

12 JAN 1970
~~20 JAN 1970~~

SPACE DRIVE



PRICE
FREE

Experimental Space Craft Development



DO UFOs EXIST?



This is the question that has been asked for generations, but **no one** seems to have the answer. One **thing** however is certain if they do exist we should observe them more closely and study their craft in detail.

The policy of this magazine regarding **UNIDENTIFIED FLYING OBJECTS** will be based on an open mind basis with the theme of **COULD THEY EXIST?** For if they do exist then we want to know because **SPACE DRIVE** is not another UFO magazine. It is intended to become a highly reliable

scientific paper reporting on the technical advances of private researchers engaged on space drive techniques. In other words we are studying UFO's purely to try to analyze their workings and obtain some clues by watching them closely of their propulsion system(s) and then applying those clues to our own craft now being in the process of hypothesis and theory.

So if you have seen a UFO at very close range don't hesitate to let me know all details of its "manufacture".

Eventually with more information coming in **SPACE DRIVE** will be able to print sonar, magnetic or static or cathode ray propulsion systems to help those persons who are trying to build their own "Saucer".

If we can't prove that they exist by material values, then let us study the photographic evidence and get up there and **JOIN THEM**-because we can't beat them, and find proof that they exist the proof that so many are asking for, and not obtainin



EDITORIAL

DEAR READERS

Every magazine has its teething troubles and its a wonder that Space-Drive ever got published at all. Everything went wrong, including the Duplicator and I want to apologize for any copies of this magazine that appears a bit messed up. I hope that by the next issue to have all the problems overcome.

However, that aside, Space-Drive is intended to become a serious work into the study of and comprehension of the unidentified flying objects, and their propulsion system.

Space-Drive will also be taking a close look at the Moon programme of the respective countries of U.S.A. and U.S.S.R. and following this through in as much detail as possible.

This magazine will also be a serious study of all types of space propulsion techniques whether it is rocket propulsion or otherwise.

May I say here that not everyone is interested in UFOs so as I have just said we will cover as much on ordinary science as possible.

Space -Drive therefore must be as comprehensive as possible covering a wide spectrum of information for the researcher and UFO and Space student.

Today's researches means immense headaches. Therefore some kind of pause is necessary to relax the tired, frustrated brain of the researcher, who seeks some kind of ENTERTAINMENT away from his study.

Therefore in the light of this grave situation, I hope to introduce into Space-Drive with the readers approval, STORIES and cartoons-for a laugh or to relax; with the old motto of PEOPLE WANT TO BE ENTERTAINED - NOT EDUCATED. Whether you believe this or not that's up to you. Therefore I would like to add an ENTERTAINMENTS-SECTION into this serious paper to ease the burden of serious thought. I find that when I am working hard on an 'insolvable' problem I rest away from it, and then the answer comes easy after a rest period, So, relax tiredness with Space-Drive and then

confront the problem later. We hope you approve of this, and will write in your own ideas for this.

If the entertainments section is acceptable I will continue to print it. If it is then those 'budding' authors who wish to see their story in print- (it must be a subject in relation to the material of this magazine however) then submit it with a postal order for 1/- per page-to cover the running cost of stencils which are from 1/2 to 1/6.

In order for Space-Drive to remain free it needs the voluntary support from all in the way of freewill donations no matter how small they are. So if you would be so kind and send in at least 1/- for every article you WANT printed. All other articles sent in will be accepted on their merit and published free of charge.

Adverts in this magazine are accepted either as free EXCHANGE or otherwise chargeable at:- £5 whole page . 1/2 p. 2 £2, 10. 0. £1. 5. 0 quarter page. anything under this size goes at 3d per word no matter how large.

Well that is left now is to wish readers a Happy new 1970.

OUR ADDRESS IS: 19, LEALAND ROAD, TOTTENHAM, LONDON, N.15. (at present)

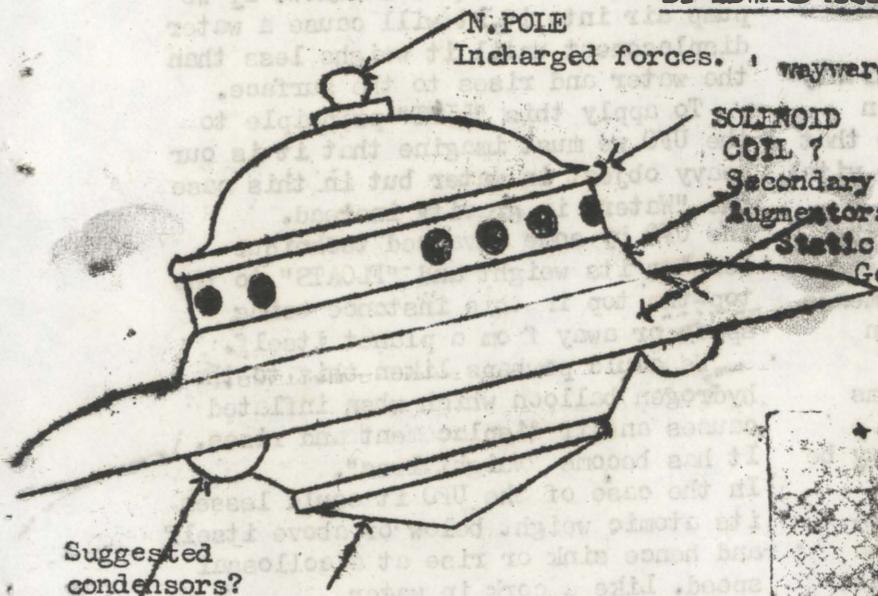
TODATE we have 6 members in 3 weeks, including our HONOURY member Mr. John Parkington of Liverpool, LANCs.

EDITORIAL FOOTNOTE: SPACE-DRIVE MAGAZINE IS UNDECIDED AT PRESENT AS TO ITS APPEARANCE. IT IS NOT QUARTERLY OR MONTHLY, READERS SHOULD JUST WAIT FOR IT TO ARRIVE EVEN IF IT IS A LONG WAIT. SPACE-DRIVE HAS BEEN SENT TO ALL UFO GROUPS AND MAGAZINES IN THE WORLD, AND WOULD APPRECIATE IT IF THEY WOULD ALSO SEND ME THEIR JOURNALS IN EXCHANGE.

INFORMATION MAY BE TAKEN FROM THIS MAGAZINE PROVIDING IT IS ACKNOWLEDGED.

HYPOTHESIS ON U.F.O ANATOMY

BY EDWARD HARRIS.

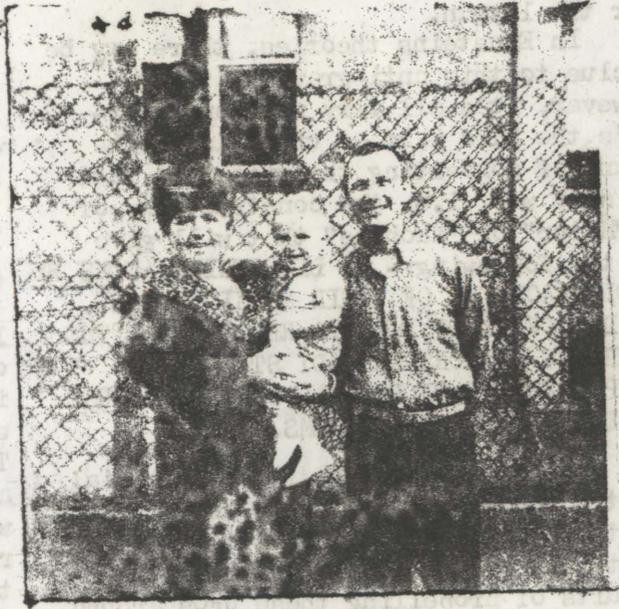


'wayward CONDENSOR' that when charged with enormous amounts of electricity travels at such a speed that the information is now classified.

NOT ALL SAUCERS

However, it seems that not all UFOs are saucer shaped.

Magnifying area for visual or three pole S fields.?



This is how I see the working mechanics and electric of the Adamski Venusian scoutship. But will the Ufo propulsion systems ever be developed one day here on earth, by the close scrutiny of one of 'theirs.'

There have been many books written dealing with this problem, and it seems that neither of them resolve anything.

Indeed there is a difference of opinion in all of them. Even now private researchers are expounding their hypotheses and ideas on how to produce an anti-gravity field capable of powering a disc-shaped craft into the heavens.

One such researcher is Richard B. Barton of the Dagenhan Aerial Phenomena Research Organisation, who sometime ago showed me his 'plans' for a saucer powered by Cathod Rays. Then there is Lenard G. Cramp in his book 'Piece for a jigsaw' who tells how UFO phenomena can be translated into every day language with the supposition of 'Bi Fields' for propulsion; and of the

The man above saw, with his wife one night while waiting for a bus a transparent BUBBLE like object descend from the sky and sink into the ground of Whipps Cross 'Hollow Ponds' Walthamstow about 1964. This case however has been checked-Out by Mr. Keith Palmer of CONTACT, whom I am sorry to see has left the group; and the results of this are with him.

