

# R. S. R. S.

## *Newsletter*

No. 51

July, 1965

### RECOGNITION OF THE STATION'S WORK

I wish to thank all member of the Station for their congratulations conveyed to me in such a pleasant way by Mr. Wilkins in the 50th issue of this Newsletter. I am naturally delighted and encouraged by the award of the Honour which has come to me.

I am particularly pleased because I know that an award of this kind is intended, at least in part, to recognise the good work which the Station is doing, and I hope all who work here will realise that and will be encouraged as much as I am myself.

An additional sign that the good work of the Station is being recognised outside is available in the list of promotions which was also announced in the 50th issue. If this list and last year's list are taken together it will be seen that, in a period of two years, there have been 5 promotions out of 42 members in the Scientific classes, and 15 out of 90 in the Experimental classes. Two of these promotions have been to C.E.O. It is reasonable to suppose that promotions on this scale mean not only that we have individuals here of considerable merit, but that our work, as a whole, is well-known and is progressing well.

It is up to all of us to show that we fully deserve the recognition which is coming to us.

J. A. Ratcliffe

Los Viajes en Sudamerica

It has been said that the ionosphere is one of the best international clubs in existence. This certainly became apparent to me during the latter part of 1964. It was arranged that my lengthy visit to the Central Radio Propagation Laboratory at Boulder, Colorado, should include a two month spell at the associated Jicamarca Radio Observatory in Peru. I then received an invitation to spend some weeks at C.N.A.E., the National Centre for Space Activities in Brazil, from the Director, Dr. Fernando de Mendonça.

The flight from Denver, Colorado, to Rio de Janeiro occupied two days, with an overnight stop at Miami. At Rio I was met by Dr. de Mendonça, and by another of his visitors - Dr. Owen Garriott of Stanford (visitor to R.R.S., 1961). We spent the night at a posh hotel on Copacabana Beach, waking next morning to a splendid vista of sun and surf. Garriott and I spent the day sightseeing in Rio - surely one of the most scenic cities - whilst Dr. de Mendonça attended to official business. That night, we drove 200 miles to São José dos Campos, a town of about 60,000 inhabitants and the site of C.N.A.E.

Garriott broke the news that my ideas of South America as a lazy land of "mañana" would have to go by the board, so far as C.N.A.E. was concerned. The routine called for a 96-hour week (0800-2400, Monday-Saturday) but this did allow time off for meals and an evening break. I stayed in the C.N.A.E. Motel, a comfortable hostelry built on the lines of a small American motel. Four times a day the staff restaurant provided good food, along with elegant crockery, attractive decor, personable service .... good living was to be had at C.N.A.E.

C.N.A.E. is one of the few ground stations situated close to the South Atlantic magnetic anomaly, where the geomagnetic field is weaker than at any other part of the Earth's surface. Here, it is comparatively easy for charged particles, trapped in the geomagnetic field, to enter the atmosphere; so that certain effects, such as enhanced ionization and airglow emission, are to be looked for in this region. Another - unexpected- advantage of the station's location was its ability to receive signals from the (first) S-66 "beacon" satellite, during its brief flight towards its unscheduled impact in the South Atlantic.

The principal project at C.N.A.E. is Doppler/Faraday observation of satellite transmissions. Dr. de Mendonça is an acknowledged expert in this field. Other topics for study include HF propagation, radio noise of solar and terrestrial origin, geomagnetism and some theoretical work. Airglow measurements are planned.

My own work at C.N.A.E. consisted of giving a course of lectures on ionospheric physics and the preparation of a survey of literature on the F region of the ionosphere. I should add that all my discussions were conducted in English; my rudimentary Portuguese was called upon only during

trips into São José dos Campos. The town lies in a broad, pastoral valley with a pleasant prospect of distant mountains. The early spring weather was extremely pleasant except for the "cold fronts" which brought heavy rain.

