THE letters and papers of the late John Jacob Abel have been deposited in the Institute of the History of Medicine, the Johns Hopkins University, for cataloguing. The institute would greatly welcome any letters written by him prior to 1915. They will be transcribed and promptly returned. Please communicate with Miss Helen T. Konjias, 1900 E. Monument Street, Baltimore.

SCIENTIFIC EVENTS

THE COLORADO ROCKY MOUNTAIN OBSERVATORY OF HARVARD UNIVERSITY

HARVARD UNIVERSITY will erect the world's highest astronomical observatory this summer in the Colorado Rocky Mountains. The station will be equipped with a coronagraph, a new instrument for creating artificial solar eclipses and making possible regular observations of the corona and also of other phenomena of the sun's atmosphere.

The observatory will be located at Fremont Pass, Climax, Colorado, at an altitude of 11,318 feet. It will have the only coronagraph in the Western Hemisphere, and the third such instrument now operating in the world. The station will be built on the property of the Climax Molybdenum Company, through whose cooperation the new observatory was made possible. Harvard already has stations at Cambridge and Oak Ridge, Mass., and at Bloemfontein, South Africa. Professor Donald H. Menzel, of Harvard Observatory, is in charge of setting up the new coronagraph station.

The coronagraph studies of such solar activities as sun-spots, solar prominences and the corona and of the interrelationships of these activities, promise also to lead to greater knowledge of physical conditions on the sun and the relationships between the earth and its star neighbor.

Until the recent invention of the coronagraph by the French astronomer, Dr. Bernard Lyot, the solar corona could only be observed during total eclipses, when the moon cuts off the intense light of the sun ball. Of major importance for coronagraph observations is the selection of a high-altitude site, where the clearest possible sky prevails, free from dust and other suspended particles. Dr. Menzel spent some time last summer investigating various sites in the Rocky Mountains before selecting the location at Fremont Pass. The Harvard coronagraph, which has been under construction for three years, employs the same basic principles as Dr. Lyot's instrument. A special feature of the Harvard instrument will be the treatment of the lenses with the invisible-glass technique developed at Massachusetts Institute of Technology by Dr. C. H. Cartwright. This treatment helps to cut down reflections and scattered light in the instrument.

The coronagraph is not adapted as yet to replace natural eclipse observing altogether. For one thing there is difficulty in studying the blue and violet regions of the spectra, because the sky light is very intense in these regions. But for many purposes it provides excellent records, with the principal advantage that observations can be made every clear day, and do not have to await the eclipses.

Equipment at the Harvard station will include a powerful spectrograph for the study of the spectrum of the corona. Studies of the motions of solar prominences will be made with color filters as well as motion pictures. Movies will also be made of the corona, giving the first record of how this peculiar light structure changes from day to day and how its streamers project into space.

FELLOWS OF THE LALOR FOUNDATION

THE Board of Trustees of the Lalor Foundation has announced the names of the winners of seven awards for research in chemistry for the academic year 1940–41. These awards this year amount to $14,650. They are designed to enable men and women of outstanding ability to carry on special investigations at important research centers in the United States or abroad. The recipients of the awards were chosen from a group of forty-one candidates representing applicants working in the major fields of chemistry and related sciences.

The applications received indicate a wide-spread interest in these fellowships, 56 per cent. having come from candidates from universities in the eastern United States, 17 per cent. from the Middle West, 8 per cent. from the South, 17 per cent. from the Far West and 2 per cent. from candidates outside the boundaries of the United States.

As respects institutions where applicants elected to carry on their research, 63 per cent. selected eastern universities, 10 per cent. middle western institutions, 22 per cent. the far west and 5 per cent. chose universities outside of the United States. The fellowships include two for work at the California Institute of Technology and one each for work at the University of Chicago, Columbia University, the Johns Hopkins University, the Massachusetts Institute of Technology and Yale University.

The recipients of the awards are:

DR. ANDREW CALVIN BRATTON, instructor in pharmacology at the Johns Hopkins University Medical School, to continue work with Dr. E. K. Marshall on chemical

aspects of chemotherapy of compounds of the sulfanil-amide type.

DR. ROBERT BYRON JACOBS, of the research laboratory of physical chemistry of the Massachusetts Institute of Technology, to continue work with Dr. F. G. Keyes on the fundamental properties of materials at low temperatures.

DR. JOSEPH O. HIRSCHFELDER, research associate at the University of Wisconsin, to work with Dr. Linus Pauling, of the California Institute of Technology, in an investigation of the best ways and means for calculating the quantum mechanical energy of molecules.