Now let us analyse these sky phenomena;

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believe that they are...
action, that the researchers could put
their finger on.

In searching for clues to their propulsion system mechanism I don't think that it is beyond our understanding if we study their basics.

Those engaged at coming to grips with UFOs for the purpose of solving their propulsion system and power source are indeed welcomed here and any suggestion put forward will be printed no matter how way out it may seem.

We are not searching for an earthly factor although we hope that UFOs in some way do employ one somewhere, so that in this analysis we may obtain some vital clues.

Therefore to propose some hypothetical ideas that may help those engaged on this work approaching this immense subject from the angle of atomics in their make up. Let us then think of displacement of atoms in simple terms for the layman.

In Einsteins theories, there may be a clue to this anti-gravity effect. However, it's all very well on paper it's the hard part of visualising the means of converting theories into fact in some way, i.e. the construction of a "Motor" or "Machine" that will give us the following:-

- 1) LIGHTENING ATOMS BY A DISPLACEMENT OF THEIR ATOMIC WEIGHT.
- 2) DISCOVERY OF A MEDIA RELATIVE TO THE INHERENT FACTORS ALREADY STATED.
- 3) PROCESSING OF NATURAL FORCES FOR USE IN UFO PROPULSION SYSTEMS.

Let us examine the first potential of the theory of relativity and displacement. Many good books have been written as to how a force field could be the results of propelling these UFOs around. One such book is PIECE FOR A JIGSAW by Leonard G. Cramp in which the author does his best at giving a scientific explanation. However, I am now giving a different version to this assuming whether or not the UFOs have a force field or not.

Does the UFO lessen its ATOMIC WEIGHT? Let's take this step by step.

- 1) In Einsteins theory he states that gravity is not a force at all but a displacement - in space, and that if another body is put into space it

lot us imagine that we have a bowl of water into which we place a heavy object. Immediately there is a displacement - a sort of "hole" in the water. There is then a corresponding pressure on any other body that may be in the water.

Now to make that HEAVY object rise to the surface we must somehow make it lighter than the water somehow. If we pump air into it, it will cause a water displacement until it weighs less than the water and rises to the surface.

To apply this "LIFT" principle to the UFO we must imagine that it is our heavy object in water but in this case the "Water" is gravity instead.

The UFO by some advanced technique lessens its weight and "FLOATS" to the top - the top in this instance being space or away from a planet itself.

We could perhaps liken this to the hydrogen balloon which when inflated causes an air displacement and rises. It has become "weightless".

In the case of the UFO it could lessen its atomic weight below or above itself and hence sink or rise at a colossal speed. Like a cork in water.

To cement this hypothesis further let me tell you of a few clues already gathered. At a recent UFO landing, investigators noticed that the impressions left in the ground suggested the order of several tons. Now, except by conventional standards, could such a tonnage ever leave the ground.

To conclude some of my hypothesis, let's assume that in order for a UFO to become weightless it could reverse its atomic revolutions. In other words all the electrons are revolving in the opposite direction - a kind of anti-matter.

Therefore in order for a spaceship to land on earth it must attune its atomic weight to normal. This process may be very lengthy or may not even be possible this is why SOME UFOs do not land, or if they do it takes the neutralising process a long time. If it did land immediately it would probably blow up the moment it touch unlike atoms. There have been cases where UFOs have been seen exploding perhaps this is the reason. In one case a UFO plunged out of control into the sea and blew up.. This could also account for radiation being found sometimes.

CONVENTION

? BY
S. DRIVE
REPORTER



ABOVE . EDWARD HARRIS AND WIFE RITA
AT THE UFO CONVENTION HELD IN AUG-
UST 1969.

Britain's first National Space and UFO Convention was nearly a flop as far as audiences went as out of the expected 5,000 expected only 2,000 turned up.

No, it was not the weather. It was due to bad handling of the advertising. Many people did not know there was a convention on in some areas. The other fault was due to the location-Weburn Abby. Most people could not afford the journey, and those that did got lost on the way there.

The final straw was that coach parties arriving at the Convention saw no directing signs. Add all this up and you can why it nearly was not a Convention.

Neither was there any need for SPACELINK to criticise the effort as "probably just another Hippy do." This adverse term could have forced more potential people away - Shame on you! However the I.S.T.R.G. Convention was rescued by all the excellent speakers who turned up..

Pity John Keel of America could not attend however, I am sure he would have made a fair opponent to ufology and would have made the balance more equal on the enigma of UFOs; this balance tipped as it so happened towards Dr. Frank E. Stranges and no one opposed him on the subject .

Perhaps it was just as well that the expected press and Television coverage was not there to report on the shambles. On the whole it ran according to programme and the important people were all there. What a great pity that Arthur Shuttlewood of the Warminster Journal "ran away" so soon after his speech, I in particular wanted to speak to him on a UFO seen in 1962 or so., perhaps he had other engagements that day.

The country's first UFO convention was all UFO- nobody from the US or USSR respective Embassies came. So the "SPACE" part of the Convention - the "hippy do" was not forthcoming.

However, it WAS our FIRST and Mr. Parry has now informed everyone who is interested in coming to the SECOND next year that it will be held in CAXTON HALL, Westminster. Hoping that first impressions are not ISTRG'S last.

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S P A C E D R I V E's UFO TOP TEN . OF
SPACE AND UFO MAGS.'

1. FLYING SAUCER REVIEW.
2. SAUCER NEWS.
3. FLYING SAUCERS.
4. SPACELINK.
5. CANADIAN UFO REPORT.
6. INTERPLANETARY NEWS.
7. UFO NACHRICHTEN..GERMANY.
8. BUFORA JOURNAL.
9. SPACEFLIGHT.
10. HERMES (Junior Astronomical Society)

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Education and Training Division of Lunic Enterprises

"Swallow Command Liverpool"

World on a Disc

IN THE YEAR

2525

BY E. MARRS



What has this song to do with Peter Scothern?

This pop-song is a song of science and how it could probably progress as centuries pass by. This disc is very well done and shows not only the wonders but some of the horrors too. "I.e.-Pick your son pick your daughter too- from the bottom of a long black tube."

Zager and Evans go on to sing that by the the year 7510-"If God's Coming he should make it by then."

WILL GOD BE COMING BY THEN? What connection has the Bible with these Phenomena? From Luke.21:11 states in

"fearful sights and great signs from heaven would be seen of this coming."

On the next page you will see a photo of Jesus in the sky. How authentic is this picture. It shows our Lord over the skies of Korea. According to information recieved by a newspaper, a Chicago Airforce man took photos of American and communist aircraft during combat patrol. When the film was



Missionary Evangelist
PETER SCOTTERN

3. Buxton Road, Mansfield,
Notts., England

developed, to the amazement of everyone the image of Christ supposedly formed by clouds showed up on one of the photos.

Some people have actually seen this sign over London. One such person who claims to have seen a similar sign is Mrs. E. Dunn, of Colsterworth Road, N.15.

Well, there it is, **WORLD ON A DISC** in the year 2525. A kind of forecast of the future.

I also wonder whether mankind will be able by some of the dates mentioned, or if it will science be evolved to such a degree that we will all become mere mutated specimens with no purpose in life. Still what purpose do some people lead? **WORLD-BONE-TELEVISION** **REED**. It is only people with hobbies who are out of the rut- those persons who will not let the year 2525 creep up on them without having done something in the year 1969-70 and beyond.

Peter, left, tells of these Sky Signs and of God's coming.. Song and Mr. Scothern therefore have something in common. *continued*

Rocket crashes

MELBOURNE Thursday.—The fourth Europa Rocket launched from Woomera by the European Launcher Development Organisation followed its predecessors today and crashed in the Pacific after its German third stage failed to ignite.

NEWSPAPER AND DATE UNKNOWN

LAYMAN'S MOON VIEW

7



A model of the Lunar capsule. The legs and lower half are left on the Moon. The upper half will return the astronauts to the Apollo mother ship orbiting the Moon.

I'm writing this in my study on our English campus of Ambassador College.

The second moon landing started a train of thought, that's why I'm writing now.

I simply have to reflect HOW TREMENDOUSLY GREAT the human mind is! Not only can it devise and produce the means of flying to the moon—but think of all the marvellous and intricate mechanisms the mind can produce.

Your name and address is only one of the more than two million subscribers listed on the \$2,500,000 computer at the Data Processing Centre on our Pasadena campus. The things that a computer can do are almost beyond belief!

Think of it! Man can accomplish all these marvels, yet he cannot solve his own problems here on earth. This moon landing made me realise, as never before, the REASON for the fantastic growth in the circulation of this magazine.

(extract from Mr. Armstrong's thoughts in his letter to HIS readers)

MY VIEWS ON UFO'S AND THE APOLLO TWELVE MISSION. By Terry Falter.

Everyone knows of the fantastic achievements of America on the Moon so I am not going to bore you with its repetition, but the following articles were written by ordinary people and sets out how they feel about the whole business.....