On leaving Brazil, I had to begin to use Spanish instead of Portuguese. I flew west from São Paulo in a DC6 of Lloyd Aereo Boliviano and eventually arrived at La Paz, the capital of Bolivia. At the airport, presumably for the benefit of tourists, was a small traditionally-dressed, Indian girl and a rather motheaten llama, beside a sign proclaiming "The World's Highest Commercial Airport" (4070m, 133300'). (Could not Tibet boast a higher one, complete with a lama instead of a llama?)

I was met by Dr. Saaverdes of the Cosmic Ray Observatory, and driven down into the city, which lies in a deep ravine some 1000' lower than the surrounding plateau. The tortuous road was exciting, with drivers exchanging compliments such as ¡imbecile! (Some Peruvians prefer ¡ cuadrúpedo!) Once installed in a hotel, I had to combat a mild attack of soroche, or mountain-sickness. The symptoms were headache and lethargy. I found the best treatment comprised total inactivity.

Next morning, I caught the transport to the Cosmic Ray Observatory on Mount Chacaltaya, twenty miles away and 17100' above sea level. Here Bolivian, U.S. (University of Michigan) and other visiting scientists conduct numerous experiments concerned with cosmic rays. But most casual visitors, myself included, feel too lethargic to appreciate to the full the fine points of the equipment, or even the spectacular scenery of the Andes. That evening, the transport made its way down to La Paz in a heavy snowstorm, first of the season. Newspapers were full of the story of a dynamited train, which presaged the "open season" for revolution. So I felt some relief when, the next day, the cloud cover on the plateau lifted sufficiently to allow the Panagra DC7 to take off, bound away over the Andes to Peru.

H. Rishbeth

To be continued

STAFF NEWS

Congratulations to:

Mr. and Mrs. Eric Dunford on the birth of their son David, on 18th May.

Pat and Michael Galindo on the birth of their son Adrian Conway, on 27th June.

Miss J. B. Turner on her promotion to Acting Executive Officer on loan to Department of Economic Affairs.

NEW STAFF

Welcome to:

Mr. D. J. H. Sturdee

Mrs. E. N. Rew

Mrs. I. M. Wells

Mrs. B. McFadden

T. S/A

T. C/A

Part-time Typist II

Part-time Typist II

Mrs. B. A. Lewington  
Mrs. M. J. Dickinson  
Mr. J. E. Stenning  
Mr. G. Harris  
Mrs. E. Brown

Part-time Duplicator Operator  
Part-time Shorthand Typist II  
E.O.  
E.O.  
T. Cleaner

Resignations

Mrs. D. M. A. Mays  
Mr. W. W. Smith  
Mr. J. S. Cubbin

T. Cleaner  
T/Craftsman's Mate  
T/AEO.

R.S.R.S. SPORTS AND SOCIAL CLUB

Tennis

R.S.R.S. had an enjoyable and successful start to the season in a mens doubles match against Old Windsorians Rugby Club on 26th June. The match, played on courts in Windsor, was on the more unfamiliar grass but the result was a win by 6 to 2 with one unfinished. We were represented by

Mr. Horner and Dr. Bramley  
Mr. R. W. Smith and Mr. Legg  
Dr. Bryant and Dr. Bent

and the return match is on 24th July.

A number of matches with other clubs are being arranged and anyone who is keen to play in mens or mixed doubles should contact P. A. Smith.

P. A. Smith

Cricket

At cricket on Midsummer Day  
While idly observing the play  
I thought as I clapped  
How strikingly apt  
Was a match between Bryant and May

F. Horner

The gathering of enthusiasts on the field at lunch times on the finer days in June culminated in a friendly match being played on the evening of 1st July.

The match was between Brian May's Eleven and Dr. Hopkins' Eleven, Mr. May's team went in to bat first. The first wicket went for nineteen runs but Brian May seemed to be set for a long stay until Peter Kervin ran in from deep field to take a magnificent catch dismissing him for fifteen runs. After this wickets fell fast and furiously to the deadly accuracy of bowlers Eccles, who took five for eighteen and Hale, three for twenty. The last wicket fell after about an hours play for a total of forty runs.

