

## SPACE

# NASA Plans 'Boot Camp'

Four-week reserve training programs are planned for scientist-astronauts, who will go aboard on the flight to the moon, to help prepare them for the lunar mission.

► A SUMMER "boot camp" for scientists who want to go to the moon will be set up in Houston, Tex., by the end of this year. It will be for physical scientists, not social scientists such as psychologists.

Astronaut L. Gordon Cooper, who orbited the earth 22 times last year in the final Mercury flight, told reporters the first scientist could be aboard on the second or third trip to the moon, but definitely not the first. The scientist probably will be a geologist or biologist.

About 40 or 50 scientists who meet the jet flying requirements and scientific standards yet to be determined will gather each summer for a four-week reserve training program, Maj. Cooper said. From this reserve, four or five will be picked as crewmen for Apollo flights.

The program will stress flying training, since a scientist-astronaut would have certain flight duties to perform on board a lunar mission. He would have to be able to fly the craft alone in an emergency.

Health and flying experience will be more important than age and sex in determining which scientist will go to the moon. A qualified woman scientist would be eligible.

National Aeronautics and Space Administration officials are meeting with the Space Science Board of the National Academy of Sciences to determine qualifications of prospective

scientist-astronauts. Applications will be accepted in three or four months.

Jet flying time will probably be less than that needed by astronauts who consider flying a jet plane the best training for flying a space capsule. Whereas the original group of astronauts averaged 2,500 to 3,000 hours flying time before entering the program, the latest group of 14 averaged 1,500 hours flying time.

The astronauts themselves are receiving geologic training to see how much of the scientific mission they can perform.

Maj. Cooper did not exclude the possibility of getting to the moon by 1970. "If Congress will give us the money, we can do it," he said. Dr. Hugh L. Dryden, deputy administrator of NASA, who was also at the meeting, said the United States still stands a "fighting chance."

• Science News Letter, 85:309 May 16, 1964

## ASTRONOMY

## Diamonds 'Best Friend' Of Scientists Too

► DIAMONDS are a "best friend" of scientists as well as of girls.

The "friendly" diamonds are those in meteorites, which are the only objects found on earth's surface known to arrive from

space. Hence, although they have no commercial value, such diamonds are important to astronomers, geologists, chemists and nuclear physicists.

Meteorites furnish a good clue to such things as when and how the solar system was formed, what the interiors of earth and other planets are like, the geological and chemical history of earth's crust and rocks, the structure of atomic cores and thermonuclear, or H-bomb, processes.

Not all scientists are convinced that the crystals in meteorites are or once were diamonds. When that is proved, then they will know the conditions under which the solar system was formed, because the conditions for making diamonds are known.

Dr. Harold C. Urey, Nobelist of the University of California, San Diego, La Jolla, is one of those convinced the minerals once were diamonds. Dr. Clifford Frondel of Harvard University believes the crystals were "probably" diamonds.

They were two of seven scientists reporting their views on the origin and history of meteorites to the National Academy of Sciences meeting in Washington, D. C.

Dr. James R. Arnold, also of the University of California, San Diego, La Jolla, noted that only one meteorite, known as the chondrite Pribam, has an accurately known orbit. Its path while streaking through the earth's atmosphere suggests it came from the asteroid belt.

However, Dr. Arnold said, he is "hopeful" the network of observing cameras being established in the Midwest soon should allow determination of the orbits of other chondrites, which are stony meteorites.

Dr. Frondel noted that only about eight meteorites are now discovered each year, and that probably only a few hundred tons of either stony or iron meteorites are available for study. The largest, a 60-ton chunk, is still in place where it fell in South Africa.

• Science News Letter, 85:309 May 16, 1964

## METEOROLOGY

## Weather Calls Increase 1200% in a Decade

► THE "WEATHER LADY" is 12 times busier than she was 10 years ago, but she has more to say.

Calls to the U.S. Weather Bureau's automatic information phones have increased 1200% since 1954, Dr. Robert M. White, Bureau Chief, told a House appropriations subcommittee.

Calls reached a peak one stormy day last winter, when the Washington, D. C., branch of the Weather Bureau received 300,000 calls.

There are now special phone numbers across the country for airplane pilots, providing automatic information for many different air routes. A few cities offer marine forecasts automatically.

To meet the increased demand, the number of forecast maps prepared has increased 600%, and the number of daily stratospheric observations, 300%.

The increase of calls to the actual non-automatic Weather Bureau offices for information was only a little over three percent of that for the tape recorded "weather lady."

• Science News Letter, 85:309 May 16, 1964



Black and Decker

**SPACE POWER TOOL**—An Air Force technician demonstrates the first power tool designed and built specifically for an astronaut's use in space. Developed by Martin Company and Black and Decker Manufacturing Company, both of Baltimore, the tool comes close to eliminating the twisting force that in space would send a weightless astronaut spinning.