FROM THE PLAIN TRUTH MAGAZINE, HERBERT W. ARMSTRONG EDITOR who writes:-

Dear PLAIN TRUTH Subscriber,
Just a few hours ago this afternoon, as I write personally to you as a subscriber I watched a foot step down on the moon for the third time by a human being.

Although I sat up all through the night on the two Apollo moon landings, I don't think I'd do it for UFOs, for if there are such objects, then so be it.

I am however, always interested in the unknown, even if I did not understand it. Of UFOs? I have never seen a UFO but you may ask what I'd do if I did see one? I'd RUN. Although I would be interested in it I would'nt be THAT INTERESTED, and actually stand there and watch it. I would'nt

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take chances.

On the other hand I would be willing to go to the moon for a bit of excitement and out of curiosity. The last moon shot was a bit of a disappointment, because of the broken T.V. camera and also we never saw much of the film they brought back.

Have I a message to any other space 'FANS' - not really. I would always buy newspapers however, to read up on these events.

This reminds me, I read somewhere that the Russians declared that they could put a man on the moon any time they wanted to. Well I did stay up all night to watch the moon landing anyway and I expect I wasn't the only one either.

TERRY PALMER.

SPACE TRAVEL A LOAD OF BULL

by Carol Brown

When I first heard about UFOs as they are called, my immediate reaction was, when I first heard about the Americans and the Russians being the only two countries to send men up to the moon I think myself that it is a load of rubbish. However in my first opinion I have never before seen such clear photos of the Moon before and of men walking so easy on it. If they had gone so far away they would never have been able to speak to Earth so clearly if the first Americans went up to the moon and were put into isolation when they got back, surely then Why? should the other men who went up to the moon also have to be isolated (If they found nothing wrong with the first Astronauts)?

I think myself that they only went to the other side of the Earth. I think all the American and Russians are looking for is praise and that I think is the only way that they can get it, dont you. ?

material is best guided by the Author and the publishing company if they are of good repute then by all means read it even though it is better to keep an open mind. The worst trap to fall into is believing. Don't believe in anything you can't prove. Spacedrive aims to sort out the Junk Journals from the good ones, by summarising them for you and leaving it up to you to decide whether it is then worth reading. This Issue looks at SPACELINK

Continued on next page.

MOON PART OF THE EARTH?

by John Sullivan

I suspect that the Moon was once a part of the Earth and while the planet was still in the molten stage the Moon and other large particles broke away and are now floating in our Solar System. The Moon then slowly cooled and as the large gas bubbles burst, the moon set solid leaving these holes now known as craters.

OPPORTUNITY FOR ASTRONOMY

by John Sullivan

Anybody who is interested in Astronomy and the Space race is wasting their time in Britain, as the Government considers there are many more important projects here.

Myself I believe this is wrong, Britain is years behind in the Space Race when we were once far ahead; of any other countries, we could have been on the moon before anyone had thought of it: But Britain would not finance Space Projects.

EXAMINING OTHER UFO LITERATURE

This Issue:-

SPACELINK

by Spacedrive Reporters

When you buy books Journals and magazines on Ufology. DON'T MAKE YOUR MIND A DUSTBIN if you think that just by reading through a magazine that it might influence you with Junk Material. Then dont even bother to read it in the first place (Dont be a UFO 'Junkie') so pointers to good reading

Firstly, before we look at SPACELINK you can sum up what a person is like by the types of books he or she has on her bookshelf. So look hard at your book rack- ARE YOU A HARD CORE BELIEVER- A UFO "BUFF" Are YOU filling up your mind with RUBBISH? TAKE A LOOK NOW!

Therefore from books to magazines, of which the newcomer into this subject will find himself bewildered- there are enough UFO magazines on the market including DUPLICATED ones to bury yourself in.

One such UFO magazine is SPACELINK of whom the managing editor is LIONEL BEER. LIONEL BEER is a very solid down to earth sort of person who produces SPACELINK- it seems more as a hobby than anything else, this is how it appears to us. However we consider it to be one of the most important magazines to read. You will not fill your mind with rubbish by reading THIS UFO magazine.

Spacelink itself criticises other magazines on the market, you will probably see this one in their remarks column soon.

It is this part of SPACELINK that I wish to comment on. However, firstly the history: SPACELINK used to be the journal of the Isle of Wight Ufo Investigation Society, and was later taken over by MR. BEER who did not wish to see such a good effort fold up. At first SPACELINK was in duplicated format with LITHEED front cover, but as each issue came out they improved to the point where MR BEER asked his readers if they would like to see the magazine in LETTERPRESS print.

IS SPACELINK A GOOD MAGAZINE ? Spacelink is rated 4th in our TOP TEN of popular publications and as far as we are concerned OUR OBSERVANT. Spacelink is to us an aggravating magazine which tears the truth from the fiction with a tyrinical action. The truth hurts some people, but this magazine sometimes

PAGE 11
pushes a thorn into your side that is not called for, examples seen.

The trouble with its managing Editor is that he is hypocritical when he need not be so. He slams hard at struggling groups that do not come up to HIS standards. Instead of encouraging SPACELINK tends to discourage at times and should use more tact if it wants to PRINT THE TRUTH.

Apart from this I would always recommend SPACELINK on the merit of its SHARPNESS. If SPACELINK relaxed its vigil then so would other groups. If your magazine needs improving SPACELINK WILL NOTICE IT, so always be on your toes when Mr. Beer is around. I recommend Spacelink because its Managing Editor Mr. Lionell Beer is DOWN TO EARTH. He reports on Ufos-yes, but I have heard that he does not believe in them- THIS IS VERY GOOD.

Does Spacelink do this out of spite of other mags? Tearing them up to boost their sales? We wish we knew?

What I mean by this is that in every copy of SPACELINK you will find a list of magazines and you will see next to them REMARKS on this publication. One example was "X magazine price -- (POOR QUALITY SPIRIT DUPLICATED)"

I think it is fine to let people know what they are buying for their money but SPACELINK should really stick to news reporting and stop making stupid statements in thier REMARKS column about "POOR" duplicating which the reader will find out in due course. The policy of SPACE-DRIVE is also to be ULTRA-CRITICAL, and will weed out the good from the bad, whether it be UFO magazines, UFO 'Personalities', or UFO GROUPS. Perhaps with the field narrowed in sorting out the JUNK, UFOLOGY and SPACE-RESEARCH, perhaps even religion can proceed unhampered by all the SHARKS that are jumping onto the band wagon for financial reasons. SPACE-DRIVE recommends SPACELINK without hesitation..long may it run.

Why I am HERE

BY DAVID PROCKTER



THE TWO PHOTOS OF DAVID ARE YEARS APART.

David Prockter is an undescrivable character, for this magazine he has written articles to follow this one. He is an entirely different person today to the boy we used to know.

He joined the ISTR in 1965 at 13 years old and from his brilliant pen flowed some very good articles. Whether these were entirely original or not the outcome was always rewarding.

David was the life and soul of the club, He always came to meetings, never failed sometimes he was the only member to turn up at meetings. He came in all weathers usually soaked to the skin-I have seen Rats look better.

Members came and went but David like the rock of Gibraltar stayed firm.

He was of good character coming from a good but over strict family I believe and this I think led David to other avenues of 'escape' from reality and expressed his feelings in writing articles in a quest to become recognised.

He has now wandered into the music field now writing songs, of which his favourite group is the BUFFALO SPRINGFIELD. David was a bad boy at times, but he will always stick by his friends, unfortunately some of his friends are slightly different from the rest of us whether this is good or otherwise —

but he realised this and is trying to right the wrong. He will always stick by his friends, no matter how WAY OUT his friends are to us.

Apart from music David wants to write freelance for any club or Journal that will HAVE HIM.

The ISTR group may say goodbye to David as a club member of the main group and in future he wishes only to pursue his other interests.

David has now joined the ESCD branch and writes:

"This may come as a shock to some of you UFO people to know that I have left the ISTR Group (UK) for good. I am now writing freelance for any magazines who would like me to write articles for, including AURO, DAPRO, STAR

and perhaps COSMOS.

I am writing for Mr. Harris effort not because he has been my good friend for just over four years, but because Mr. Harris' magazine Space-Drive is one of the most original and most important magazine to appear in the last year. FLYING SAUCER REVIEW and SPACELINK, do not cater for the amateurs and INTERPLANETARY NEWS would be better off if it did not exist.

I left the ISTRG because the ~~secretary~~ society does not do any of the things that it says it does and many other reasons that cannot be put into print.

I shall be writing for this magazine until it becomes fully recognised and I hope you will can give it all the support it needs."

DAVID PROCKTER

EDITORS REPLY. I have printed David's letter just as a point of view, which is not necessarily the views taken by others in the club. No club should air its dirty linen in public and that goes for David too.

Moon Babies

BY

I wish to point out that the only part of this article which is not my own work is the first part. This was an interview between Mr. E. Harris and his Cousins in September 1966 and Mr. Bob O'Rourke in Interplanetary news. NO 15 Vol 4 1966.



JUNE KINLARD 1968

On this article I have therefore commented, the rest being my own beliefs and taken from no other source.

