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CONTENTS

RED FLAG OVER THE MOON by Romney Boyd	4
THE ORZU PROBLEM by Lloyd Biggle, Jr	12
THE SKITZ AND THE UNSKITZ by Jefferson Highe	25
SPUTNIK SHOES by Charles A. Stearns	3 9
THE POWDER OF HYPERBOREA by Clark Ashton Smith	52
NEVER MARRY A VENERIAN by Charles L. Fontenay	63
REQUIEM FOR A SMALL PLANET by Ray Cummings	66
THE STARS ARE WAITING by Marion Zimmer Bradley	84
ALAREE by Robert Silverberg	95
SHAGGY DOG by Charles E. Fritch	109
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SATURN PRESENTS THE STARTLING FACTS

After Sputnik and Muttnik, what? Sciencefiction has been talking about space-flight for years while the politicians laughed it off as "Buck Rogers" stuff. SATURN dares to present a realistic analysis of what the future of spaceflight is really going to be.

RED FLAG OVER THE MOON

by ROMNEY BOYD

After Sputnik and Muttnik, what? Sciencefiction has been talking about space-flight for years while the politicians goofed. SATURN dares to present a grimly realistic analysis of what the fulure of space-flight is really going to be.

A MOUNTAIN of self-deception came crashing down on the heads of the Western world on October 4, 1957, when the ominous beep-beepbeep of a man-made moon came circling the globe. For that satellite, the first actual step in the conquest of outer space, was not-as ten thousand science-fiction stories would have had it and as millions of lines of smug newspaper and magazine stories had predicted-was not an American invention

Only a few weeks earlier Russian claims to having perfected a powerful rocket capable of intercontinental cargo travel (the cargo being, of course, atomic warheads) were pooh-poohed. From the White

House on down to the lowliest politicos, the report was greeted with shrugs, smiles of scorn for such obvious poppycock, and jeers that it was mere propaganda. But as it turned out the Soviets were not making scarehead stories, they were coldly stating facts.

They produced a rocket capable of penetrating outer space. They blasted off a miniature globe many times heavier than our most ambitious plans had projected and at a higher altitude—and they then said that it was just an advance trial, a mere preliminary to the real thing.

And while the Russians were preparing to complete this first successful space breakthrough, what were we doing?

We had postponed our efforts at putting up an earth satellite from an indefinite time in the fall of 1957 to an equally indefinite time in the early summer of 1958. Our officials were engaged in refereeing a ridiculous dispute between the Air Force and the Army as to which of several half-finished rocket programs should be scrapped and which kept. The earth satellite we planned and couldn't bring about on schedule was to be a piddling little thing of about twenty pounds, to be sent up—if we were lucky-to about three hundred miles.

Of course once the Sputnik, as the Soviets call their moon, was up and going, there was a great scurrying and to-do in the circles of the brave gentlemen who compose the United States rocket leaders. Efforts were made to say that, well, the Russians were a little ahead of, but not much—a few months maybe—we weren't in a race anyway—besides we'd soon outstrip them with our know-how.

The facts are otherwise. The size and weight and height of the Sputnik shows that the Russians are not just a few months ahead, but at least two years ahead; that they

possess the means and technique to plan space operations many times greater than those in our present capacity; and that they are forging ahead without halt, without inter-departmental arguments, and without a lot of shoddy lobbying to see into whose corporative pockets the new few billions of defense money is going to be funnelled.

In plain language, this is all going to mean that the Russians are going to be the first to conquer space, the first to reach the moon, the first to set up a permanent base on the moon.

WE ARE SORRY to have to make this observation so bluntly. But it is the peculiar quality of a magazine of this sort, a science-fiction magazine whose readers are accustomed to view the future with intelligent eyes rather than with the blinkers that "family" magazines impose, to be able to present an unpleasant aspect of the future in its true light.

I know that it is possible to raise objections, but for the most part these objections will be derived from the soft soap that is going to be dished out heavily by the culprits who were responsible for our fumbling failure to keep ahead of the Soviets in a field where we certainly once had a head start. Raise these objections if you will, but a two-year lead in rocketry with the full consciousness of the importance of the outcome is not to be overcome so easily. The Soviets, having brought to world attention their leadership in the field, must now redouble their national effort to keep it. You can rest assured that they know this and that, while we are holding post-mortems and emergency committee meetings, they will be plunging ahead with tests, plans, and vaster engineering operations. They have publicly stated their objectives-and stated them without all the evasiveness we give to ours.

