

Lunar Rendezvous Technique Believed To Be Advantageous

Editor's Note: Cape Canaveral bureau manager Alvin B. Webb Jr. is on vacation. In this guest column Dr. Kurt H. Debus discusses why the United States plans to use the lunar orbit rendezvous in efforts to land men on the moon.

By DR. KURT H. DEBUS
Director, NASA Launch Operations Center
Written for UPI

Cape Canaveral — UPI — The President has set as a tentative goal the landing of men on the moon "before the end of this decade." The USSR, according to cosmonaut Gherman Titov, plans to get there "by 1967" barring unforeseen difficulties.

A recent step up in booster-launching activity by the Russians in the Pacific area appears to contradict their latest view that they now have "some doubt whether putting a man on the moon is worthwhile."

Strong Preconception
There is a strong preconception that the USSR favors an earth orbit rendezvous technique over our own lunar orbit rendezvous mode to achieve a moon landing. If this is true, the reason for our choice of approach (assuming both modes employ three men) are worth a brief study.

The EOR mode, as we see it, involves two launches — one of a fueling tanker, the other of a partly empty booster and a space-craft — before the moonbound cosmonauts can take off from earth orbit. In our LOR mode, a lunar excursion module is detached from the Apollo spacecraft and service module and descends to the moon's surface from an orbit only some 60 miles up.

Wait and See
The Russians claim that an emergency rescue from an earth orbit would be "easier" than from a lunar orbit. Further, that available boosters of about 820,000 pounds thrust (slightly more than half

the first stage of our Saturn C-1) can be used. These boosters, presently launching the "Vostok" spacecraft, are cheaper to build and therefore permit far more extensive testing. That may be true, but just how the USSR plans to carry out its objective with so little power remains to be seen.

The lunar landing entails controlled vertical descent to a largely unfamiliar, definitely unprepared surface having many unknown characteristics. An accurate launch must be safely accomplished in this environment by the crew, unaided by any ground facilities. These lunar operations are considered the most critical portion of the entire Apollo mission. It is imperative, therefore, that they be performed by a vehicle which is not unduly compromised by other requirements. For instance, the lunar excursion module features a large picture window which could be taken back to earth because of reentry heat. On the other hand, the heavy heat-shielding needed to protect the command module can be left in lunar orbit. In effect, the LOR mode separates conflicting engineering requirements and allows each module a maximum of desirable features with a minimum penalty on weight and complexity.

Other Advantages
Other advantages of LOR are: — Only two of the three crew members are subjected to the lunar landing. The third can observe, monitor and report to earth from the orbiting spacecraft. — Highest performance with presently planned boosters and spacecraft designed to carry man much further into space and therefore less delay. To sum up, our LOR mode has been calculated to offer a 55 per cent greater overall mission success probability than with the EOR technique, for 10 to 15 per cent less cost. These naturally, were the deciding factors.



AT SALEM WORKSHOP — Three Medford educators visited the Oregon Program Team Teaching workshop for elementary teachers at Morningside school in Salem recently where five other Medford elementary teachers are attending. The previous day the educators visited the secondary teaching workshop at Marshall and Wilson High schools in Portland where six Medford secondary department heads are enrolled. Both sessions, which end Aug. 2, consist of teachers actual-

Historian Should Seek More Realistic Measure for Activity

"The time is now at hand when the historian must stop using the simple chronological units of old, the year, and the decade, and the word 'century' in the mere sense of 100 years, and seek a new and more realistic measure, perhaps something like a 'unit of change' in each of many areas of human activity."

This advice was given by Dr. Vaughn Borne, chairman of the Social Science division at Southern Oregon college, when he addressed the third annual Southern Oregon History conference, which met at the college and at the Jacksonville museum.

Subject of his address was "Centuries Ago" and he was referring to 1928.

"The year 1928 in the United States was truly centuries ago," the speaker declared after reviewing the changes which have taken place since that year. The twenties, he labeled the "Age of Certainty," the sixties, the "Age of Fear."

If a unit of change could be used as the measure, Dr. Borne contended, "we would find points of expansion and of compression. The unevenness would be disturbing in the extreme. But we could not help but come closer to understanding the roots of our unease, our unrest, our disquietude, and our fear to contemplate where we have been, where we now are and where we might be heading."

In 1928, the speaker recalled "the government recognized neither the Soviet Union, from which Leon Tro-

sky had just been expelled, nor the propriety of "social drinking." The bootlegger was a big man with status in society. If some were yet unsure about whether or not women should smoke, it was by no means because of any hazard to lungs or the cardiovascular system.

Paul Bunyan Event Stated in Yreka

Yreka — Danny Sailor, world champion speed high climber from British Columbia, will be one of several loggers on hand for the Siskiyou County Fair's annual International Paul Bunyan Logging championships in Yreka, Calif., Aug. 17, at 7:30 p.m.

Sailor will be entered in the speed climbing events, where he will demonstrate his skill on the climbing pole. Sailor's favorite trick is to climb to the top of the pole, drop his hat, and then beat it to the ground.

Fair manager, Jim Jones, reported that top loggers from as far north as Washington will be at the fair and will compete in events such as the one-man power saw, single hand chopping, hand chopping, the axe throw, and timber falling.