MORE ABOUT MOON BABIES.

To be or not to be, that was the question put to Mrs June Shepard those who read her views would no doubt like to continue along these points First of all I would like to say that the moon is a long long way off. A far distant dream of the future. But one day to become a reality. (already has). To begin with we are told that the moons gravity is only one sixth of earth's. But this alone does not give anyone the knowledge to say that and quoted from H.G.Wells FIRST MEN IN THE MOON that inhabitants of the moon will be soft sponge like creatures. Praise be to Mr Wells. He was a talented writer, but of SCIENCE FICTION not of FACT. Facts are the whole reason why the Editor Mr.E.Harris is publishing this magazine, this is why you should not allow yourself to be influenced by a lot of rubbish.

Who can therefore say what a moon being would look like. Certainly not like you or I and certainly not one who has made a million pounds by having a brilliant but pardon the expression of a cockeyed imagination.

"Weak muscled race.?" this is the question put to Mrs Shepard -"is probably what moon babies born on the moon will be."

"NO!" She exclaimed. But is she sure? But then again she could be right-who knows.

Mrs Shepard then went on to say that babies will probably be born normal, but as the moon's gravity effected them they would become weaklings and would only overcome this by repeated journys back to earth to recuperate.

I am therefore of the conclusion that Mrs Shepard has been reading too much of this Science Fiction.

The other question was was marriage between earthlings and aleins in the future ever

be possible? Her answer was " This time I think it would not work out as their atomic structure may be entirely different to our own. Therefore raising or even attempting to have children would be virtually impossible.

Really Mrs. Shepard, I am beginning to think that you have already visited our outer Planets. My own views on the subject, believe me are my own and do not come from any paperback library.

Firstly, I believe that Babies will and can be born anywhere, if it is possible to live on the moon-then babies will be born there. They will probably become acimatised to the moon's conditions and of course the worlds greatest scientists will not be wasting time on unnecessary projects. They will have accomplished many things to add comfort to the change of living. The moon will undergo strenuous inspection and investigation by scientists but for many years before it is colonised so I do not believe we will have to keep trotting back to earth to recover.

THIS ARTICLE HAS BEEN REPRODUCED BY THE KIND PERMISSION OF INTERPLANETARY NEWS, OUR COMPANION MAGAZINE.

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LOST IN SPACE.

Wow! How she has grown? Who? Why "Little" Penney Robinson in the new Lost in Space series. Penny played by Angela Cartwright has been in a host of Films since 1956 and viewers were treated to a new style Lost in Space when they tuned into ITV on the 12th December this year.

Someone has been doing their 'homework' in this new series. On the 19th December viewers saw how the Robinson Family arrived back on Earth in Time, in the spaceship Jupiter 2, to 1947 (ironically same date as the first recorded sighting in Michigan) even the same term was used by an Actor towards the end of the programme when he said — "The shape? Well it's a kind of — Like a plate, Yeah that's it — a Saucer — I suppose that's what you could call it a FLYING SAUCER.

Yes someone has been doing some research into the background of UFO's and applied it to Lost in Space. They even went as far as saying that this UFO (The Jupiter) Blacked out all power etc.

The New series has made its time jump also — all the actors are at least 3 Years older Now, Just look at "Little" Will (Played by Bill Munny) and Angela Cartwright — she in particular is no longer a little girl but a tall good looking teenager, nearly as tall as Mrs Robinson. Angela (Penny) started her career in Los Angeles and was described by an English Newspaper in 1956 as a typical American girl. But she was not American by Birth. Angela was born in Cheshire England, and partly raised in Canada where her parents moved to Toronto when she was only one year old.

Then two years later, in 1955 the family moved again to Los Angeles California.

Angela's professional career started when arriving in California; there a neighbour encouraged Mrs Cartwright to put her and her sister Veronica into childrens fashion model —

It was from this that stemmed Angelas future in Films. It was her long dark hair and huge Hazel eyes that made her the ideal choice for films such as "Somebody up there likes Me" "Something of Value" "and she was also in the Musical film "Sound of Music".

Lost in space is her new film adventure series and long may we see her on T.V. and watch her grow up — as we have watched her growing up since the Old series.

The New series is much improved on the last and long may it run. Thanks to 20th Century Fox Films of 31, Soho Square, London for supplying this Information.

Also thanks to Mike Parry for his kind co-operation with the ESCD dept for typing this for me.. EDITOR.

SPACE-DRIVE GERMANY SECTION NEWS.

UFO NACHRICHTEN UND SZENE DER UFO.

Space-Drive Fragt der obend Zeitschrift diesen fragen: WOLLEN SIE BITTE UNS HELFEN? Wir möchten auskunft von Ihnen ob Sie können SPACE DRIVE in Deutschland herausgeben?

In England UFO Nachrichten is viel gelesen und die information is immer willkommen. Manchmal sind nachrichtenen übersetzung von andere UFO Gruppe, und in ihr eigenes magazin gedruckt. SPACE DRIVE können, für Deutschland Nachrichten aus England in Deutsch drucken und hoffentlich bald andre UFO Gruppe in Deutschland interesierte sein und vielleicht für SPACE DRIVE senden. Wenn es populär bekommen dann können wir mher auf deutsch drucken. Unsere andere magazin INTERPLANETARY NEWS ist nun voll GEDRUCKT, nicht mehr in DUPLIKAT form, und heraustielt zum vielen Länder durch den welt. SPACE DRIVE Zeitschrift ist für seriös studie auf der nachdruck der UFO und wie wir können das nachdruck zu unser eigenes machine stellen.

Wenn Sie interesierte sind an: Space Drive 19, Lealand Road, Tottenham, London, N.15.

Ich wünsche alle froh Weihnachten und Glückliches neues Jahr. EDWARD HARRIS.

UFOLOGY IS A DEADLY BUSINESS

An interesting speculation on the subject which interests so many people is the fact that many of the researchers in this field have met with fatal accidents. Societys have closed down under mysterious conditions and it seems likely that more organisations are coming under the axe.

To quote a case typical of this subject, consider the honorary President of U.F.O.I.C. Australia Dr M.Lindnter. On the 17th August he was on a tour of the World calling on UFO organisations to foster goodwill, part of that tour included the National Space and UFO Convention. Unfortunately his arrival was to close to attend the Convention and give his lecture which no doubt would have shed some light on the phenomena of UFOs. He continued on his journey and the next news that we have is that he met with a tragic accident whilst trying to board a moving Train in Germany. A man with his integrity is hardly likely to try and board a moving train in especially a foreign country.

Betty and Barney Hill have both died from mysterious causes, quite recently I.G.A.P. - GE informs that they are unable to continue. Reasons I am afraid we do not know for sure.

As I write this short article I wonder who is next! You or Me. It is up to us to come to better terms between each other. We seem to have any number of enemys that we know nothing of. So when will the mysterious hands strike Next Week tomorrow or

N.

ugh!
by Mike Parry

LETTERS TO THE EDITOR.

Dear Sir,

of this and the better. Looking forward to
cutsings - it is a good write up. It is a good
start, what you need is a little publicity it
goes a long way.

Pity they have made the mistake of using

The way I can help you, and this also applies to me, that at times you will find you run short of material and this you will have to face at one time or another. You can use material from AURO Journal any time you wish, usual credit given. This way we both gain. I find our readers like this idea what do you say?

If you get a correction on the write up you send me a copy. If you are anything like me, this running a journal gets in your blood. I get a lot of satisfaction from it. Will keep in touch.

John Parkinson.

Aliens Unidentified
Research Organisation.

Several Letters have been received from Mr John Searle and are of massive content. So much so that we have no room to convey the jist of the letters and readers will be interested to Note that the Editor of I.P News is scheduled to investigate the Organisation. In this respect I as the Editor of Space Drive will be accompanying him and the results will be published in this Journal. Also any material as Photographs.

ACKNOWLEDGEMENTS AND THANKS TO THE FOLLOWING:- Daily Mirror Newspapers American Embassy Press Office, Tottenham Herald, AURO Journal and all other persons who have contributed to this Journal.

The appearance of this magazine is unfortunately not of the best quality, for many reasons, one as stated in the Editorial.

It should be noted that this Journal is issued Free and therefore its appearance is of a secondary nature. Later issues will be improved upon should readers feel as disposed as to send in Donations to help.

For Further coverage of the Apollo Programme in Detail readers should consult the Societys Journal Interplanetary News. As unfortunately we are unable to report all the facts in Space Drive

THE EARS THAT POINT TO STARDOM..

MAKE-UP man Fred Phillips's home cooking was a winner.

Mind you, the recipe was a bit odd . . . take a few ounces of rubber, place in a greased, oven-proof mould, and bake in a medium oven (350 deg.) for about four hours.

But the result was little short of spectacular—a few pairs of pointed rubber ears that have become famous.

Hero

You've certainly seen them if you've watched B.C-1 at 6.15 on Saturday afternoons during the last few weeks.

They belong to that inscrutable Space hero Mr. Spock, played by Leonard Nimoy, in the American science fiction series "Star Trek."

