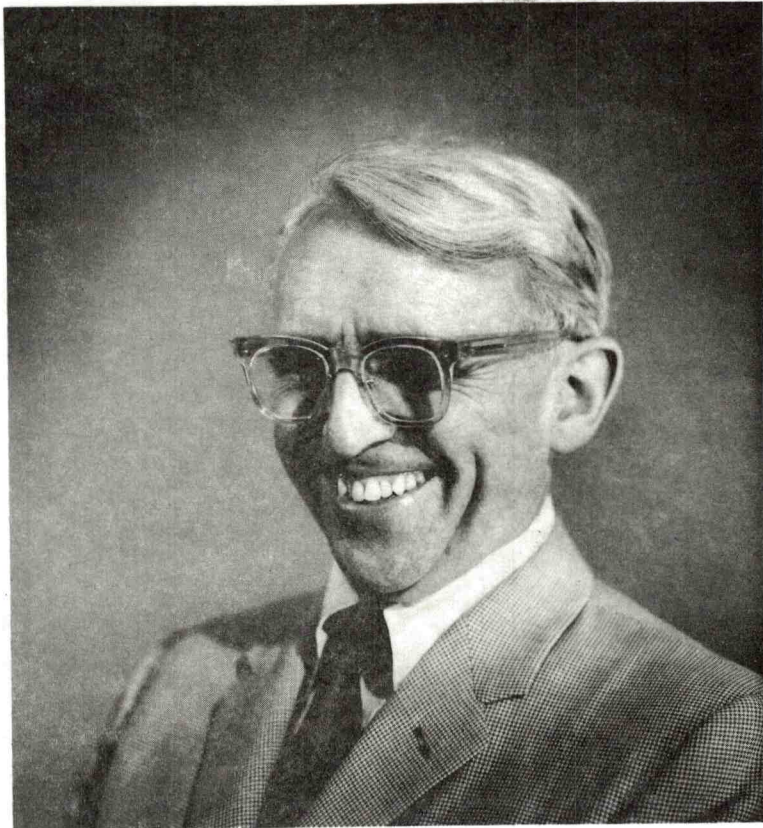


NEWSLETTER

No. 134

July 1972



Dr. H. A. Gebbie

I am sure all staff will wish to join me in extending a very warm welcome to Dr. Gebbie who has recently become a member of the staff of R.S.R.S. He has a distinguished record of research at millimetre, sub-millimetre and infra-red wavelengths and we are indeed fortunate to have him among us.

Dr. Gebbie was educated at Galashiels Academy and at Edinburgh University where he took his first degree. He then joined the Admiralty Research Laboratory, Teddington, in 1942 and worked there for seven years leaving, in 1949 to go to

Reading University where he obtained his Ph.D. for research on the optical properties of semiconductors and afterwards spent a year at the Services Electronics Research Laboratory, Baldock.

Dr. Gebbie next worked in the U.S.A. for a number of years, first as a Research Associate at Purdue University, Indiana, followed by two years at the Massachusetts Institute of Technology and two years at Johns Hopkins University, Maryland. He returned to the U.K. in 1957 as a P.S.O. at the National Physical Laboratory. In 1959 he was made Head of the Infra-red Section and was promoted to S.P.S.O. on individual merit in 1962 for his pioneering work on infra-red interferometry and high pressure physics. His work led to a great increase in the power of spectroscopic techniques at very long infra-red wavelengths; a major contribution being his discovery and development of an intense source of monochromatic radiation lying in the wavelength range between the far infra-red and microwaves, where previously no adequate source had existed. Dr. Gebbie's work in this field has been outstandingly productive, not only in experimental work, but more especially in the development of spectroscopic hardware which is now exploited commercially. His work on the interferometric spectrometer was recognised in 1965 by the award of the Duddell Medal of the (then) Physical Society of London. He was promoted to D.C.S.O. on individual merit in 1966.

