



NEWSLETTER

No. 103

November 1969

SKYLARKING IN SWEDEN

Having awaited the end of the Elk-hunting season and the beginning of the October new moon, all conditions were set for the start of the E.S.R.O. campaign to launch two Skylark rockets S29, from Esrange in northern Sweden.

The rocket payloads consisted of experiments from R.S.R.S. and from the Universities of Birmingham and Belfast. The aim of the experiments was to study the heating and ionizing effects produced in the ionosphere by fast particles (electrons) during an auroral display and also to obtain information about the origin of the particles. A chemical trail release was incorporated in order to measure the neutral winds between 150 and 200 kms.

Both rockets were fired successfully near midnight, one on the 5th and the other on the 17th October 1969. These firings proved for the first time that the Skylark rocket can land within the Esrange boundary when fired to an altitude of 230 kms.

From the first firing, which was made into a stable, weak aurora, the R.S.R.S. experiment has produced results which suggest an explanation for the type of mechanism responsible for the later stages of an auroral display. Before the rocket re-entered the atmosphere the trail was released and produced its own display which aroused some novel explanations of a different kind in the local press.

The second rocket was fired into a strongly pulsating aurora, in order to observe pulsations in electron density and measure the extent of any time delays between different electron energies. The visual pulsations with a period of several seconds, were recorded from the ground, using both T.V. equipment beneath the rocket trajectory and photometers at the launch site. A preliminary analysis of the R.S.R.S. results show pulsations in electron intensity that are delayed at lower energies. Some similar observations made by R.S.R.S. in 1967 provide the only evidence so far for locating the cause of auroral pulsations on the geomagnetic equator. The recent results not only support the earlier conclusions but should make possible a more thorough analysis, in view of the ground support, the wide range of electron energies studied and the favourable conditions during the flight.

G. M. COURTIER

STATION NEWS

Dr. Horner will attend a senior management appreciation course in work study, from December 1st-3rd. The course is being organised by the Atomic Energy Authority.

The Station Committee will meet on December 11th at London Office.

The Christmas Dinner will be held on December 19th.

STAFF NEWS

Congratulations to :

Mr. A. E. Oakman now Technical Officer I.

Dave Kelley and Linda Wragge on their marriage at St. Luke's Church, Shepherd's Bush, on November 29th.

Welcome to :

G. L. Mollet	C.A. (Part-time)
J. A. Smith	Tech. III (Fixed term)
R. Sizeland	A.E.O. (Fixed term)
W. J. K. White	S.O. (Perm.)
M. Denihan	Labourer
Mrs. E. G. Bignell	Canteen Assistant (Part-time)

Resignations :

G. L. Lim	Technical Officer (Singapore)
Mrs. D. M. Bellchambers	S.A. (Non-perm)
J. G. Bartlett	A.E.O. (Non-perm)

Other Changes

P. J. Bannister	S.A. Transfer to Computer Group
G. Woodworth	S.S. Labourer C.S.C. Cert. of qualification issued.

OBITUARY

Mrs. V. F. Pullen

We much regret to record the death of Mrs. V. F. Pullen on 11th November 1969.

Vera Pullen joined R.S.R.S. just a year ago. Her circle of friends included some of the Staff who live nearby, but she was best known here to those who needed to use the teleprinter service in the Old Building. To an exacting and trying task she brought a capable and charming personality. We can only offer our sympathy to her family and regret that her qualities were not far longer to be used in life itself.

SPORTS AND SOCIAL CLUB

The Christmas Dance will be held this year on Saturday, 13th December, from 8 p.m. to midnight. As usual, the canteen will be transformed for the occasion and there will be a bar and refreshments. Music will be provided by 'The Clubmen'. Tickets price 8s. 6d. (refreshments included) are on sale now from committee members and others, at strategic points throughout the station.

M. FARMAN

Wine Circle

The November meeting of the circle was a demonstration by Dr. K. Burrows of the use of concentrates in winemaking.

The Circle has arranged discounts with W. R. Loftus Ltd., Brew It Yourself Ltd. and Semplex Home Brews Ltd. The Club has taken out a subscription for the magazine 'Amateur Winemaking', and this will be circulated among members.

Membership cards are now available and it would be appreciated if members would collect them from me.

F. BENNETT

Bridge Club

The only item of news to report is the result of the match against R.R.L. mentioned in last month's newsletter. Unfortunately, we were beaten 78 IMPs to 57, despite being exactly at half-time : 25 IMPs all.

It has been proposed that one of the regular lunch time sessions should be devoted to teaching newcomers. Provisionally, these special sessions will be held every Monday in room E127.

ROBERT PRATT

LETTER TO THE OUTSTATIONS

Dear Colleagues,

There are jobs in any organisation which subject the individual to simultaneous pressures from many directions. Their solution, and one's sanity, require diplomacy, hypocrisy and humour. It is also of value repeatedly to remind oneself that so-and-so is really quite a nice chap, not the chap, not the wilfully obstructive oaf that he appears to be when his thoughts run contrary to one's own calm logic. 'Twas ever thus; witness Dr. Hooke (the tension and extension man) in one of the printable parts of his diary : 'Yet again to Mr. Tompion to try if the machine be complete, he returned me a short answer. He is a surly dog'. Tompion was obviously under pressure that day.

One who seems never subject to such weakness is named in this month's Staff News. Ernie Oakman is promoted and I have little doubt that I may congratulate him on behalf of you all. There may be occasions when we too have called 'to try if the machine be complete' but always the voice of reason has quietly answered in such a way as to be acceptable even to one as timid as

Yours sincerely

The Editor

REPRINT LIST - NOVEMBER 1969

- E. N. Bramley Electric field effects in the middle latitude F-region
J.A.T.P. 1969 31, 1223-1227
- L. Thomas and
M. R. Bowman Atmospheric penetration of ultra-violet and visible solar
radiations during twilight periods
J.A.T.P. 1969 31, 1311-1322
- J. A. Lane Radar echoes from clear air in relation to refractive-index
variations in the troposphere
Proc. I.E.E. 1969, 116, 1656-1660

INTERNAL MEMORANDA

330

Burrows, K., Thomas, L. and Willis, D. M.
Notes on the IASPEI/IAGA General Scientific Assemblies,
Madrid, Spain 1-12 September 1969