Fred Phillips used to make Mr. Spock's jointed ears in the TV

studio in Hollywood but found it was more convenient at home.

Says Fred: "I made them with rubber, cast in moulds of Leonard's real ears." He still makes the occasional replacement batch now.

There's even a reason for the odd shape of the ears. "Star Trek" producer and creator, Gene Roddenberry, carefully worked out the fictional background of Mr. Spock and his home planet Vulcan.

Roddenberry reasoned that Vulcan had a hot, dry climate with relatively little surface water and an exceptionally thin atmosphere.

Extra-large pointed ears were necessary for its inhabitants so as to "cup" the fainter sound waves more efficiently in



LEONARD NIMOY as Mr. Spock.

the thin atmosphere.

For Leonard Nimoy, the ears, and his part in the series, have brought him instant fame.

He's a quiet, serious man, married with two children, and he's staggered by his success.

Mr. Spock fan clubs have appeared through-

out America—and the series has initiated buttons which show the baffling words "I Grot Spock."

Nimoy got his drama training at college in Boston and later appeared in such TV series as "Dr. Kildare," "Rawhide" and "The Virginian."

But it was as Mr. Spock that he became worldwide celebrity.

And when he visited one of America's Space centres, it was the astronauts who were lining up for the autograph of the Man from Vulcan.

So if it's fame you're after, try a pair of pointed ears. Remember: Fred Phillips has got the recipe.

JACK BELI

STAR TREK 1969

A POPULAR

T.V

SERIE

LAST SHOW

WHS

ON

XMAS

SATURDAY

—



IS STAR TREK TO END ? If so it will return next year. Dr. WHO NOW TAKES over till then.

FROM - DAILY MIRROR - WITH THANKS ABOUT OCTOBER 1969

Books etc.

Groups..

WORTH JOINING

WORTH READING ---

SPACEFLIGHT
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Car of the future

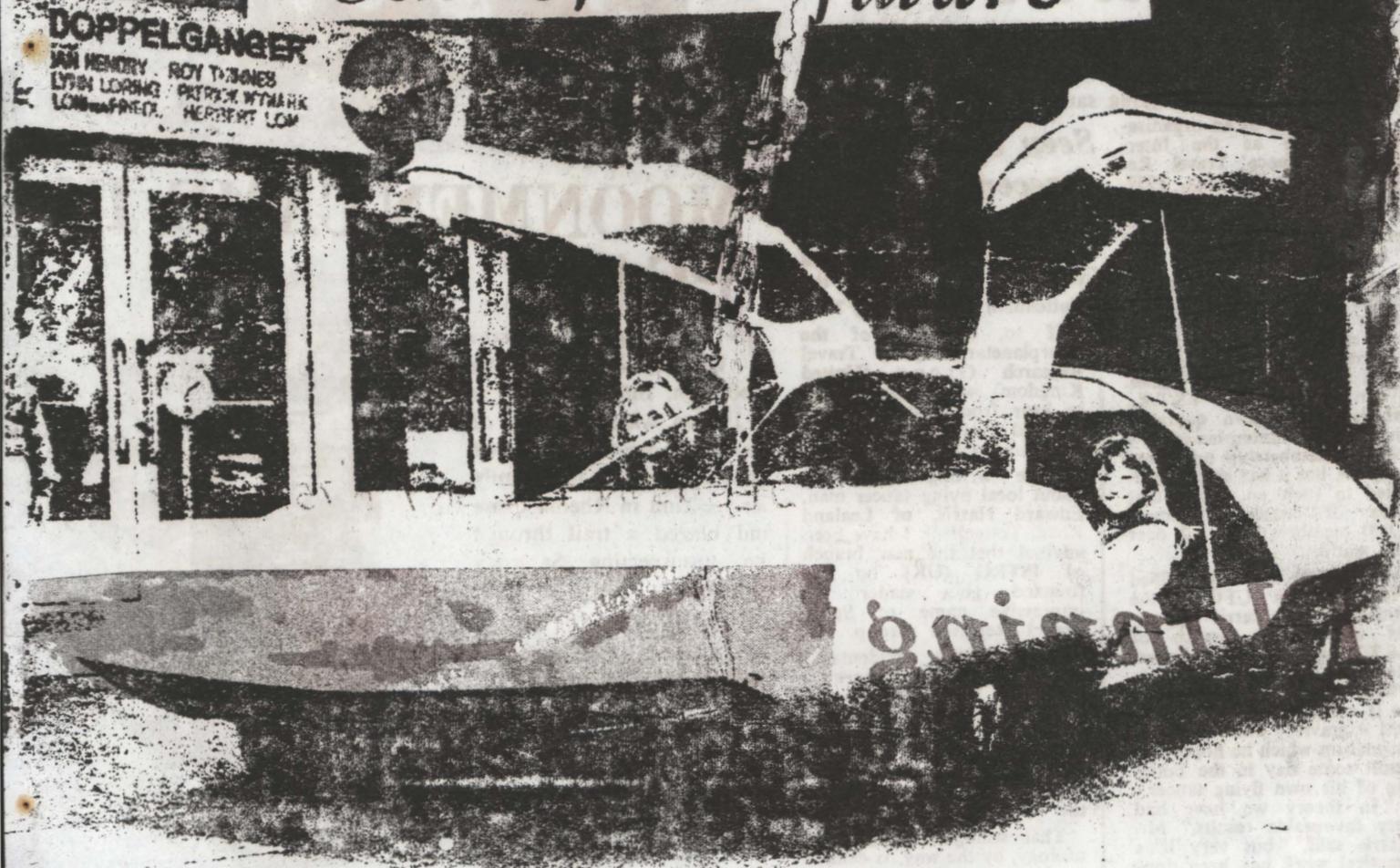


Photo: David Willis, 253 Durants Road, Enfield.

This sleek, powerful looking car of the future caused a stir when it was put on display outside the Regal Cinema, Edmonton, on Monday. The

car is the actual one used in the film "Doppelgänger," now being shown at the cinema.

Trying out the controls are 10-year-old Maria Monti, of

Victoria Road, Edmonton, and in the passenger seat is Miss Jill Royal, a member of Pro-Motor (Europe) Limited, responsible for taking the car around the cinemas.

In the year 2525 continued from page 8 - (BY E. HARRIS)

MORE ABOUT PETER SCOTHERN



Rev. Peter Scothern has been ministering to the lost and suffering for over 20 years. He is internationally known having visited many countries and nations. Countless lives have been transformed, numerous incurables healed and the faith of all titudes inspired. Rev. Scothern has preached to congregations numbering 75,000. He has ministered within the Church of England, Baptist, Methodist, Brethren, Elim, Apostolic, Assemblies of God, Church of God Churches, as well as theatres, civic halls and public stadiums worldwide. 20,000 thronged the Brockfield Stadium, Sierra Leone to hear this message of faith and to witness indisputable miracles of Divine Healing. The national press and radio gave unbiased coverage of the crusade. The President also sought personal prayer.

JESUS
IN
SKY →

TRUE OR
FAKE?

a Flying Saucer

A YOUNG Tottenham man, 28-year-old Mr. Edward Harris of Lealand Road, is busily engaged in drawing up plans for his own flying saucer.

The founder of an organisation known as the Interplanetary Space Travel Research Group in May, 1957, Mr. Harris is also introducing a new magazine shortly devoted to space matters called "Space-Drive".

His interest in space research began when he was only 16 when he and another youth worked together at firing miniature rockets on Wanstead Flats, in Forest Gate. When he founded I.S.T.R., which has its own quarterly magazine, "Interplanetary News," membership numbered only 10, but it has since multiplied to such an extent that today it boasts of almost 1,000 members from all over the world.

An expert on Unidentified Flying Objects (UFOs to the initiated), Mr. Harris recently set up a new branch of I.S.T.R. called Space Travel Research Group, and it is within this organisation that he is conducting research into anti-gravity and electro-magnetism which he hopes will result some day in the building of his own flying saucer.

"In theory we have had very favourable results," Mr. Harris said, "but very little practical work has been done yet."

Seen any UFOs recently?

HAVE you seen any flying saucers or strange-looking objects in the sky around the Tottenham area recently?

If so, members of the Interplanetary Space Travel Research Group (United Kingdom) would be pleased to hear from you, and even to send you a special questionnaire to answer.

Since writing last week about local flying saucer man, Edward Harris, of Lealand Road, Tottenham, I have been advised that the new branch of ISTRG (UK) he has founded goes under the impressive name of Space Travel Research Group.

ISTRG (UK), incidentally, according to its honorary president, Michael V. Parry, is a non-profit-making organisation dedicated to providing an interest in the fields of space research, astronomy, space science, ufology, and the like.

That strange-looking word, ufology, by the way, is defined as the study of flying saucers and the sightings of these craft—if there are such things.

MOONMEN CAME IN PEACE

ON Saturday, Tottenham was invaded by the Moonmen. Infiltration began at 11 a.m. when the band of outlandish creatures emerged from their base at the Family Service Unit in Rheola Close and blazed a trail through the unsuspecting Saturday shoppers.