Points given for first, second and third places will be cumulative. Entry blanks and official rules can be obtained by writing the Siskiyou County Fair, Box 338, Yreka, Calif. Entries close at 9 p.m., Friday, Aug. 10.

IRS REPORTS INCOME
Washington — UPI — The Internal Revenue Service said Wednesday that taxpayers reported \$329.9 billion in adjusted gross income for 1961. This was \$14.4 billion more than reported in 1960, the bureau said, with about 500,000 more persons filing returns in 1961 than the previous year.

Much of the content of his speech, the college faculty member said, he had drawn from his forthcoming book, "Labor Politics in a Democratic Republic."

The conference in Ashland was followed by a tea in the Jacksonville museum and Saturday evening the conference guests attended the Shakespearean festival.

Highway Officials Start Project of Road Classification

Salem — The Oregon state highway department is undertaking a highway classification study which will determine maximum possible use of highways by the trucking industry, according to Forrest Cooper, state highway engineer.

Some of the state's older highways have sharp curves which cannot be negotiated by the largest-size trucks without crossing over the center stripe. For this reason, many of these older highways are restricted to trucks of shorter length.

A three-unit caravan will make the study. The pilot car of the caravan warns the other two vehicles of oncoming traffic with its two-way radio or stops the traffic when necessary. A bright red 40-foot semi-trailer follows the pilot car and tests curves in the road. The operator in the observation car behind the truck takes movies of the turn and voice-records some of the data. Some still pictures are also taken. If the semi's wheels cross the center line, it is recorded by the movie camera.

Pinpoint Trouble Spots
The classification study will pinpoint the trouble spots, and a modest program of betterment will be undertaken. In some cases, minor improvement of a very few isolated cases will permit reclassification of a highway to a standard permitting longer loads.

When the remaining 45 per cent, or 3,400 miles, of primary and secondary highways are test run, the highway department will have a complete inventory of its roads and the sections that need improving, Cooper said.

The research project is expected to take about four months. It is being done in cooperation with the bureau of public roads.

Sideswipe Accident Reported by Officers
A trailer hitch breaking loose caused a sideswipe accident in the Siskiyou Tuesday afternoon a mile north of the summit, state police reported.

A car driven by Karen Campbell, 18, Woodland, Calif., was headed north pulling a baggage trailer when the loose hitch caused the car to sway and go out of control. It sideswiped a southbound car driven by Melvin Sherman, Redfield, 78, of Richmond, Calif., police said.

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Small Worlds Around Us

By LYNN M. WATKINS
(Register and Tribune Syndicate, 1963)

Simple Egg Too Complex For Man To Reconstruct
Your food store has dozens of eggs all packaged cleverly in specially designed containers. Tomorrow morning, you and your family will remember what the wording on the package read: "country fresh eggs" and Humpty Dumpty will be a part of your meal.

Chances are you will give no thought as to the miraculousness of them. You will break the shells, one by one, drop the contents into the frying pan, turn them sunny side up, or scramble them depending on just how you prefer your eggs to be cooked. Many ways.

There are, as you know, any number of ways eggs can be cooked, or added to other dishes to make them better, adding nutrients, and nourishment. They are a staple part of our diet, and you might reasonably ask, "what's the big deal?" Is that what you think, you haven't thought much about the mystery of creation, the miracle of birth, or the perplexity of a living thing.

Perhaps we have taken the egg's commonness too much for granted without fully realizing what a wonderful object it really is. We naturally view with contempt, or complacency, any object which is cheap, commonplace, or easily procured.

Old Humpty Dumpty is common, there are incalculable millions of them, and more produced every day. However, this should not detract from his importance or the sheer wonderfulness of him.

Too Complex
No one today, or in any foreseeable tomorrow, will ever succeed in putting him back together again, not all the king's horses or all the king's men—he's too complex.

Whether he sits on a wall and falls, or is cracked, dropped into a fry-pan, he continues to be one of the masterpieces of the Creator's hand; much more miraculous than any machine man has ever put together.

Man, in his bumbling way, can mess around with machinery, putting together some single or dual purpose gadgets from wood, steel, plastic, glass or rubber. They accomplish simple tasks, whereby man's work may be a little easier, or that will make a job for some other man. But man is not intelligent enough to create an egg.

Listen to him talk, or believe what he is bragging about, and we would think he could accomplish miracles with his silly machines, but anything as wonderful as a silly, simple egg, has him stymied to a standstill.

It was many years ago, when a serious writer put together a nursery riddle for children, wherein an egg, a common, everyday hen's egg, fell from a wall and broke. That egg, the writer called Humpty Dumpty.

Supposedly, the child cried, for its toy was broken. Probably that child, like children today, believed that an adult could put its toy back together again. Yesterday's children, as well as those of today, have confidence in adults. The know-it-all attitude of most of us naturally implies that adults can do anything. But that adult, regardless of who or what he is, doesn't know enough to make a Humpty Dumpty, let alone put one together again.

COOLING
New York — UPI — Smack in the middle of a heat wave came an announcement by a leading appliance company that it was expanding its air conditioner and refrigeration equipment manufacturing facilities by 20 per cent. The firm, Whirlpool corporation, said it will spend about \$3 million on the project in the latter half of 1963.

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