FOR STAFF USE ONLY

APPLETON LABORATORY
NEWSLETTER

Nos. 188/189 March/April 1977

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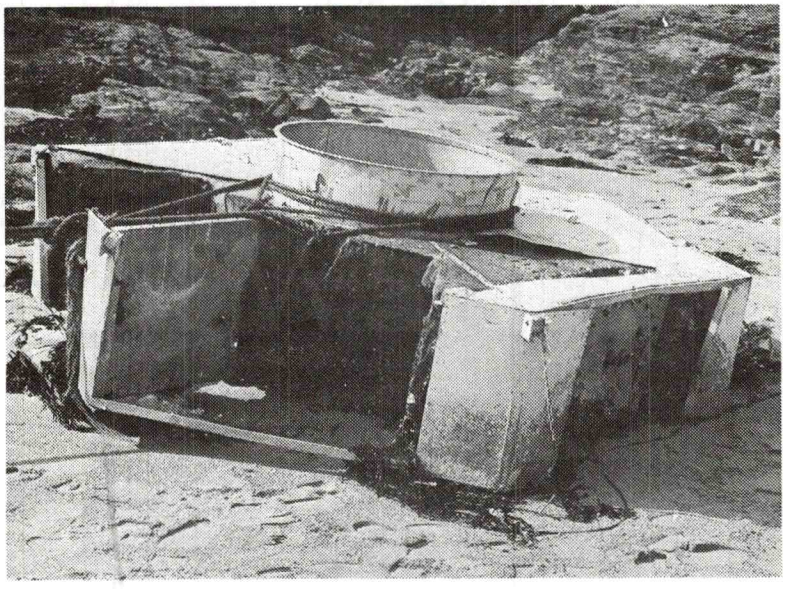
OR
THE EXPORT REJECT



Journey's end. Battered but recognisable the module lies among the rocks at St. Ives.

Since the days of the Montgolfier brothers, working with balloons has been a strange and unpredictable business where the improbable frequently happens and the impossible casually asserts itself with an air of quiet normality; our experiences at A.L. with transatlantic balloons have certainly led us to believe this to be so. A recent dramatic sequel to our ill-fated 1976 campaign is in the great credulity-stretching tradition.

Those readers who are familiar with the fate of our two transatlantic balloons launched in Sicily last summer will forgive me, I hope, if I go over old ground. (If that is the appropriate expression!) Our first balloon, dubbed "Italy 1" was launched on 29 July at sunset and was last heard transmitting at

0500 U.T. on 2 August by our ground station operators at Chesapeake Beach. Ionospheric conditions were poor and reception was intermittent but an FCC fix gave its position as about 500 km, east of New York. The telemetry data showed on-board systems working normally and the float height to be correct. The balloon had drifted further north than had been anticipated and was headed straight over New York City. Transmissions suddenly stopped and there were no further radar fixes or visual sightings.

During the next few weeks there was much speculation about the disappearance. Had the balloon crossed the coast unobserved and come to earth in a wild and unpopulated region? Had it flown over an area of cold cloud and dived catastrophically into the sea? Was this another Bermuda Triangle mystery or had the U.S. defence system used the balloon for target practice? As time passed our hopes of finding the true answer faded.

Meanwhile another unhappy fate awaited our second balloon ("Italy 2"). After a highly successful flight all the equipment was recovered in good condition near Gardner, Massachusetts. The recovery crew loaded it onto a truck and set out for N.S.B.F. headquarters in Palestine, Texas. They stopped overnight at a Holiday Inn in Monroe, Louisiana and were awakened at four in the morning by the sound of muffled explosions. They rushed outside to find the truck and its contents ablaze from end to end. The lithium batteries were shooting up in the air "like fireworks on the 4th July" as one of the recovery crew put it. In spite of the efforts of the firemen, severe damage was done to most of the equipment including the vital experimental film records. Some of the A.L. equipment, protected by pressure containers, survived the fire and was returned to us. After a couple of minor repairs it was made to operate perfectly once more on the bench.

A full enquiry was held by N.S.B.F. but the true cause of the fire was never clearly established.

The loss of all this precious and irreplaceable equipment was, of course, a great blow to the Italian, German, French and British Scientific groups involved in the campaign. It undoubtedly influenced the SRC decision not to proceed with transatlantic balloon operations in 1977.

The unlikely sequel to this ill-starred campaign began on March 21st this year when a local council employee spotted a large hexagonal-shaped object lying on the beach at St. Ives, Cornwall. He told the local Police who in turn contacted the Royal Naval Air Station at Culdrose. A Naval team was sent to inspect the object and decide whether it was dangerous. They concluded that it was some kind of research buoy, took some photographs and reported their findings to Royal Naval Intelligence. A label was found on an item of Racal equipment which gave the type and serial number and from this Racal Communications Ltd. were able to identify the customer and so link the unknown object with the Appleton Laboratory.

On hearing of this, I telephoned the Security Officer at RNAS Culdrose and from his description was able to confirm that this was indeed our Service Module from the long-lost Italy 1.