In 1968 Dr. Gebbie went back to the U.S.A. to appointments, first as a Senior Research Fellow at the National Bureau of Standards, Boulder, Colorado and latterly as Professor of Physics at the University of Colorado, in both of which he continued varied researches with millimetre and shorter wavelengths.

Dr. Gebbie now joins us to carry out work which in the first instance will lie mainly in the area covered by Dr. Lane's Division. He will also act as a consultant to me generally on matters relating to the Station's programme of scientific research. We look forward to much stimulation in our work stemming from his wide experience and from his keen insight into physical problems and incisive approach to them.

J. A. SAXTON

THE TUTANKHAMUN EXHIBITION

I suppose that we started queueing about 9.30 a.m., after following a signed detour from Tottenham Court Road station presumably intended to get you to the end of the queue - with hindsight we would ignore it. In the road outside several shabby little men were selling the Evening Standard's Tutankhamun Supplement, a collection of "historic" pictures and headlines, such as "Tomb Sensation!!" One had visions of the mummy having changed its sex, or of the finding of some compromising material, but no - it continued: "Mummy Stuck when Removed from Tomb". How kinky can you get? We didn't buy one.

We expected a repetition of the business of going to see the Crown Jewels - a three-hour wait in rows of ten followed by a quick glimpse as one passed by them at a sort of rough jog-trot - so we were relieved to have a wait of only one and three quarter hours, mostly in the yard and largely under cover. We were quite happy to keep moving and to read the handbook, which was just as well, because inside there were crowds, poor light, and constant exhortations to "move on slowly ladies and gentlemen, that's all we ask, remember the people waitin' be'ind!" It took another hour and three quarters to get through; often one was waiting to be admitted into the next room, and really one had plenty of time to look around.

The handbook is a superb production at 75p, and there are magnificent photographs which in some instances do the exhibits more than justice. One can buy a short catalogue - little more than a list - which is more useful inside. I thought the lighting in some of the cases could be improved: mostly it was overhead and sometimes the sides were poorly lit, although there were mirrors in one or two cases. Each case had a thermometer/humidity meter, and perhaps too much lighting was not desirable. It was very hot in the exhibition.

The crowds were a real problem; one Texan gentleman wanted to get out because he "felt the call o' nature" - I suppose its all those open spaces he is used to - and announced that if he couldn't get out forwards he'd jst have to go backwards. I suggested that he was just making difficulties for himself, and he did offer, if "I jst stayed right there" to tell me a thing or two when he got back, but the crowd moved us on and I lost the opportunity.

Room one has a number of the smaller exhibits, in cases rather too close together for the number of people wanting to see them, in our case made more difficult by two different queues going in opposite directions under the misguidance of two uncorrelated custodians, one of whom maintained that it was

"easier to look after a battalion" - I believe him - I wouldn't have his job for £10K p.a.! There is a striking figure just at the entrance, a wooden statue of Tutankhamun in black and gold, about life-size (1.73 m) and then a number of exquisite small items - a model of a typical ceremonial barge, alabaster unguent vases, a painted alabaster casket, a model of the canopic coffin of beaten gold inlaid with glass and carnelian - (really beautifully done in miniature) - an effigy of the king on a bier with a falcon and the human headed bird (Ba) - wooden effigies of the king and of the god Ptah standing (apparently) on a bootblack's box, which turned out to be a plinth of the shape of the sign for "Truth". It was the precision of the miniature work which we found most surprising - it would be hard to beat even today.

One moved on to a black-and-gilt head of the sacred cow, and the "bed of the divine cow" supported by two beasts whose length suggested inter-breeding with a dachshund, but not apparently intended for sleeping in, being purely ceremonial. Then the furniture, beautifully decorated stools and chests, a gaming board, a gold staff with a miniature effigy of the king surmounting it, a fan and a standing "emblem of Anubis" of strangely modern design. The state of preservation is truly remarkable, superior to that of much extant furniture of the seventeen and eighteen hundreds. Then there is a small golden shrine with most beautiful relief work on all its sides. These have been photographed, and are shown in panels about five feet high on the surrounding walls, and even with this degree of magnification are still of remarkable clarity and precision. This is workmanship of the highest order by any standards, artistic or technical.

