

# CORRESPONDENCE

## More Cosmonaut Data

Sir, I have recently come across some biographical data on Soviet cosmonauts [1] which I have not seen printed in Western sources:

Full names of cosmonauts:

Vladimir Vasilyevich Kovalyonok.

Valeriy Viktorovich Ryumin.

Vladimir Afans'yeyich Lyakhov (born 1941 July 20).

Georgiy Ivanov Ivanov (born 2 July 1940 in Lovech, Bulgaria, and selected as a cosmonaut in March 1978).

Major Ing, Oldřich Pelčák [2] was born in Gottwaldov, Czechoslovakia, on 2 November 1943.

JONATHAN C. McDOWELL,  
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## REFERENCES

1. *Zemlya i Vsyenniya* "Earth and Universe", various issues.
2. *Zapiski '78*, special issue, 1978. This magazine is the one referred to as *START (Blast-off)* by P. S. Clark in earlier correspondence.

## Confirming Salyut Data

Sir, In reply to Mr. Parker (*Spaceflight* October 1979, page 432) I can confirm that the total power available for the Salyut 6 space station is 4 kW. This value is published in both *Aviatsiya i Kosmanavtika* (No. 3 1978 p. 37) and *Krilya Rodini* (No. 4 1978 p. 25) and has been further quoted in several East European publications and in English in *Interavia* (No. 11 1978 p. 1084).

With the confirmation of the information I should like to take the opportunity to add a few words about the operational use of the power. Mr. Parker may be correct in assuming that certain "housekeeping" functions are powered down during the refuelling process but I would question his use of Skylab data for estimating power requirements. In his letter Mr. Parker seems to be assuming that the cosmonauts maintain several large pieces of scientific equipment operational at the same time. Past experience of the Salyut programme indicates otherwise.

Salyut science activities utilising major hardware (for example the BST-1M, MKF-6M, KRT-10) are scheduled to occupy the majority of the crew's work day. Unlike Skylab, where the astronauts were constantly engaged in the use of major hardware, Salyut activities are (according to revelations by Klimuk at the 1976 COSPAR meeting) staggered to allow the exploitation of one major item per day. This means that if, for example, the programme dictates that the cosmonauts take data on the BST-1M of variations in intensity of received radiation from a star on the horizon during sunrise and sunset periods of the orbit the cosmonauts wait for the event to occur before obtaining data and then, instead of proceeding to some other activity, the crewmen wait for the event to occur once more on the other side of the orbit. This is an extreme case but does illustrate the scenario. This is quite different from the pace of activities on the Skylab flights.

Soviet policy appears to be devoted eventually to relieving man of the data collection process, this being done automatically while the crewmen orient the station or repair malfunctions. For the current generation of Salyut vehicles the power requirements seem to be adequate even if they dictate having to stagger large-usage items, such as the KRT-10, for use only every other day.

Mr. Parker's other point regarding the weights and measures aspect of the Salyut complex deserves some clarification. The dimensions he quotes were contained in a press release from the Novosti Press Agency (No. 8164). These figures were taken by staff of *Novosti* from the GDR publication "*Horizont*". The only Soviet source the writer can recall seeing precise figures

quoted for the complex was *Zemlya i Vselennaya* (No. 5 1978). Although the overall dimensions of the complex are given as: Salyut length—about 15 m; Soyuz and Progress lengths—7.94 m; only selected individual portions of the station are given precise figures. The length of the Salyut 6 space station is, as stated in the article by the current writer, 13.5 m. A more detailed look at the measurements is contained in the Salyut 6 Mission Report currently awaiting publication in this magazine. Since the Salyut 6 article was submitted eastern European sources (published before the submission of the article but not in my possession until later) confirm this length and also the lengths of the Soyuz (7.5 m) and Progress (7.94 m). The common diameter of the vehicles is 2.72 m at the widest point. In its report of the display at the Paris Air Show *Moscow News Information* has described the Salyut 6 complex mock-up to be 28 m in length. This value is correct when one deducts the lengths of the docking probes of the Soyuz and Progress ships and adds the length of the Salyut 6 itself.

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## Bigger Salyut?

Sir, In a news release, issued by NASA on 25 January 1978, covering the details discussed at the joint USA-USSR meeting on a possible joint Shuttle/Salyut flight in the early 80's, measurement for a Salyut vehicle were given. These stated that the length would be 21 metres with a maximum size (including solar batteries) of 30-33 metres. Maximum diameter would be 4.2 metres. Mass was given as 26 tons. Available scientific equipment volume, for any one item, would be 0.6 metres by 0.6 metres. Available electrical power would be 2 kW, for science equipment.

This information seems to suggest an uprated Salyut vehicle would be available in the 1980's and the comments reported by *BIS Spaceflight* (Milestones, Vol. 21, No. 10, p. 386) by Roald Sagdeyev and the Cosmos 1100/1101 flights by a single carrier on 23 May 1979, may be indicative of the near appearance of this vehicle. If the RAE figure of about 12,000 kg each for the two Cosmos 1100/1101 vehicles is correct, then it implies that the launch weight for the two vehicles was around 24 tons, which is close to the mass stated for the "shuttle" Salyut at 26 tons.

Will we see, therefore, in 1980, a new uprated Salyut vehicle?

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## BIS History

Sir, It was quite fascinating to read about the development of the BIS from its early beginnings in 1933 to its super new home in 1979. I wish that I could have been there when it all started but alas I was not even a twinkle in the sky.

NICHOLAS E. STEGGALL,  
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## Promoting the Society

Sir, The Society's participation in the 37th World Science Fiction Convention - "Seacon '79", held in Brighton for four days in late-August 1979, was mainly a massive literature handout consisting of *Spaceflight/BIS* issues and application