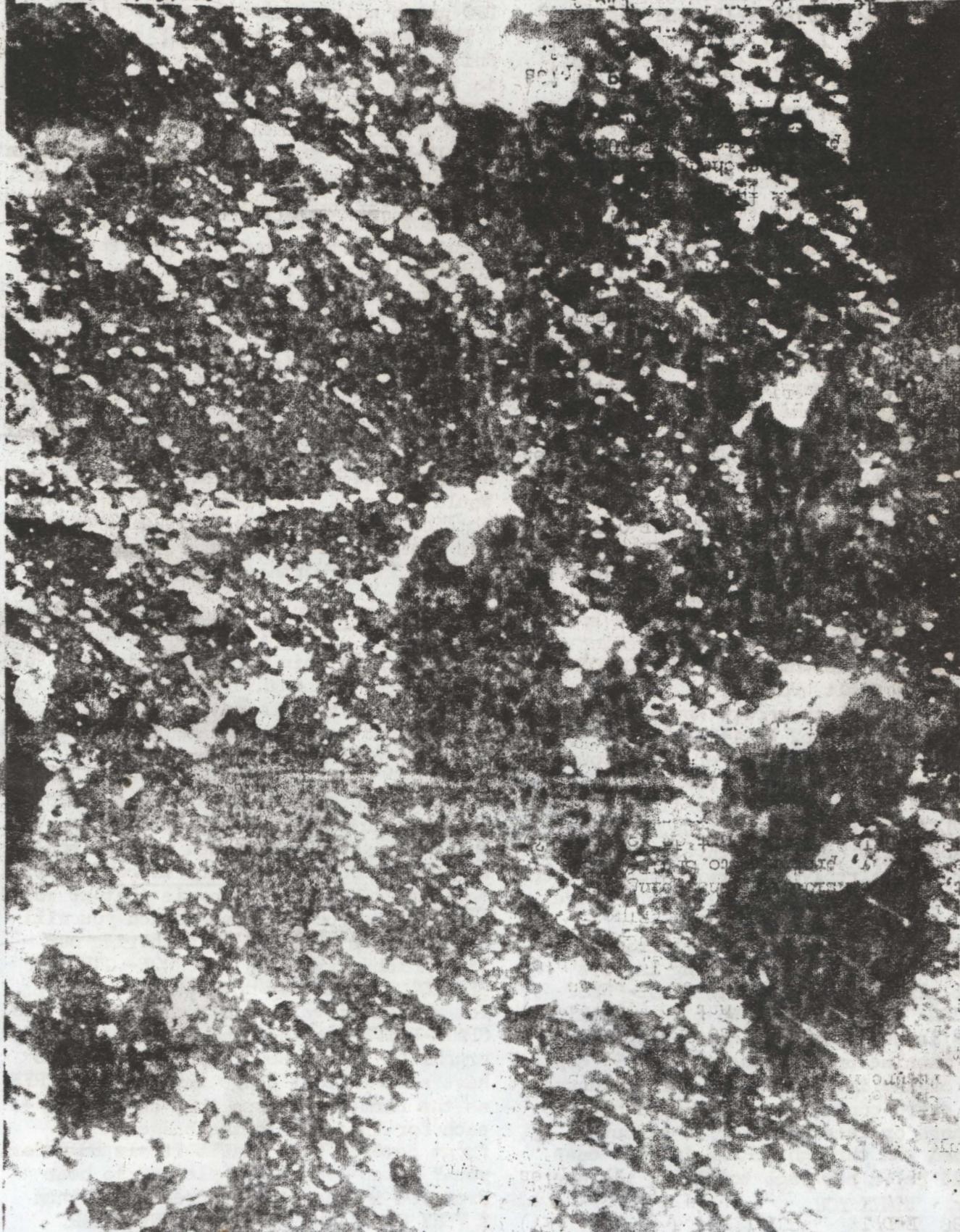
But the moonmen had not come to conquer. Their motives were peaceful, although they did score a victory with local children who, as our picture shows, joined the procession, which danced and sang its way along the High Road.

The Pied Piper march ended at the flats in Reed Road, where children came down from their homes to sing with the moonmen, ask them questions and generally have lots of fun.

With Saturday's venture, the moonmen—in other words, the Family Service Unit helpers—wanted to remind local residents of their work in helping to keep families together.



Over 5% of the lunar surface is composed of glassy spherules, made by meteorite impact, and Astronauts Armstrong and Aldrin reported that they were slippery to walk on. The spherules of various colors in an aluminum dish, range from colorless through gray-green, green, brown, and wine-red to opaque. The largest spherule is 0.4 millimeters in diameter. PHOTO FROM IPS - SCI-3301 - same as 69-3968.



FLASH! E.S.C.D. TO BECOME
INDEPENDENT FROM ISTRG AND
CHANGE ITS NAME TO SOMETHING ELSE

Dear Friends,

Please accept this letter as a personal one, although it is a DUPLICATED one- but I am just saying Hello and welcome to all of you. I have introduced onto the UFO market this periodical-SPACE-DRIVE, and hope you will appreciate it and the efforts that went into it.

To celebrate its birth, and ironically also the NEW YEAR; as the magazine was three quarters published by then on 1st JANUARY 1970- I have presented it to you with a FREE GIFT. This is my SUNRISE magazine which fared very badly last year and folded up on the very first issue. This was due to us not being able to get a sponsor for the next issue. I still have 900 out of the 2,500 to give away.

I have included SUNRISE with SPACE-DRIVE because just to show you that SPACE-DRIVE could be done similar with a very small outlay. It would however take a long time. So if you would like to see SPACE-DRIVE like it then please write in.

At present it is being published on an old machine that should have gone into the Ark long ago, in order to save money- MY money, as the magazine is free and is only being produced as a hobby at present.

I wish to apologise for some spelling mistakes which occurred while rushing the manuscript. One word was "INCANDESCENT" which was spelt wrongly.

SPACE-DRIVE therefore would request donations of help, if it is liked, and could be the mouthpiece of YOUR group by using it as a notice board for YOUR ideas. It will make interesting reading.

PLEASE When writing to us, enclose a stamped self addressed envelope if you ever want a reply. Otherwise your letter will just be read and filed for future use, if any.

A future note for this magazine is that, I am considering changing its name already, probably to SPACE-QUEST or SPACE-DRIVE QUEST. (What do you think?) This issue is in very short supply as the machine broke down and only 99 copies out of the intended 2,000 were produced. Any extra copies required would have to be more or less PAID for to execute a second run through. PRICE in this case would be 1d per page totalling 1/- per copy. THANK YOU.

Because of this shortage only one copy of SPACE-DRIVE will be issued out to every UFO group and magazine in the world.

This magazine is not MERELY just another Unidentified Flying Object magazine but is intended to look into the structure and complex of UFOs, and apply this to ESCD and our own experiments.

SPACE-DRIVE (meaning to drive, the DRIVE into space) was originally designed to publish ESCD experimental saucers and show the reader HOW they worked so that the reader if a researcher could put his own "spaceship together." We were to publish the plans and components needed to create such an anti-gravity field. But we were advised by another researcher in BERKSHIRE that this would be very unwise. Therefore we will probably now only publish SOME details and drop a few clues. It is then up to the experimenter to piece this together himself, without giving anybody's secret away. My only request in return for this is this Would other researchers like to part with some of their knowledge in a kind of swop. You may have what others are looking for even if it is worthless to you.

HOW TO JOIN E.S.C.D.

It is easy to join our ESCD and it is entirely free. Although a voluntary donation would be welcomed no matter how small. TO JOIN just send your name and address to me and I will add it to our files.

RULES AND REGULATIONS ?

There are no strict rules except one, of which we jump on you if it is broken. We would request that all new members would honour and observe secrecy in confidential matters. The other thing is that we would like it if once you have joined you will give us your support in furthering our aims which are: " FOR TOMORROW- ONE STEP BEYOND" this is our motto.

You will receive the following: BULLETINS, SPACE-DRIVE magazine, and will go on very organised skywatches if you wish. We do have a cloth coat badge which is NOT FREE as the firm that makes them charges 16/- each for them, it is the badge on the front cover. Well that's it. Is ESCD for you? If so I would be pleased to hear from you in the near future. Until then A VERY HAPPY AND PROSPEROUS NEW YEAR.

EDWARD HARRIS

MR. SEARL PLANS MOONCRAFT



Deep within the provinces of Berkshire lies an organisation known as SWALLOW COMMAND. It is within this organisation that Mr. John Searl hopes to put a man or several men on the moon very soon.

Several years ago, Mr. Searl claims he discovered a means of propulsion that was far from the orthodox.

But so far the Flying Saucers he claims to be building seem to be non-existent. When an investigator arrived to meet Mr. Searl he saw nothing startling.

Sometime ago Mr. Searl sent me a letter in which he claimed that he was helping the Americans in their space programme that if in this instance the Apollo 11 got into trouble on the moon he would do his best to rescue them putting over the need for such a project such as LUNIC ENTERPRISES.

