We could very well be looking for people who do not exist.

The positions listed herein are done so with no small amount of trepidation and humility. EOS has a reputation for interdisciplinary technology based on interdisciplinary people. The growth of this reputation could very easily tie in with your own...

In Quantum Physics

RESEARCH METEOROLOGIST, Ph. D. (minimum M.S.) with three to five years experience in applied theoretical physics.

INFORMATION THEORIST, Ph.D., a minimum of three to five years experience in at least two of the following fields: radar techniques, physical optics, electromagnetics, radiation theory and side looking radar.

EXPERIMENTAL PHYSICIST, Ph.D. with a minimum of five to eight years experience in any one of the following areas: biomedicine, laser applications to medicine, use of lasers in probing the cellular nucleus and probing enzymes and acids.

In Fluid Physics

THEORETICIAN in high-temperature devices, Ph.D. with ten years experience.

PLASMA PHYSICIST OR ENGINEER, Ph.D. with five to seven years experience in spectroscopy and plasma diagnostics from the beginning of the art.

PLASMA PHYSICIST, M.S. preferred with experience in small high powered circuit design and development and knowledge of systems analysis and trade-off studies.

In Aerospace Electronics

INFRARED SCIENTIST, M.S. or Ph.D. with four to eight years experience in infrared devices and IR solid state detectors... experience in lead sulphide required.

Send your resume in strict confidence to Dr. James D. Mitchell, Electro-Optical Systems, Inc., 300 N. Halstead St., Pasadena, Calif. An equal opportunity employer.

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lunar mass distribution was analogous to the earth's. This led him to the conclusion that the earth was more oblate than contemporary geodetic observations showed. The greater accuracy of present geodetic determinations, however, rules out his adjustment. Lately, the discrepancies were attributed to uncertainties in the solution of the main problem. The new computation now eliminates this factor from the controversy.

A description of the Eckert-Smith computation was presented at the International Astronomical Union Symposium 25, held last summer in Thessaloniki. A full account of the work will appear in the Astronomical Papers of the *American Ephemeris and Nautical Almanac.*

Cosmic rays

Atomic Energy of Canada Limited has dispatched a transport van loaded with cosmic-ray detectors on a 10 000-mile tour that began March 27 at Chalk River, Ontario, and will end June 18 at Acapulco, Mexico. Taking advantage of the present period of low solar interference, the program will undertake comparative studies and an intercalibration of the varying equipment at permanent ground stations in North America. The van will also stop at 200-mile intervals to measure the latitude effects on cosmic-ray penetration arising from the earth's magnetic field.

The project is directed by Hugh Carmichael, head of the General Physics Branch of AECL's Chalk River Nuclear Laboratories.

Penn magnet lab

A high-field magnet laboratory has been organized at the University of Pennsylvania and is now engaged in the construction of its equipment which is scheduled to begin operation by the beginning of 1966. The magnet laboratory is under the technical direction of Elias Burstein and is organized as part of the University's Laboratory for Research on the Structure of Matter, which is supported by the University, by industrial donors, and by the Advanced Research Projects Agency. Although primarily intended for use by faculty and students of the University of Pennsylvania, the facilities of the magnet laboratory will be made available also to visitors from other universities, to staff of ARPA-sponsored industrial projects, and to the staffs of industrial sponsors of the LRSM.

Although the new laboratory has provision for five magnet stations, only two magnets are being built at first. They are low-impedance, air-core solenoids of the type developed by Francis Bitter, designed for three-megawatt continuous operation at 10 000 amperes and 300 volts. One will have a $1\frac{1}{8}$-inch bore for fields up to 150 kG; the other will have a $4\frac{1}{8}$-inch bore for fields up to 90 kG. For the future a one-inch-bore pulsed magnet to produce fields up to 240 kG for periods up to a minute and a one-inch-bore, radial-access solenoid for up to 90 kG are planned.

The windings of the solenoids will be composed of approximately 500 copper disks with a sixteen-inch outside diameter. Each plate contains a radial cut so that it can become a segment of a continuous winding of half the 500 turns in series. The plates are so arranged that they form two continuous windings laid in contact with one another, one winding being advanced a partial turn with respect to the other.

The hole configuration for cooling lines is similar to that used by the Naval Research Laboratory. Holes in adjacent rows are arranged so as to form the corners of approximately equilateral triangles. The sides of the triangles vary inversely with the radius to compensate for greater current density near the center of the solenoid. Thus the maximum conductor temperatures will be approximately equal at all points on the winding plate.

According to Professor Burstein, the Magnet Laboratory will provide more than a fivefold increase in field intensity over that normally available in materials-science laboratories. The availability of fields in the 100-kG range will extend the range of materials which can be investigated and will also make possible the investigation of phenomena which would not otherwise be feasible.