Max Planck

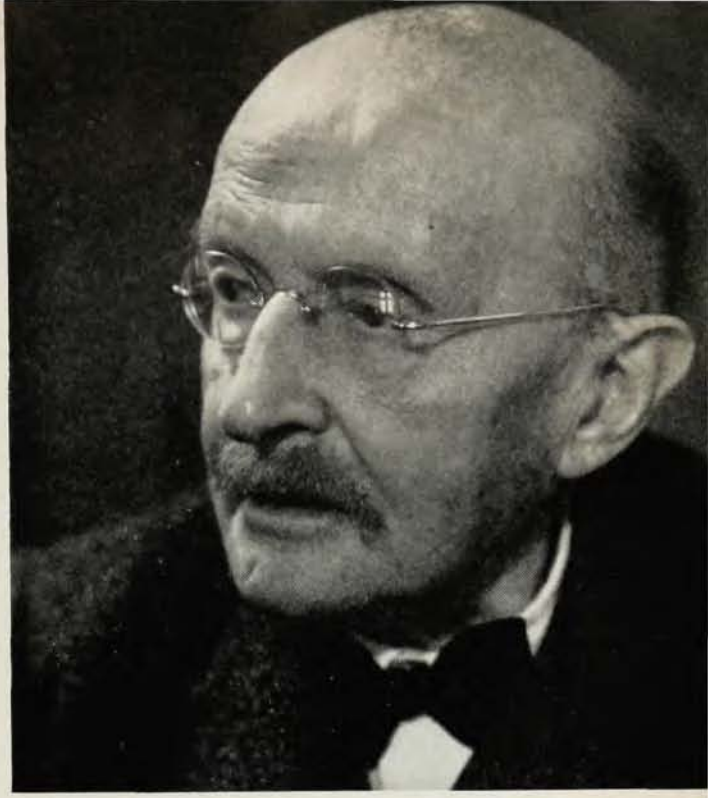
ONE HUNDREDTH BIRTHDAY CELEBRATION

By V. F. Weisskopf

ON April 24–25, the German Academy of Sciences in Berlin and the German Physical Societies held memorial sessions in Berlin to commemorate the 100th birthday of Max Planck. This celebration was a remarkable event in many respects, but primarily in that it was the first time scientists from the two sectors of Germany had collaborated on a common project. Scientists from both sides of the Iron Curtain spoke at the meetings, which were held alternately in East and in West Berlin. In the true spirit of Max Planck, the celebration became a symbol of the fact that science represents values beyond the scope of politics.

Since Max Planck was permanent secretary of the German Academy of Sciences from 1912 until 1936, the most important meetings were held by the Academy. The Academy is today under East-German administration, for its building is located in the eastern part of the city near the Humboldt University, which formerly was the only university in Berlin; after the division of Germany, however, a new university, Die Freie Universität, was founded in the western sector. The Academy building, the Humboldt University, and the State Opera House are among the few reconstructed buildings in a section of Berlin completely destroyed during the war. Still to be seen are the empty hollow shells of the old palaces, churches, and government buildings in the former center of the capital.

The celebration began with an opening session of the Academy in the State Opera House introduced by the president of the Academy, Max Volmer. H. Fruehauf then gave a most interesting talk on the activities of Planck as permanent secretary of the Academy, the post he held for a quarter of a century. Some of his letters and proposals were read, all of which bore out Planck's true conception of the dignity of science during the many difficult political crises of his time. To mention only one example: During the First World War a motion was submitted to the Academy demanding the expulsion of the French among the foreign corresponding members. As it seemed impossible to get a clear majority against this move, in view of the high tide of "patriotic" feeling, Planck addressed a memorandum to the Academy in which he asked for the postponement of this decision until after the war, when the questions involved could be judged in calmer fashion. His proposal was accepted and, of course, the step was never taken. Some of his correspondence with Einstein was also read, revealing that in his fight against the forces of the Nazi regime, he was not so successful.



Max Planck (1858–1947), whose 100th birthday was celebrated last April in the divided city of Berlin. Born in Kiel, Prof. Planck taught for many years at the University of Berlin and was director of the Institute for Theoretical Physics there. He received the Nobel Prize in physics in 1918. On the opposite page he is shown at work in his study.
(Photos by Ullstein-Hubermann, Augenstein)