However, because SPACE-Drive was rushed in meet deadlines most of the text of this has been mislaid.

Mr. Searl has recently announced to the press that he needs one million pounds to build what he calls his LEVITY DISC. So if you would like to make a donation please send it to the address seen in this magazine.

The difference between LUNIC ENTERPRISES and the ESCD or whatever it will soon be known as, is that we are hoping for voluntary support and therefore remain FREE.

Mr. Searl has announced that in order for the LEVITY DISC to reach the moon it will have to have tracking stations everywhere. He was also saying that the cost of manufacturing the parts have been slowly increasing and that it is becoming increasingly difficult to afford the cost.

SPACE-DRIVE wishes Mr. Searl and LUNIC ENTERPRISES the best of luck in the future and hope that all the rumours and speculation about his organisation will cease when Mr. Searl flies the first LEVITY DISC and amazes us all.

THIS IS TO ANNOUNCE AN IMPORTANT CHANGE IN THE I.S.T.R.G. UK.

Several members of this group have now decided to form on recommendation of an emergency meeting to be held when this was typed on Friday 9th January that out of the ashes of an old established club (ABOVE) there has risen a new kind of Space Research Club under the new Presidentship of Mr. Frank Hyde who has now made arrangements with the American Embassy for their full co-operation in our new formation. Therefore we officially announce that the new name of the above club is now known nationally as:

NATIONAL INTERPLANETARY SPACE TRAVEL RESEARCH ASSOCIATION. We will be producing a new magazine which will cover all aspects of SPACE from Astronomy to UFOlogy. The name of this magazine will be announced, but will be vastly different from anything seen on the space and UFO circuit today. SPACE-DRIVE now will disappear and become a supplement in the new NISRA JOURNAL. EDWARD HARRIS

AS with Apollo-11, one of the most exciting moments of the Apollo-12 mission was the actual landing on the moon. Astronauts Conrad and Bean, — set Intrepid down only a quarter of a mile away from Surveyor-3, the unmanned craft which landed in a crater on the Ocean of Storms.

The astronauts had also cutting shears and a sapsack to retrieve small pieces of the Surveyor craft. The pieces were brought back to earth and examined to find out what happens to materials that have been on the moon for a long time.

Apollo-12 shows value of manned space missions

The space-flight that began with a flash of lightning. That is how the second manned flight to the moon may come to be remembered.

But the Apollo-12 mission has better claims to fame. In the 10 days, 4 hours and 42 minutes between launch and splashdown, Astronauts Pete Conrad, Richard Gordon and Alan Bean carried out the most intensive celestial investigation so far. The moon's Ocean of Storms, on which Conrad and Bean lived for nearly 32 hours, is now the most thoroughly explored region in the universe outside earth.

The moon explorers covered about 11 miles during their two moon-walks, and retrieved parts of the "Surveyor" space craft that had been on the moon since 1967.

Guided by scientists on earth, Conrad and Bean gathered about 80 lb. of moon rocks, which they photographed and carefully documented. The scientist at Houston, linked by radio contact, told the explorers what to look for, and discussed the terrain from which the rocks were gathered.

They left behind a nuclear-powered science station, which is expected to operate for over a year. The way in which the instruments were set up and the first findings from them have earned warm praise from the scientists concerned.

Apollo-12 demonstrated that astronauts can make a pinpoint landing; and the pictures taken on the surface and from orbit are expected to reveal much new information about the moon.

A leading American scientist, Dr. Garth Latham, of Lamont Geological Observatory, said of the flight: "Those who questioned the worth of manned missions of this sort learned quite a lesson."

The next manned mission to the moon — Apollo-13 — is due to be launched on March 12. The landing site, in the Fra Mauro formation about 150 miles south-east of Apollo-12's landing site, will be determined after close study of Apollo-12 pictures of the area.



Alan Bean with ALSEP PACKAGE ON MOON.

MOON ROCKS GO ON WORLD TOUR

A piece of moon rock about the size of a walnut will be on show at the Geological Museum in London from December 27 to January 5.

This rock sample, brought back by the Apollo 11 astronauts, will then be displayed at the Royal Scottish Museum, Edinburgh, from January 5 to 7, and the City of Liverpool Museum from January 9 to 10.

Another Apollo 11 rock sample has already been seen in Moscow as part of a USIS exhibit *Education USA*. The exhibit is a road show and will tour throughout the Soviet Union.

In all, six specially mounted moon rocks are at present touring the world, under the auspices of NASA and USIS.

Coming soon— the lunar jeep...

Pete Conrad and Alan Bean obviously enjoyed their two long spells of work on the moon's surface. They hopped, skipped and jumped around, and joked and laughed as they described the scene to Mission Control.

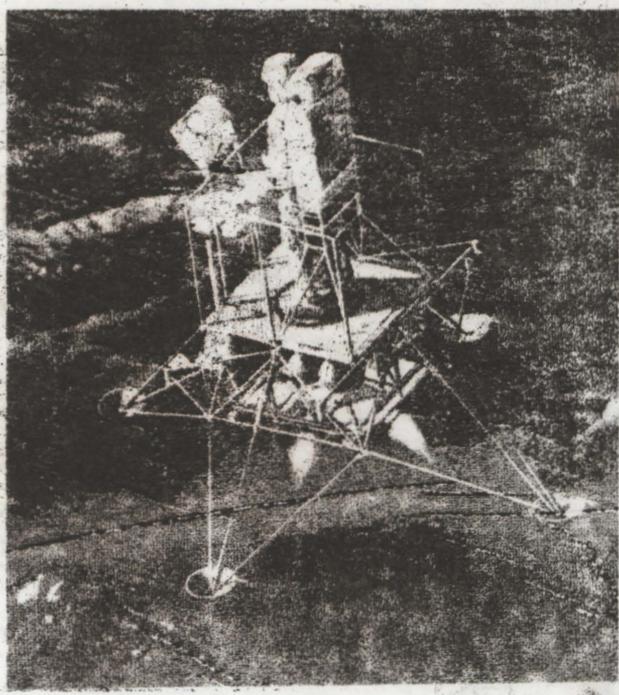
It should be even more fun for the moon explorers of 1971 who will have a lunar jeep to run them around. The picture on the right shows what it looks like.

This first version of a lunar roving vehicle will be used on the last four Apollo missions (Apollos 17-20) to allow the crews to carry out a much more extensive exploration of the areas in which they land.

The lunar jeep has been kept as small and light as possible. It weighs about 1,300 lbs. on earth, but not much over 200 lbs. in the one-sixth lunar gravity.

On the moon's surface, the lunar jeep will be able to range as far as 10 miles from the landing craft, though it is unlikely to travel so far on its first missions. Top speed is about 10 miles per hour.

The lunar jeep has wire-mesh wheels each driven by a separate battery-powered electric motor.