Some beautiful golden effigies of the king in action, one of which is curiously feminine (tomb sensation?) and some truly magnificent jewellery, a trumpet, the crook and flail, a bow and a boomerang, and finally the piece de resistance of the exhibition, the mask of solid gold, beaten and burnished, painted and inlaid, which had been placed over the head and shoulders after mummification. One could spend a good time examining this, and indeed we did, because by now most people had had enough and didn't stay in the last room for very long.

A superb exhibition if one is interested in antiquities, and particularly if one is interested in this period, and we felt that it was well worth it, exhausting as it could undoubtedly be. It is a pity that special facilities cannot be extended to old people, who find it all much too much.

After lunch my wife went shopping and I went to see the Wallace Collection.

It is also a superb exhibition. It is free. There is so much to see that one could easily spend several days in it if one really paid attention to every item, and I spent most of my time looking at the pictures. There was nobody there at all. Curious, isn't it!

F. V. BALE

LETTERS TO THE EDITOR

Sir,

I have followed with interest the correspondence in your columns about those intriguing examples of civilized man's graphic ingenuity, and their influence on the society around them, which are to be found in your great entrance hall.

I would like to differ from your correspondants in their interpretation of my good friend Blimp's original thesis. Having studied it with some care I do not find one shred of evidence to suggest nostalgia for the past; more I feel, a regret that current cultural patterns appear to favour acceptance of gaudy sub-mediocrity simply because it is a contrast to the drabness that preceded. There can be no doubt that some time in the future wise men of good taste (such as myself) will look back on this era as the one when architects and interior decorators saw their designs through the pages of glossy magazines rather than the eyes of those they supposedly serve, and thus Man, seeking no redress, was enslaved by the Almighty Glossy Magazine.

I will discuss this subject further with considerable tedium, in the TV series I am currently preparing : "The Civilizing Effect of the British Empire", a joint co-production of the B.B.C., "Women's wear Weekly" and "Mechanix Illustrated, Inc.". Needless to say, copies of this letter cannot be obtained from your Newsagent in 15 instalments price 85p. each (reductions for schools, prisons, etc.).

Yours etc.

Kenneth Clique

Sir,

I have several times been accused of being 'Leonardo da Blimp' and write to say that I am not, although not being an Orangeman myself I very broadly agree with him, whoever he may be.

I would have thought that the main objection would be that the mural, hitherto the main feature of the decor, is now completely lost (particularly on a sunny day) in the vicious orange glare. Is it to be cheered-up too?

FRANK V. BALE

STAFF NEWS

Congratulations to :

Ali Moosajee, on his marriage to Rashida Akberali, at Tanga, Tanzania, on July 2nd.

Laurence Harris, on his engagement to Marion Lock, on July 22nd.

Dr. J. E. Allnutt now M.I.E.E.

Mrs. Mary Parissien now C.O.

Mrs. S. Davies now Specialist T/P Op.

Welcome to :

M. B. Oliver	S.S.O. (U.C.L.)
Miss M. Lock	Vacation worker
G. C. White	" "
Miss B. Okolotowicz	" "
R. V. Hutchings	Semi-skilled labourer
R. A. Wakefield	Craftsman II
Mrs. E. A. Banks	Canteen Assistant P/T
R. H. Cook	Semi-skilled labourer
R. B. W. Arnold	" " "

Resignations

A. S. Waite	C.O.
Mrs. S. L. McCaig	C.O.
D. J. King	S.O. (Vol. transfer to R.G.O.)
J. M. Flint	S.C.S.
R. V. Hutchings	Semi-skilled labourer

News of Former Staff

Members of Staff will be very sorry to learn of the death of James, the infant son of Marilyn and David Harrison. We offer them our deep sympathy.

