Kaplan gives Mariner data about Venusian atmosphere.

Dr. Louis Kaplan, of the Jet Propulsion Lab at the California Institute of Technology, lectured April 16 on the atmosphere of Venus. The talk, a COMPASS Seminar, featured analysis of the Venus probe, Mariner II. Venus has long been known to have an atmosphere; indications and probabilities on the termini of daylight and night were all proved the existence of some gaseous covering. But to date little has been known about it except its presence.

One thing definite is known about Venus—it is covered by a layer of carbon dioxide. This is the only gas definitely revealed by spectroanalysis. It is also fairly certain that water vapor is at least completely absent.

The depth and density of the clouds is very uncertain. The recent occultation of the bright star Regulus indicated that the atmosphere is about 55 km. high, with pressures ranging from several atmospheres to 7 millibars. Radioastronomy and microwave experiments, such as those on Mariner II, indicate very high temperatures and pressures at the bottom of the Venusian atmosphere. Pressure may reach 100 atmospheres, and at some point—exact location not known—water vapor begins to exist. Higher in the atmosphere the temperatures range from 200 degrees kelvin at the surface, to 440 degrees kelvin at 400 km. Many of the recent tests, including Mariner II, indicate that the atmosphere is in two layers of clouds. Exactly what is the composition of either, or where the dividing point lies, is unknown.

The current nuclear power of the United States is much larger than would ever be needed, according to Seymour Melman, professor of industrial management at Columbia University. In a lecture April 18, sponsored by the Student Organization for a Rational Approach to Disarmament and Peace, Professor Melman provided a new study made by a group of specialists in foreign affairs, economics, and related fields. The study, entitled ‘A Strategy for American Security’, was released to the press yesterday.

According to Professor Melman, the ‘overkill’ capacity of the United States is enormous. With approximately 3400 nuclear weapon-carrying missiles of massive size, many tactical fighters, and short-range ballistic missiles, the United States has the potential to destroy the Soviet Union at least 200 times over, allowing for Soviet defense of 50% effectiveness.

Obstacle to disarmament. The report points out that once the United States can destroy the USSR, even allowing 50% defensive attrition, any excess capacity is useless. The continued stockpiling of nuclear weapons by the United States may have an adverse effect on the political economy and is an obstacle to disarmament.

Related Problems. The study states that many of our unemployment and economic-growth problems are traceable to military expenditures. Moreover, that the civilian sector is being deprived of labor, power and resources by the military sector.

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The savings resulting from a drastic cut in military expenditure could be apportioned in various ways, including a large tax cut, public works and urban redevelopment. Professor Melman points that if any political party proposes this, it can easily win the national elections in 1964.

There were seventeen teams entered in the IM softball this weekend as the league leaders began to emerge. Nine teams remain unbeaten in the right-handers, with the season just past its halfway mark.