The United States has e means to make up the loss—if time permits. We have an industrial apparatus far superior to that of the Soviets, but do we have the time to spare? Are our leaders willing to take a stand quick enough and firm enough? What is more—are they willing to scrap fast some of the rubbish they have cluttered up our rocket projects with?

What exactly does a Soviet

victory in moon-flight mean? Well, the moon is a permanent fixed space platform, from which every part of the Earth's surface can be surveyed telescopically down to the smallest detail. To construct a telescope in the low-gravity airlessness of the moon's surface is a simple matter compared with telescope construction on Earth. With great ease and speed, lenses can be arranged, on simple skeleton frameworks, virtually fixed on the Earthwhich, please remember, is a fixed object in the lunar skies. Observations will be a hundred times clearer there because of the lack of an obscuring atmosphere.

It would be no problem to set, almost at once a spy observatory on Luna that will be able to spot every movement on Earth of a troop of soldiers or even of a single automobile. There will be no military secrets left.

The next step, following the observatory, would be the setting of a rocket-artillery base on the moon. From such a point, it would be no problem to fire direct rocket shots at any activity on the Earth's surface the Lunar Station didn't like. What is more it would be vastly difficult for

the Earth to fire back.

In addition to these obvious military advantages, there is also the tremendous boost to science that working on the moon will give. Conditions of matter in low gravity and in outer space are still not subject to experiment to the Earth-bound. The certainty of making great discoveries and great strides in the conquest of nature is taken for granted once we have reached outer space. The qualities of various elements at temperatures near absolute zero are already suspected to hold tremendous potentials for energy liberation and such temperatures could be had without much difficulty during the two-week long lunar nights. The world's chemists would sell their souls for a chance at such experimentation.

The Russians, who have had a bug on engineering education (they are outstripping us in the number of students and graduates—another scandal) since 1945, know all about these possibilities. They are giving their rocket and space travel men the same type of high priority drive that the U.S.A. gave the atomic bomb project during World War II.

The cold fact is that Soviet achievement of the moon is

going to make them the masters of the Earth. They know it—and what is worse, until October 4, 1957, apparently the Pentagon didn't know it.

THERE ARE men among the rocket engineers of America who knew this too. Such men as G. Harry Stine, whose book EARTH SATEL-LITES AND THE RACE FOR SPACE SUPERIORITY, published by Ace Books shortly before the advent of the Sputnik, put the case with clarity and passion. In unique thirty-five cent newsstand paperback, Stine outlined what America planned to do in the launching of its own earth satellite, the Vanguard, and then went on to outline what American engineers saw as the next steps along the line.

These steps consisted of advanced designs of cargo-carrying rockets and man-carrying rockets—the ICBM—and then of a vast and elaborate project to construct a manned space station—an Earth Satellite as large as a small city, with a permanent crew of engineers and researchers. This space station in turn would serve as the place where the first moon-exploration rockets

8 SATURN

would be put together and then launched. It would act to serve the same defensive and research purposes that the moon would serve.

Possibly this is still the official United States program. If it is, it is going to be too bad for us. Because the Russians stated the answer quite clearly a few months ago. One of their scientists pointed out that construction of this colossal space platform was a waste of time and an evasion of the obvious. For the obvious, said this Soviet rocketman, is that a really permanent and stable space platform already exists -and that was Luna itself. The Russian logic called for by-passing any such man-made platform and for setting up shop without delay on the moon itself.

The sense here should be self-evident. Stine admits in his book (which is must reading for everyone interested in this space race) that his space station is entirely indefensible in time of war. At the very outbreak of hostilities it could be blasted from existence by one easily aimed H-bomb warhead rocket (since its orbit would be but a few hundred miles from Earth). But the moon, old Luna, cannot be knocked out

of the sky no matter how many H-bombs we plaster its surface with. It is a permanent station in the sky. If shelled from Earth, the occupants have merely to set up their posts on the other side of the moon, the side forever turned away from Earth, and they will be safe from all that Earth-stationed enemies can do.

In his book Stine outlines with great ingenuity and enthusiasm the plan for the construction of this space platform. This is basically the one originated by Darrell C. Romick. It calls for the construction of this city in the sky by the piecing together of hundreds of thousands of small sections, each transported up to orbit by means of huge three-stage rockets. It would call for the construction of these rockets in mass quantity -about as many as an automobile plant can turn out cars! The cost would be in the billions and the task would take about four years to complete.

Four years to complete, billions in costs, and not worth a single cent in wartime! No wonder the Russians are smiling today. They have stated their objective—the moon itself. They are driving for it in the most direct fashion.