Congratulations to :

Janet and Charles Adams on the birth of their son on July 20th.

STATION NEWS

Dr. Rishbeth has attended a Management Course on Operational Research Models, which was held at the Civil Service College, Sunningdale, from July 17th-28th.

Dr. Quigley has been in San Diego, California, attending a conference entitled "Waves and turbulence in stably stratified layers and their effects on electromagnetic propagation". The main theme was the wave-motions which radars now detect in the lower atmosphere, and their relationship to meteorology, fluid dynamics and radio propagation.

He also paid visits to the U.S. National Radio Astronomy Observatory's establishments at Kitt Peak, Arizona, where there is an 11-metre radio telescope working down to wavelengths of 1 mm, and to Charlottesville, Virginia, (the NRAO Headquarters), to discuss the U.K. mm-wave telescope project which is under R.S.R.S. management. Before returning he spent a few days with the Canadian National Research Council (N.R.C.) in Ottawa, to discuss the results of the now successful long-baseline interferometer experiment which is a cooperative venture between R.S.R.S. and the N.R.C.

M. P. M. Hall recently visited the Hamburg Meteorological Institute and the Norwegian Defence Research Establishment to discuss proposals for the development of a new commercially produced radiosonde for use in radiometeorological research.

SPORTS AND SOCIAL CLUB NEWS

The Barbeque which was held on June 24th was extremely successful. The weather was fair, the food plentiful and, most important of all, lots of people attended. The children appeared to enjoy the Treasure Hunt and altogether, the event seems to be one which is well worth repeating each year.

Cricket Results

Saturday 24th June Smith-Rose Cup Match

North	87 all out T. Golton 25
South	88 for 5 Alec Carroll 22
South won	

Wednesday 28th June British Aliminium Away

British Aluminium	110 for 6 in 20 overs Gardner 61
R.S.R.S.	74 for 6 in 20 overs Hayes 22 not out

Wednesday 12th July Westminster Bank Home

Westminster Bank	13 all out Hayes 6 wickets for 9
R.S.R.S.	15 for 4

There was a 10-over follow-on match in which R.S.R.S. scored 60 for 4 and Westminster Bank scored 56 for 4.

JOHN CATHREW

A.C.O. Evening

This was another very successful occasion - as may be gauged by the fact that the Bar was very nearly drunk dry! We look forward to the return matches, when A.C.O. are hosts, and hope that we are able to acquit ourselves as well! The results of the various matches are as follows :-

Table Tennis

The Table Tennis Club fielded a strong team against the A.C.O. on Thursday evening and achieved a fine victory. It was decided that, although the conditions were more suited to the growing of tomatoes, this would not provide a suitable competition, so we were forced to play table tennis instead. The team of four players was divided into two sections leaving not eight half players but two teams of two players, each person playing two games. We hoped to play two games of doubles as well but these were cancelled by popular request when the buffet appeared.

The results and teams are as follows -

<u>R.S.R.S.</u>	<u>A.C.O.</u>			
1. John Dudeney	A. D. Obee	A vs. 1	9-21	14-21
2. Alan Buck	B. G. Clisold	B vs. 2	13-21	15-21
3. Peter Smith	C. G. Emery	C vs. 3	10-21	9-21
4. Piers Eggett	D. M. Batham	D vs. 4	8-21	10-21
		A vs. 2	9-21	9-21
		B vs. 1	13-21	15-21
		C vs. 4	15-21	10-21
		D vs. 3	4-21	5-21
	R.S.R.S. 8	A.C.O. 0		

ALAN BUCK

Football

Despite lack of experience in playing as a team, the members of the football club, who played in the 7-a-side match on Thursday, made an encouraging effort against the talented A.C.O. team. (Six of whom play for regular league teams.)

The game started with a continuous and determined attack by the opponents which culminated in a splendid goal from their centre forward. However the home team defence remained calm and stood their ground until a long ball opened up our attack allowing Martin Garside to set up the goal which Nick Hillsdon (Captain) skilfully attained from within a confused defence just before half-time.

