASANT SATHE): Mr. Deputy Chairman, Sir, I want to thank the hon. Members who participated in the discussion on the Bill.

SHRI AMARPROSAD CHAKRABORTY (West Bengal): Mr. Deputy Chairman, Sir,...

MR. DEPUTY CHAIRMAN: Let him reply, then we will see. There are so many amendments.

SHRI VASANT SATHE: Sir, this Bill has a limited purpose. We have discussed in this House earlier a Bill on the amendment of the Cinematograph Act which deals with certification of films, how films should be made, how they should be certified, what should be the guidelines, what types of films should be produced in this country and what curbs or restrictions should be put on the films. All this on which yesterday many hon. Members expressed themselves and today also, that would come under the ambit of that Act and that Bill and that is why I have brought that Bill and the amendment before this House and the House had the full opportunity to discuss that. So, I do not think, although I respect the sentiments of all our friends, that we should take a fresh note of the feelings of this House which is practically unanimous that films distorting social values, deriding our moral ethos, such films should not be allowed to be produced or certified. This has been the general feeling in this House. I shall convey these feelings to the Board of Films Certification to benefit by the views expressed by this House. But may I, in all humi-