DR. JANE ANNE RUSSELL, of the University of California, to continue biochemical investigations under Dr. C. N. H. Long at Yale University School of Medicine.

DR. ROBERT M. SIMHA, from the University of Vienna, to work with Professor V. K. LaMer at Columbia University on the statistical problems and kinetics of polymerization in long chain compounds.

DR. E. L. ROBERT STOKSTAD, biochemist, Western Condensing Company, Berkeley, Calif., to work with Professor H. Borsook at the California Institute of Technology on Vitamin Factor U and an unknown factor in polished rice.

DR. ROBERT P. WALTON, professor of pharmacology, School of Medicine, University of Mississippi, for chemical and clinical work at the University of Chicago.

The Selection Committee acting for the foundation consisted of Dr. Roger Adams, director of the Department of Chemistry of the University of Illinois; Dr. Hans T. Clarke, professor of biochemistry, Columbia University; Dr. Charles A. Kraus, director of the department of chemistry of Brown University; Dr. Arthur B. Lamb, dean of the Graduate School of Arts and Sciences of Harvard University, and C. Lalor Burdick, secretary of the Lalor Foundation.

THE WILLIAM LOWELL PUTNAM MATHE-MATICAL COMPETITION AWARDS

THE Department of Mathematics of the University of Toronto, Toronto, Ontario, has won the first prize of $500 in the third annual William Lowell Putnam Mathematical Competition, Professor W. D. Cairns, secretary-treasurer of the Mathematical Association of America, has announced. The members of the winning team were W. J. R. Crosby, J. C. Maynard, G. H. K. Strathy. The second prize of $300 is awarded to the Department of Mathematics of Yale University, New Haven, Connecticut, members of whose team were J. E. Brewster, A. M. Gleason, G. R. MacLane. For the third prize of $200 there is a tie between the Department of Mathematics of Columbia University and the Department of Mathematics of Cooper Union Institute of Technology, both in New York City. The members of the Columbia University team were Laurence Annenberg, Julius Ashkin, Paul Marcus; the members of the Cooper Union team were Murray Klamkin, Benjamin Lax, Samuel Manson.

In addition to these prizes to the departments of mathematics with winning teams, a prize of $50 each is awarded to the following five persons whose scores ranked highest in the six-hour examination: (names arranged alphabetically) W. J. R. Crosby, University of Toronto; A. M. Gleason, Yale University; E. L. Kaplan, Carnegie Institute of Technology; J. C. Maynard, University of Toronto; R. M. Snow, George Washington University. One of these five will later be chosen to receive a $1,000 year scholarship at Harvard University, this award to be announced later. The members of the four winning teams will receive individual cash prizes according to the ranks of their teams, and all individuals receiving prizes will also receive medals.

Honorable mention has been awarded this year to three teams and to five individuals. The teams are from the Department of Mathematics, University of California, Berkeley, members being Julia H. Bowman, W. M. Kincaid, C. W. Lippman; the Department of Mathematics, University of California at Los Angeles, members being Richard Arens, Robert James, Harold Shniad; and the Department of Mathematics, Carnegie Institute of Technology, Pittsburgh, members of the team being S. N. Foner, E. L. Kaplan, W. E. Stuermann. The five individuals receiving honorable mention are: G. R. MacLane, Yale University; Samuel Manson, Cooper Union Institute of Technology; Paul Marcus, Columbia University; G. H. K. Strathy, University of Toronto; J. E. Wilkins, Jr., University of Chicago.

The third annual William Lowell Putnam Mathematical Competition was held on March 2, 1940, and 208 undergraduate mathematics students from 68 colleges and universities in the United States and Canada took part. Qualified readers graded the examination books, complete anonymity being maintained throughout by the use of numbers instead of names for identification.

The first competition was held in April, 1938, and the second in March, 1939. This competition was designed to stimulate a healthful rivalry in the undergraduate work of mathematics departments in colleges and universities in the United States and Canada, and is open only to undergraduates. The examination questions were taken from the fields of calculus, higher algebra, differential equations and geometry.

The Putnam Competition is made possible by the trustees of the William Lowell Putnam Intercollegiate Memorial Fund, left by Mrs. Putnam in memory of her husband, a member of the Harvard class of 1882, and is sponsored by the Mathematical Association of America.

SYMPOSIUM IN THEORETICAL PHYSICS AT THE UNIVERSITY OF MICHIGAN

THE eighteenth Symposium in Theoretical Physics will be held at the University of Michigan in connec-