The second half brought a flurry of "in the air" play from the opponents who scored three excellent goals in quick succession, although several of their attempts were brilliantly thwarted by the R.S.R.S. keeper. The game was brought to a close seconds after we scored as a result of an impressively strategic onslaught to give the final score of 4-2.

In spite of a great deal of effort by all the team members I feel credit should be given to Joe Bains for preventing a double figure defeat.

RICHARD BERRY

Badminton

By agreement with A.C.O. a 'friendly' badminton evening was held rather than a match. Conditions in the vehicle store were decidedly hot and sticky

but failed, however, to quell enthusiasm and a pleasant evening was enjoyed by all. Those of us from R.S.R.S. were; Annette and Ricky Street, Hazel Ross, Julie Richardson, Derek Wright, Willie Brown and Tim Bevan.

TIM BEVAN

Cricket

Despite a rather damp evening, we had a most enjoyable match. R.S.R.S. batted first and at the end of the allotted time (20 overs) had scored 47 runs for 8 wickets. We took the field in a continuous drizzle of rain but A.C.O. were able to pass our score without the loss of a single wicket and before their overs had expired. First blood to them this year and we look forward keenly to the return match on their ground in August.

JOHN CATHREW

Tennis

Eight players from A.C.O. came over for the annual tennis evening and as most of them had not played this season, we decided to mix-up instead of having a match. Play started at five o'clock and continued, apart from two short breaks for rain, until it was virtually impossible to see the ball. Our visitors, particularly the ladies, obviously enjoyed themselves even though the standard of play was rather low at times. The R.S.R.S. players were Jane Gantlett, Wendy Harrington, M. Dick, A. C. Gordon-Smith and R. W. Smith.

R. W. SMITH

Bowls

The Ladies entered two Rinks and while unsuccessful against the Ladies of A.C.O. acquitted themselves very well.

The Rink of Ellen Scammell, Lena Thomas, Betty Carroll and Carol Spears went down by 20 shots to 9, and the other Rink of Mary Parissien, Kathy Shand, Daphne Robertson and Mary Haxton lost by 19 shots to 5.

The Men's matches finished in an exciting tie, the Rink of Harold Lovesey, Reg. Parissien, Cecil Clarke and Alf. Haxton went down by 24 shots to 8, and the Triple of Nick Bence, Eric Price and Alex Carroll won by 25 shots to 9.

It is hoped to have the two Rinks of Ladies and Men in the return match with A.C.O. and they are very keen to "turn the tables" on their rivals.

A word of thanks from the Bowls Group to the Ladies for the excellent refreshments which were provided, and to John Halley and his helpers "at the Bar".

E. F. BENICE

Billiards

After a long delay the "billiards" contest got under way at about 8.30. It soon became apparent that snooker was more popular and Dick Kressman got off to a good start by winning his match.

John Dudeney played second and very unfortunately lost. The game rested on the black and although John potted the black, the one ball carried on round the table and went in off.

Piers Eggett played the third game and won it, despite the fact that it was a very slow game and his opponent had the god of luck on his side.

The final game was a doubles match of billiards with Willie Brown and Piers Eggett representing R.S.R.S. This game we managed to lose, and so the final score was 2 all, which I think was a very fair result.

P. A. EGGETT

Darts

The Pub Games subsection got off to a fine start on Thursday evening with a notable victory over the A.C.O. team at the Ancient game of Darts.

The ladies team, consisting of three stalwarts from the computer group and an itinerant professional from the Jolly Blacksmith, played four games of doubles, resulting in a 2-2 draw. A lady from the A.C.O. kindly substituted for Wendy who unfortunately had to leave, and a deciding game of fours was played. This was a very even game and was won by R.S.R.S., the result being decided by a mutually agreed tie-breaker.

