working closely with the Cannon Committee and, even here, will be able to get unusually fast action if the project is ready to use the money. This remains to be seen.

Minority Opinions

After the nearly straight party-line 10 to 6 vote against the $107 million authorization, several of the Republicans on the committee were ready to offer privately some more flamboyant reasons than those suggested above for the committee's action.

The most widely published has been a suggestion that the Democrats are toying with the Stanford project to pressure the AEC into going along with the majority's plan to modify the huge Hanford, Washington, plutonium reactor to produce electricity for the federally owned Bonneville Power Administration (the TVA of the Northwest). But Senator Henry Jackson of Washington, leading proponent of this plan, is said to have worked out a private agreement with the AEC on this subject which is satisfactory to him, and even the minority member responsible for this story (an anti-public-power man) does not seem to particularly believe it.

Publicly, although the minority did file a dissenting report, they did not make a particularly strong case against the committee's action, and, in fact, toned down their report from earlier, more critical drafts. Nevertheless, one of the minority, probably Congressman van Zandt, will presumably make a *pro forma* attempt to add the full authorization to the bill by means of a floor amendment.

More realistically, although there is no clear indication that political factors affected the committee's decision, two such factors were present. First, there was some displeasure among the majority that the impetus for the project came from the White House, rather than from within the AEC. The position of the White House on this is that since an unprecedented amount of money is to go into building this machine, a national policy decision was required to decide whether such a project is advisable at this time. Related to this is the safe assumption that it has occurred to the statesmen on the committee that it might not be a bad idea for the final authorization to come in January, when there might be a Democratic administration available to take credit for this momentous project.

Finally, there remains the question of who or what will suffer as a result of the committee's action, and the principal answer seems to be the Stanford scientists. They have repeatedly made the point, more or less endorsed by the AEC, that they will have difficulty holding and adding to the staff of top men assembled at Stanford to run this project. What is more certain is that this delay will cause a considerable amount of anguish among the brilliant group at Stanford who have been working on the project for quite a few years.

The fact that there is 90-percent, even 99-percent, assurance that final authorization will come through next year may be enough to set the scientific community in general at ease. But unforeseen developments can develop. The Stanford group have been working in earnest on this project since 1957, and the planning group was first formally organized 2 years earlier. These men saw authorization slip away at the last minute last year, after it had apparently won approval. They would be considerably less (or more) than human if they were not thoroughly unhappy at the prospect of having to wait another 9 months for their baby to hatch.

United States Launches Two More Satellites

The United States has launched two more space vehicles—the Navy's Transit I-B, a "navigation" satellite that went into an elliptical orbit between 51 degrees north and 51 degrees south latitude on 13 April, and the Air Force's Discoverer XI, which was placed in polar orbit on 15 April.

Transit I-B

The Transit I-B—a 36-inch, 265-pound sphere—is the first of a series of satellites that are expected to revolutionize the present system of navigation. The Transit project is designed to develop a reliable means of fixing the position of surface craft, submarines, and aircraft more precisely than has heretofore been possible, and under any weather conditions at any hour of the day or night. The basic principle involved is the Doppler shift; the phenomenon is demonstrated when signals from a space vehicle vary in frequency in relation to the distance from a ground station. The first Transit satellite will probably stay aloft for approximately 16 months.

In 1962 four navigational satellites are expected to be traveling around the earth in evenly spaced orbits. By tuning in on the satellite signals with special receivers, ships of any nation will be able to establish their positions with precision never before attained.

Responsibility for the establishment of the new navigational system was assigned to the Navy Bureau of Weapons by the Advanced Research Projects Agency. The development of the system is being carried out for the Navy by the Applied Physics Laboratory of Johns Hopkins University, Silver Spring, Md., which originated the concepts on which the system is based. Commander W. L. Clark, USN, has responsibility for the Bureau of Naval Weapons, while R. B. Kershner of the Applied Physics Laboratory directs the technical program.

Discoverer XI

The 17-foot Discoverer satellite that was launched from Vandenberg Air Force Base, Calif., carried a 300-pound, bell-shaped instrument capsule that was to have been ejected and retrieved by planes trailing snares as it parachuted down toward the Pacific Ocean near Hawaii. The instrument package separated as scheduled but, because of a malfunction of the devices that were to have slowed it down, it has gone into orbit instead of descending.

This is the seventh Discoverer to be sent into polar orbit, the sixth time that recovery of the instrument packet has been planned, and the 18th United States earth satellite to be placed in orbit.

Leading Scientists Active in New Committee on Economics of Peace

Polykarp Kusch and Seymour E. Harris have been named cochairmen of a newly authorized special Committee on the Economics of Peace of the Democratic Advisory Council. Kusch, winner of the Nobel Prize in physics in 1955, is professor of physics at the Columbia Radiation Laboratory, Columbia University; Harris is Littauer professor of political economy and past chairman of the department of economics, Harvard University. Other committee members are: H. Bentley Glass, professor of biology, Johns Hopkins University; Richard A. Lester, professor of economics, Princeton University;