In reply Dr. Hopkins' Eleven stood at four wickets for seven runs after about five minutes but a bold innings by Peter Kervin who made four fours and was eventually run out for twenty four saved the day and Dr. Hopkins' Eleven won by sixteen runs. Harrison took three wickets for six runs and Freeston, two for seven.

Our thanks are due to Miss Jones and Mrs. Kervin who prepared tea and sandwiches for twenty two ravenous players and to Miss Preece, scorer and Mr. Spencer, the only unbiassed umpire.

Another match is due to be played on Thursday, 22nd July, and any spectators can be assured of an interesting evening's entertainment.

T. Bevan

#### Camera Club

Last month a party, twenty-four strong, visited the B.O.A.C. maintenance facilities at London Airport. In the servicing hangars we saw aircraft and engines in various stages of stripping-down; while outside, VC-10's and 707's were parked in abundance awaiting a thorough inspection by R.S.R.S. personnel. They got it.

We are very grateful to the B.O.A.C. officers who conducted our visit. We had hoped that, on the evening after Midsummer, conditions for photography would be at their best. Actually, we did see the sun once, just before we left the airport. Anyway, many cameras were seen in action and we hope members of the party will contribute prints and slides to an exhibition we plan to hold later on.

Henry Rishbeth

#### A.C.O. and R.S.R.S. get together S.S.C.-wise

The A.C.O. and R.S.R.S. Sports and Social Club committees have now had two joint meetings in the comfort of the R.S.R.S. S.S.C. bar to discuss what facilities each has to offer the other. The main outcome is that a competition evening is to be held during August at the S.S.C. premises, when R.S.R.S. teams will be required to defend the honour of the station in lawn-tennis, table-tennis, billiards, darts, and shove ha'penny! The bar will be open to serve buffet refreshments as well as the usual wide range of drinks. It should be a very enjoyable evening, so please watch the notice-board for further details.

Members of R.S.R.S. may also be interested to take part in some of the other facilities offered by the A.C.O. These include a thriving bowls club which was started in 1927. This club regularly holds matches on Saturdays, possesses a good green, and welcomes both accomplished players and novices. The A.C.O. football club is run by Mr. N. Coe, now at R.S.R.S. The club possesses a pitch and frequently holds matches against other clubs. Again new members will be very welcome. During the winter the A.C.O. organise English country dancing evenings, and these will be publicised in R.S.R.S. nearer the time.

Other proposals have been for further joint dances, joint concert outings, and other joint outings, the first of which is to be a visit to Pendley Manor open-air theatre. Further details will be appearing on the notice-board shortly.

It is hoped that members of the R.S.R.S. S.S.C., will take advantage of these new contacts since, as the A.C.O. is a much larger organization than the R.S.R.S., further contacts could be of considerable advantage to our club.

M. P. M. Hall

LETTER TO THE OUTSTATIONS

Dear Colleagues,

You will see elsewhere that Beryl Turner has left Ditton Park, at least for the time being. She has been seconded, as an executive officer, to the Department of Economic Affairs. The Director made known our good wishes to her at a presentation which took place recently.

After duty at the former D.S.I.R. Headquarters and a further spell at Singapore, Mr. Clarke has now returned to Slough. Among his duties will be some relating to Outstation liaison. This will no doubt mean that you will receive a good supply of information about the Slough scene, leaving me only the weather to rely upon for light conversation - 'as usual' did someone remark?

A most interesting announcement appeared in the press, both here and in the United States, at the end of June. The Apollo moon programme authorities have recruited six scientists for training for moon expeditions. These, it is hoped, will take place after the initial lunar flights have been achieved. One of the six is Professor Owen Garriott who will be remembered by many from his stay with us at Slough a year or two ago.

Professor Garriott's adaptability showed itself when over here; he joined us in playing cricket and mastered the art to a commendable extent. It is good to know that this sport will have an exponent among the first men on the moon. Should there be any natives it will be so good for their moral fibre, what? Also a match between the Gentlemen of Earth and the Grand Lunar XI would attract even,

Yours sincerely,

The Editor