The mens team, after donning the regulation darts kit of red nose, beer pot and pint of mild, consisted of eight people who played 4 games of doubles and two of fours, resulting in a 5-1 victory for R.S.R.S.

The teams and results were as follows -

Ladies

	<u>R.S.R.S.</u>	<u>A.C.O.</u>		<u>Winners</u>
1.	Barbara Okolotowitz	A. June Jennings	1 & 2 vs. A & B	R.S.R.S.
2.	Pat Sartorio	B. Barbara Abrahams	2 & 4 vs. C & D	A.C.O.
3.	Wendy Harrington	C. Dorothy Brown	1 & 2 vs. D &	R.S.R.S.
4.	Jane Gantlett	D. Karen Stewart	3 & 4 vs. A & B	A.C.O.
			1, 2, 3 & 4 vs. A. B. C. & D	R.S.R.S.
	R.S.R.S. 3	A.C.O. 2		

Men

1.	Piers Eggett	A. Spike Hughes	1 & 2 vs. A & B	R.S.R.S.
2.	Alan Fordham	B. Geoff Roberts	3 & 4 vs. C & D	A.C.O.
3.	Willie Brown	C. Keith Seymour	5 & 6 vs. B & F	R.S.R.S.
4.	Alan Buck	D. Simon Watkins	7 & 8 vs. G & H	R.S.R.S.
5.	Mick Guest	E. Bill Thompson	1, 2, 3 & 4 vs. A,B,C & D	R.S.R.S.
6.	Bert Childs	F. Ned Elliott	5, 6, 7 & 8 vs. E,F,G & H	R.S.R.S.
7.	Dave Beecham	G. Fred Plowman		
8.	Deryck Wright	H. Roland Lane		
	R.S.R.S. 5	A.C.O. 1		

ALAN BUCK

Newspeak '72

At the recent N.P.L. Open Day, while waiting for a ride on the gantry over No. III tank (the long one), the scientist in charge was asked at 11.50 a.m. "Is the 11.30 ride going to be late or is this one going to wait for 12.30?" He looked at his watch and replied "Oh, we have become disorientated time wise!!".

LETTER TO THE OUTSTATIONS

Dear Colleagues,

A backward glance at some old newsletters the other day got my mind going on cyclic symmetry. July 1971 saw comment upon the din produced by knocking holes in walls, come this July and what do we hear - the sound of the sledgehammer borne towards us on the drowsy summer air. It is the season of the knockings. Deep urges, inbuilt programmes, collective wishes, call them what you will, seem to decree that we must burst through conventional barriers such as corridor walls ere the hollyhocks are high in the land.

Such rhythms once discovered, the mind begins intuitively to seek examples in the day-to-day stream of events. Like a sculptor sensing the form in the unchiselled stone, happenings are visualised in terms of their relation one to another.

Tree-ring thickness can, we know, be usefully linked to solar activity; but no sooner does your dyed-in-the-wool geophysicist hear of fluctuations in the annual sale of hats to the inhabitants of Pernambuco, than his reflexes twitch. Correlation coefficients dance before his eyes and he does his best to connect the hat fact with the equatorial anomaly.

What then of the knocking? We really need more observations and more science than the writer can pretend to. Surely, though, the annual visitation of the hammers is a function of something. (Why not Sporadic E, for instance - it's been tried against almost everything else.)

Or is it an organisational ploy, simple and beautiful in its efficiency. A shock corrective for those of us apparently drifting into summers-day somnolence. I say apparently for, as many will know, we do not sleep; the heavy lids and nodding head are characteristic of our deep-thought mode, a posture misinterpreted by some, even when seen to be assumed by one as alert as,

Yours sincerely

The Editor

REPRINT LIST

July 1972

D. L. Croom

Solar Millimetre Bursts

Osservatorio Astronomico, 1972. 85-78.

D. T. Llewellyn Jones and

Stabilization of the HCN Laser

M. D. James

Journal of Physics, 468-472.

INTERNAL MEMORANDA

Nil