Their plans call for the furtherance of multi-stage rockets capable of delivering a cargo-head vast distances. They claim to have already produced the ICBM, and their claim includes an invention that will deliver it with precision on any target they name. The fact that their present strength is sufficient to lift an object of 184 pounds a height of five hundred and sixty miles, and impart to it a speed of 18,000 miles per hour, proves that they have the ability. It is simple mathematics to figure out what the same rocket power could do in lifting an object that might weigh only five or ten pounds. Considering that each pound of payload calls for hundreds of pounds of fuel, obviously this rocket is quite capable, as it now stands, of delivering an object—a tiny one-to the moon itself. Or around the moon. Or on its way to the planet Venus.

Such are actually their announced plans. They will first send robot rockets around the moon for observation. Then they will send one or two on to Mars and Venus. Next they will start landing bits of cargo on a selected spot on the lunar surface—parts of stations, necessary equipment. When all

is ready, they will deliver a man to put the stuff together and set up their station. With a high priority drive they can do all this within five years. Certainly they could drive a missile to the moon's surface right now—if they haven't already done so by the time this magazine is in print.

But G. Harry Stine, in advancing the case for the artificial space platform, was only supporting what happened to be the most advanced American thought about our own space rocket capacities in 1957. Our plans for an earth satellite one weighing only twenty pounds, had been announced originally for the fall of 1957. But they had been vague and were finally set back six or eight months. Doubtless these plans ar being hastily revised, but the fact still remains that America does not have the ability to put a satellite of Sputnik's weight up there. We can't do it.

Stine was exceedingly aware of the menace of space, of the desperate need for getting up there first. His book is a vigorous and fearless examination of the vital importance to America of our space operations and our space defenses. He pointed out how the decline

10 SATURN

and fall of the empires of the past, from the Persian and Roman to the British, was in each case due to the failure of these empires to keep up with technical developments outside their frontiers. Let the United States fail to keep its technical lead and we face the same historic fate.

LET'S FACE it; we were caught flat-footed. Our projects were tied up in arguments between builders as to which design was the more ideal. Our Project Vanguard was lingering for lack of sufficient cash and manpower. The leaders of our country had their heads buried in the sands of golf courses, hoping like the ostrich that what they weren't willing to see would therefore cease to exist. A week after Sputnik had electrified the world, too many of these leaders were already busy trying to stick their heads back in the golf traps-denying the obvious, shrugging it off, pretending we had bigger plans all the time, and so forth. Such lea s would do well to study the last days of the Roman Empire and meditate on them.

What can the rest of us do, especially those of us who, through science-fiction, know

how real and vital space flight is going to be to the human future. We can do something—we can do our utmost to sway public opinion behind a new crash program for rocket engineering and space flight.

In spite of the fact that America has more science-fiction magazines and science-fiction readers than any other country in the world (and here again Russia is a close second), we have always been shy of publicly admitting belief in space travel. Buck Rogers may be a household word, but serious people smile when they hear it. When the first American society of space-travel enthusiasts was formed back in 1931, it took the name of the American Interplanetary Society and called its journal Astronautics. But as soon as it grew large and began to attract practical engineers to its ranks, it embarrassedly changed its name to the conservative American Rocket Society and its magazine to Jet Propulsion. To this day rocket engineers would rather talk in public only about ballistic missiles, jet planes, and cargo rockets, and avoid public references to any "wild" ideas of moon-flight.

It is this curious reluctance

to admit publicly what is actually the heart's desire of every rocket man that has helped to hold back our progress. Mention moon-flying to a congressman and he'd think you crazy. Instead talk about V-2s and missiles. That sounds more businesslike.

This sort of nonsense has got to stop. Rocket men must speak out and name their objective boldly and clearly. We want the moon! We want it now, and we want it for the free world! We have the means, we have the will—give us the money and we will give you the universe!

That's the way the Russians talk. They state their objectives without blushing. They never hesitated to put pictures of space rockets on the covers of even the most sedate of science journals. Their government bureau in charge of rocketry is boldly called the Min-

istry for Interplanetary Communication!

S c i e n c e-fiction readers should speak out plainly. We can collar our acquaintances, write our congressmen, put letters in the newspapers, come out openly. Stop the nonsense, clear the decks, build the space-ships now.

If we don't, then in a few years we are going to be able to stand out in our back yards and look at a real new Soviet Satellite. It's going to be a big white sphere in the night sky with very familiar features. It's going to be called Luna; there'll be a red flag stuck on a mast in the middle of the Sea of Serenity and another on the top of Tycho. And the Man in the Moon will be broadcasting down to Earth every day—in Russian.

That's the way it's probably going to be.

THE END