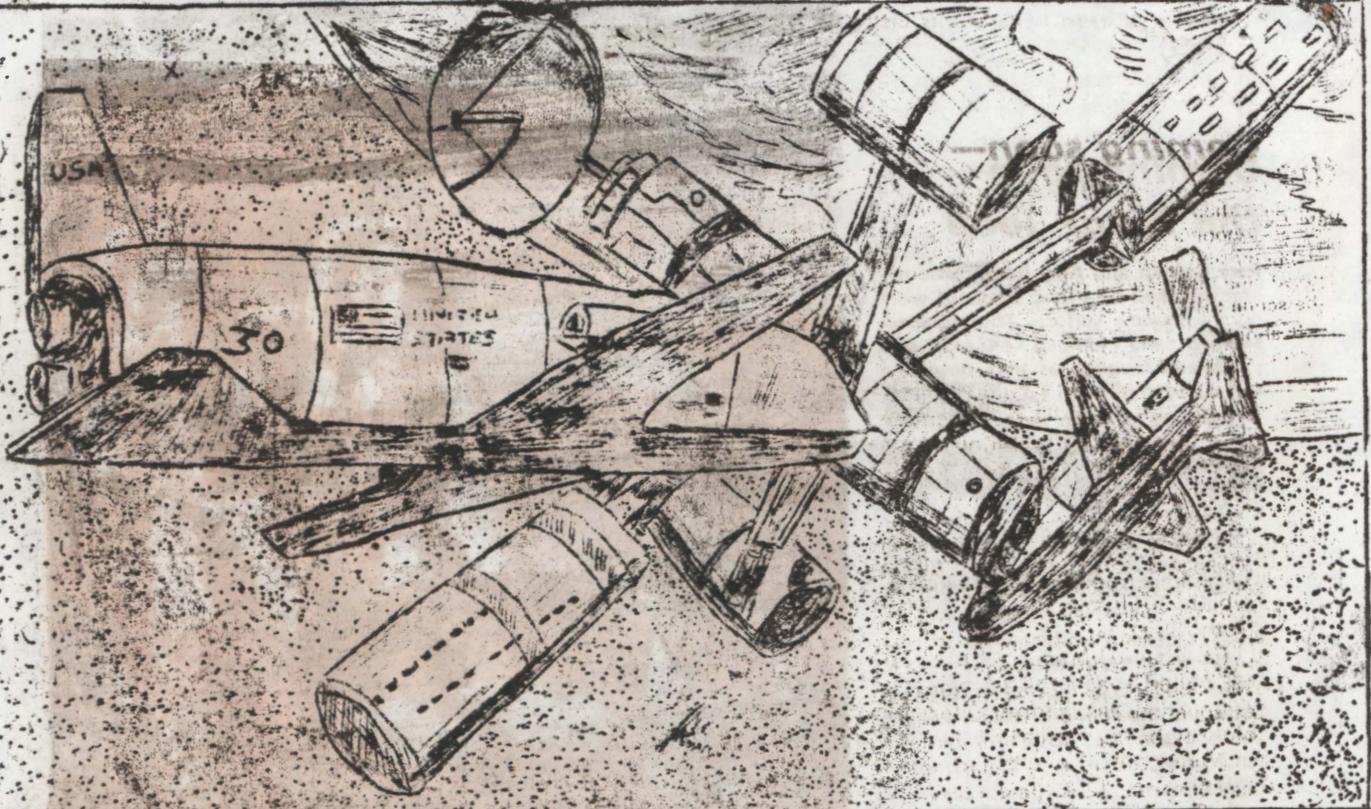
... followed closely by the Fleep

To cover really big distances on the moon, astronauts of the future will have to hop from point to point, just as we do on earth, by means of helicopters. So, in addition to developing a series of flexible-wheeled roving vehicles, the United States is experimenting with personal flying vehicles of various types.

Developments like the rocket belt, the flying chair and the flying pogo stick have been described in past editions of *Science Horizons*. The latest idea, pictured on the left, is a one-man flier called Fleep— or Flying Lunar Excursion Experimental Platform.

It has been developed by North-American Rockwell, builders of the Apollo command and service modules, and will be tested first at NASA's Langley Research Centre in Virginia.

All these vehicles would make hopping around the moon an easy matter. The rough surface would present no hazards, apart from landing. Nor is the lack of atmosphere a problem. The vehicles are kept aloft by small rockets, using hydrogen peroxide as fuel.



THE NEXT AEROSPACE TRANSPORT SYSTEM

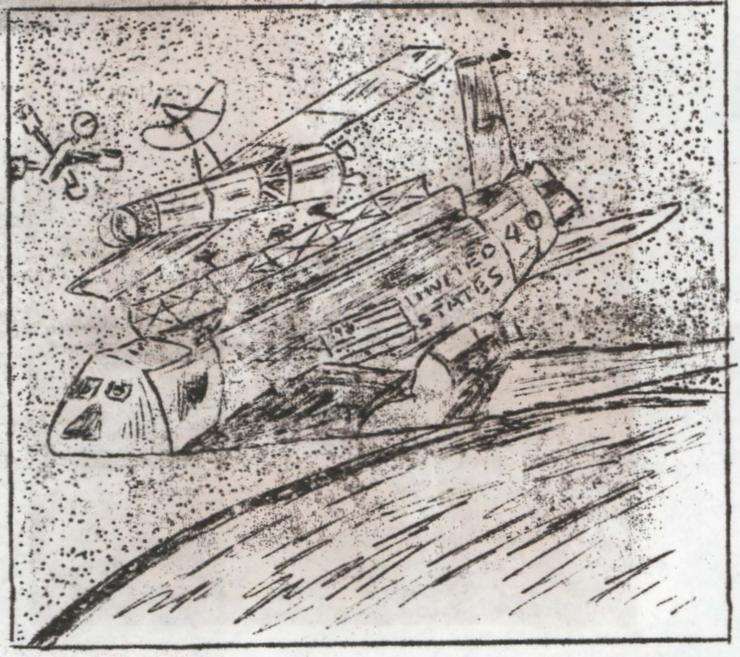
TWO GIANT winged shuttles delivering men and cargo to space station. A STUDY NOW UNDERWAY FOR LATE 1970'S BELOW: ORBITER AND BOOSTER ENTERING EARTH'S ATMOSPHERE FOR LEVEL FLIGHT

CREDIT SCIENCE IS HORIZON'S U.S.

Space shuttles to space stations

When the current series of Apollo missions ends in 1972 a new development will take place. After Apollo 20, extended missions to the moon will follow. In the future, to explore space a large space station will be needed.

This will be able to accommodate a number —



25

Concept of a 12-man space platform in earth orbit. The United States is studying this as a possible support vehicle for a post-Apollo programme to land men on Mars. The circular openings at the top and bottom of the station are docking ports for shuttle rockets. Interior facilities include control area, equipment laboratory, exercise room and quarters

of scientists and technicians and will have a life of at least 10 years.

A primary need for such a station is a completely new space transport system consisting of re-usable vehicles, which could ferry crews to and from the space stations.

Re-usable vehicles of this type are called space shuttles. Several design studies on them are already being carried out.

As at present envisaged, space shuttles will be powered by rocket engines and will take off vertically from the launching pad.

A space shuttle will consist of an orbiter vehicle and a booster element. The orbiter vehicle will contain crew, passenger and cargo accommodation, as well as fuel for the orbital and landing phases of the mission.

The booster will carry the fuel needed to achieve orbit. It will also be manned, and have a power system that will enable it to return to earth and make a horizontal landing on an airport.

A central reason for constructing a space station or space base in earth orbit is to provide a facility for research that cannot be conducted here on earth. Like laboratories on earth, the space facility would be outfitted with advanced equipment and instruments, and staffed with research and engineering personnel. One use for such a laboratory would be to conduct fundamental physics research. For example, using cosmic ray particles that are thousands of times more energetic than any that can be produced in the



largest particle accelerators on the ground, fundamental experiments would be conducted on the constitution of elementary nuclear particles. The laboratory would also be used for experiments on processes that, when taking place on the ground, normally depend on gravity gradients for particle diffusion. Such activities would lead to use of the laboratory for the growth and purification of crystals and materials for solid-state electronic devices.

One of the most fruitful areas of research is expected to be in the field of biomedicine. The

opportunity to experiment on and observe men, animals, and other biological organisms under space conditions, which are fundamentally different from conditions on earth, will be a powerful supplement to ground-based research.

Astronomy is another area of science that has a very long-term interest in a manned space station or base.

The space station and the shuttle are, in fact, the keystones to the next major accomplishments of America's space programme, the Space Task Group believes.

POLLO 13

Here is some advanced information on the next Moon flight.

To begin with the crew will be James Lovell, Thomas Mattingly, Fred Haise. Now the story:

A rugged cratered formation in the foothills of a vast highland area of the moon is the target for Apollo 13 moon landing mission. The mountain area is the Fra Mauro formation, named after a sixth-century disciple of Saint Benedict which lies just south west of the moon's midpoint as the Lunar disc is viewed from earth.

Actual landing point is a site near the Fra Mauro crater itself, a 37-mile wide pit and a dominant feature of highland area located at 17 degrees 36 minutes west longitude and 3 degrees 48 minutes south latitude. It is about 110 miles east of the Apollo 12 landing site in the Ocean of Storms.

Some Lunar experts believe that in this area is a upheaval of lava rock from deep within the moon's interior. If they are right, any rocks collected from the area would represent material that flowed out in a volcanic gush eons ago.

Apollo 13 Astronauts will make two journeys during which they will gather samples of the heavy blanket covering the formation. A drill is to be used to obtain some samples.

ANALYSIS of the 48 lb of lunar rocks and dust brought back by the Apollo 11 astronauts has already shown that the chemical composition is unlike that of any known earth rock.

This finding has led several scientists to suggest that at least one of the three leading theories on the origin of the moon now appears no longer supportable.

Alan Bean is the only one of the three who has not flown in space before. He was born in Texas in 1932 and graduated from the University of Texas with a degree in aeronautical engineering in 1955



It may well be that the moon came from somewhere else in space and was captured by earth's gravity, or that it and the earth were formed at the same time and out of the same matter.

But the noticeable differences in moon and earth chemistry, the scientists said, seem to rule out a third theory, that the moon is a fragment that ripped off the earth, when the earth was young. Of equal interest to the scientists is what they did not find.

There was no evidence in the rocks of life or water-past or present-on the moon.

Some Apollo 11 samples from the sea of tranquility are at least 3,500 million years old.

By contrast, the lunar samples brought back by Apollo 12 astronauts from the Ocean of Storms are probably 500 million years old.

Charles Conrad has flown in space twice before—on Gemini-5 and 11. He was born in Pennsylvania in 1930 and graduated with an aeronautical degree from Princeton University in 1953 when he became a Navy test pilot

Richard Gordon flew with Conrad the Gemini-11 mission. A Navy pilot, he was born in West Virginia in 1929 and graduated University of Washington chemistry degree in 1951



APOLLO 12 ASTRONAUTS 1969

THE NEXT ISSUE OF THIS MAGAZINE WILL BE SUBJECT TO ALTERATION AND NOT FREE AS STATED ON P.2. THIS WAS DECIDED ON 9th JAN. (NEW MANAGER) 'SORY - CHAPS! AM OVER RULED 50-1 E.H.

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