



The threat of war is spurring the race for space—but the greatest long-range benefits may be in your health, happiness, and home comfort

By **JAMES E. WEBB** Administrator, National Aeronautics and Space Administration with **Theodore Irwin**



James E. Webb

is sponsoring May 8-10 at the Seattle World's Fair. And, to reach an even wider audience, he has written this interesting and informative article for the readers of Family Weekly.

Editors' Note: Americans should be more aware of the importance of space exploration to their everyday lives, Mr. Webb believes. With this in mind, he will appear as main speaker at the Second National Conference on the Peaceful Uses of Space, which NASA

and save \$100,000 a year in salaries alone.

It is evident that what we are learning in space exploration will affect the lives of every one of us. Saving the accident victim at Roosevelt Hospital is but one example of many applications of space information to down-to-earth problems.

New, almost painless dental drills already have been made possible through the use of pinpoint-size bearings devised originally for satellite equipment. Miniscule batteries developed to power space devices are now being employed in electronic watches and hearing aids.

MORE DIRECTLY, through satellites themselves, we can expect far better weather prediction in the future.

Before we began to use our experimental meteorological satellites—Tiros I, II, and III—there were wide gaps in our weather knowledge. Within 60 days after Tiros III was launched, pictures transmitted from it were used to track and analyze Storm Eliza in the Pacific and Hurricane Anna in the Atlantic.

Later, in Hawaii, Tiros pictures helped trace a violent tropical storm. And in Japan, the weather-bureau chief acclaimed Tiros as opening a new era in forecasting typhoons.

Eventually, satellites will enable scientists to forecast the weather with great accuracy weeks, perhaps even months, in advance. You will know better what kind of a winter to anticipate, and whether there will be a rainy or dry spell ahead. You will be able to time your vacations for the utmost in sun or ski conditions. And promoters of fairs and outdoor sports events will be able to schedule these affairs with much less risk.

Another type of space craft—communications satellites—may permit you to watch the 1964 Olympics as they are being held in Japan or give you a box seat at the opera in Milan—without your moving from the tv set in your home.

One such satellite, Echo I, has already transmitted two-way telephone calls from New Jersey to France, reflected facsimile photos back and forth across our continent, bounced a recording over the Atlantic, and beamed letters from one state to another. Intercontinental television is likely to be next.

Today, the two transatlantic telephone cables can carry only 168 conversations at one time. New cables can be laid, of course, but one satellite could accommodate as much traffic as a half-billion-dollar cable system. Such satellites should be able to increase global message-handling capacity several thousandfold.

This year, four communications satellites are being placed in orbit for NASA's Project Relay, paving the way for a practical world-wide system of sending tv pictures and telephone messages.

RESearch on food for astronauts should eventually improve nutrition for all of us. Efforts to control temperatures in space vehicles should lead to cheaper ways to heat and cool your home. Research on radio transmission from satellites should produce truer hi-fi. Development of space-era materials should provide you with toasters, refrigerators, and other household equipment that are far more durable than anything on the market today.

Already, Pyroceram, a material devised to shield radar equipment in the nose cones of space vehicles, is being used to make pots and pans which can be taken safely out of a freezer and immediately placed over a hot flame.

These are only a few examples of present and near-future dividends from space. As manned-space exploration extends to the moon and unmanned devices are sent to investigate the nearer planets, we can expect countless other practical benefits from the technology developed for such deep-space expeditions.

COVER:

Even Eve might envy this carefree, sweaterlike swimsuit modeled by a Florida bathing beauty and photographed by Arthur Schatz. For more new swimwear, see p. 7.

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