The module had been lifted from the beach by helicopter and was now at the Naval station, so I travelled there to inspect the remains. As you would expect, after an 8-month voyage at sea ending with a battering on the Cornish rocks, the module was somewhat damaged and a lot of equipment was missing. It had rested

on the beach for five days during which time bits could have been removed by inquisitive children (or adults). There was little left of the module containing the four Italian experiments which had been suspended above the service module during flight and it appears that this became separated early in the sea-voyage. However enough remains remain to justify bringing them back to A.L. for a close examination and as I write the module is on the low-loader making the final 300-mile arc which will completely close the loop of this epic journey.

Readers who are interested may come and view the surviving equipment and perhaps join us in a little detective work. Who knows, perhaps a clue will be found which will finally answer the riddle of why the balloon came down so suddenly and unexpectedly on the morning of August 2nd 1976.

M. E. FARMAN

APPLETON LABORATORY SAFETY HANDBOOK

Every member of the staff (with the exception of those serving overseas) has now been issued with a personal copy of the Appleton Laboratory Safety Handbook.

All are strongly advised to read the portions relating to the Health and Safety at Work Act, their own work and the various site emergency procedures. The Safety Officer, Mr. M. Tracey, should be approached where safety problems arise outside the scope of this handbook.

L. R. MITCHELL
Secretary, Safety Committee

STAFF LECTURES

The following staff lectures have been arranged (titles provisional).

Wednesday 18 May 1977	"North Sea Oil Exploration" Mr. J. C. Hornabrook British Petroleum
Wednesday 15 June 1977	"Millimetre-wave Radio Telescope" Dr. R. Hills Cambridge University

The talks will be in the staff dining room and will start at 3.30 p.m.

STAFF NEWS

Congratulations to:

Alan and Linda Chipperfield on the birth of their daughter, Sarah Rachel on 30 March.

Bob Ely on his marriage to Jane Gregory on 2 April at St. Nicolas Church, Taplow.

Ken Maris, now Chargehand
Dave Collerton, now Craftsman I

Welcome to:

R. B. Shah	S.C.S.
N. Mistry	S.C.S.
K. J. Lake	S.C.S.
K. K. Wong	S.C.S.
W. G. Allen	Cfn. II
A. C. Morris	Cfn. I
M. G. Danby	P.T.O. II

Resignations etc.

M. A. Roberts	Ex. O
M. J. Clowes	Cfn. I
D. G. Back	Cfn. I

Other Changes:

Mrs. N. Wells C.A. (P/T) transferred to World Data Centre
Dr. R. G. Evans S.S.O. " " Rutherford Laboratory

SPORTS AND SOCIAL CLUB NEWS

Sailing Section

The sailing club is now preparing for the summer season which began on April 1st. It is planned to continue sailing at Datchet reservoir, using both the club Fireball and Wayfarers hired from the T.W.A. Tuition for novices will be given in the Wayfarers on a similar basis to last year as required. Competence tests will be arranged for those wishing to helm the club boat, all members may crew.

Sailing has continued throughout the winter by the more hardy members, including several initial attempts at racing in the D.W.S.C. fleet. We now have three full members of D.W.S.C.

New members are welcome; it is hoped to provide sailing at all levels of experience whenever members wish.

Further details of membership and subscriptions are available from the Secretary.

Ken Pavitt

LETTER TO THE OUTSTATIONS

Dear Colleagues

So the sea has yielded up what one time was our own. At first sight this seems no more than an unlooked for experiment in ocean currents and the accretion of barnacles, but mark, as they say, the times and circumstances attendant.

Do we not await the findings of the Working Party on our future in the 'eighties? No one doubts their wisdom, collective or individual, still, when all is said and done, man merely proposes. Disposition rests elsewhere and according to the ancients, may be foretold by decoding various Olympian signals, usually somewhat garbled.

Bearing such things in mind what do we make of matters. Triumphant completion of a voyage? A sea-change? Were this not confusing enough, consider a second sign vouchsafed to some:- Beneath the moat a board bearing clear the Legend 'Appleton Laboratory Slough' stuck fast with the stream racing over it. There's no doubt THEY are trying to tell us something.

I deem - we Oracles always deem, it's more professional than just considering - I deem it my duty to interpret the matter. What have we then. A thing submerged/emerged; stuck fast/travelling far. Mm — y....e....s, a suitable case for pretty low-grade Delphic stuff - won't worry you with our trade jargon - eh? Just pop along and get this made up.

'Tis writ in water yet secure shall be
Not subject to time's transform and decree

Unpointed as it is, thus shall it go, from the Oracular Assistant III (p/t) who is also,

Yours sincerely

The Editor

March/April 1977 Reprint List

A 1183 H. Rishbeth
'Drifts and winds in the polar F region',
J.A.T.P., 1977, Vol. 39, pp 111-116

A 1127 K. Burrows, T. S. G. Sastry, S. Sampath and J. D. Stolarik
'The storm-time equatorial electrojet',
J.A.T.P., 1977, Vol. 39, pp 125-128.

A 1220 M. J. S. Quigley and D. H. Long
'Redshift effect on the timescale of quasar radio variability',
Nature, 1977, Vol. 266, pp 38-40.

A 1234 D. A. Bryant, D. S. Hall, D. R. Lepine and R. W. Mason
'Electrons and positive ions in an auroral arc',
Nature, 1977, Vol. 266, pp 148-149.

A 1240 B. C. Fawcett
'Plasmas revealed'.
Physics Bulletin, 1977, April, pp 172-179.

Internal Memorandum

NIL