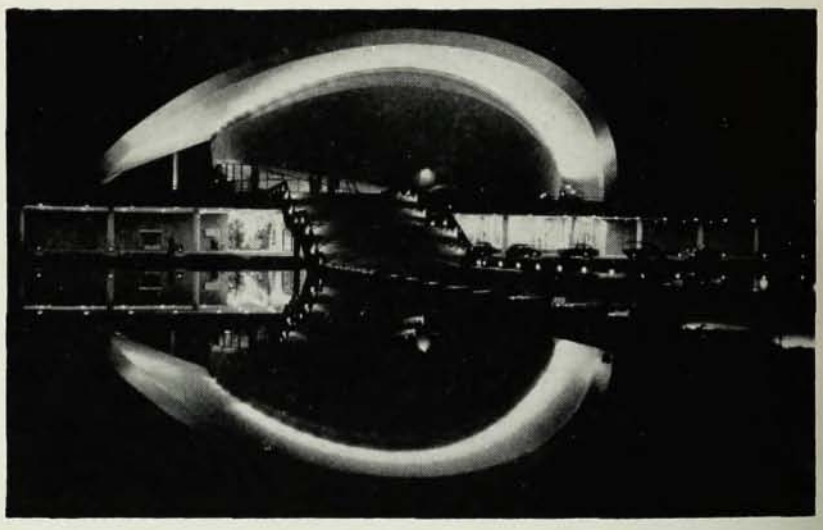
The encroachment of the Academy administration by Nazi sycophants led finally to Planck's resignation from his old post.

After this talk, Max von Laue (who lives in West Berlin) gave a very impressive review of Planck's scientific work in relation to the development of modern physics. At the end of the session, Otto Hahn (West Germany) presented a bust of Max Planck, given to the Academy by the Max-Planck Gesellschaft, a Western organization for the support of science (formerly the Kaiser-Wilhelm Gesellschaft).

Later in the afternoon, during a reception of the Academy in the Opera House, the addresses of some foreign academies were read. Addresses were sent by, among others, the National Academy of Sciences in Washington, the Academy of Sciences of the USSR, the Royal Society of Great Britain, and the French Academie des Sciences. Bogoliubov, the representative of the Russian Academy, Dirac, from the Royal Society, and myself, as the representative of the National

State Opera House in East Berlin, where the opening sessions were held. *(Ullstein)*

In the audience (left to right) are Professor and Mrs. Heisenberg and Professor Hahn. Heisenberg was a main speaker and Hahn presented a bust of Planck that was given to the German Academy by the Max-Planck Gesellschaft. (*Ullstein-Croner*)



West Berlin's newly built Kongress Halle, where the sessions on the second day of the celebration were held, was designed by the American architect H. A. Stubbins. Construction began in the spring of 1956 and the building was opened last September. (*Ullstein-Croner*)

Seated at the table (left to right) are representatives of the three atomic powers at the Planck celebration: P. A. M. Dirac of Cambridge University, representing the Royal Society of Great Britain; N. N. Bogoliubov of the Soviet Academy of Sciences; V. F. Weisskopf of the Massachusetts Institute of Technology, representing the US Academy of Sciences; and D. Ivanenko of Moscow University. Prof. Weisskopf, author of the present account of the celebration, has been on a sabbatical leave from MIT during the past year while working at the CERN laboratories in Geneva. He was awarded the Max Planck Medal in 1956 and in 1957 he was elected foreign corresponding member of the Academie des Sciences of France, replacing the late R. A. Millikan.

Academy, were seated together at one table. Regarded as a symbol of collaboration between the three atomic powers, the three of us became the object of much picture-taking, in particular when we became engaged in the discussion of a dispersion relation written on a paper napkin. The day ended with a special performance of Gluck's "Iphigenie in Aulis" at the State Opera.

The next day was devoted to a session in West Berlin. The German Physical Societies held a meeting in the Kongress Halle in West Berlin—a huge, brand new, "modernistic" building with a hall seating 1700 people, which was designed by the American architect H. Stubbins. It is a most impressive building that reminds one of the new assembly hall designed by the same architect at the Massachusetts Institute of Technology.

The session was held under the chairmanship of F. Trendelenburg, present chairman of the Verband Deutscher Physikalischer Gesellshaften. The main speech, given by W. Heisenberg, concerned the philosophical significance of Max Planck's discovery. With broad impressionistic strokes, Heisenberg traced the idea of fundamentally simple elementary particles in nature from the platonic idea of simple polyhedric shapes of his "elements" to the quantized orbits in the atoms, which marks the introduction of simple fundamental forms into present-day physics. But beyond this, Heisenberg saw the rebirth of platonic ideas in the important role which symmetry relations and group invariances play in modern elementary-particle physics. He expressed the hope that our present array of elementary particles is the image of a number of well-defined symmetries of one and only one fundamental equation. The Planck medal, a prize conceived of after Planck's death and awarded every year by the German Physical Society to a theoretical physicist, took on a special significance this anniversary year. At this meeting it was given to W. Pauli.

The second speaker was Gustav Hertz (from East Germany), who talked about the importance of Planck's discovery for experimental physics. He demonstrated with many interesting examples the complete revolution in methods and techniques that was initiated by the discovery of the quantum of action. The last talk of the session was a warm and human report by Professor Westphal on Planck as a man and a colleague. The day ended with a dinner for all participants in the Kongress Halle, at which the informal and pleasant atmosphere was a fitting conclusion to the impressive celebration.

Somehow the significance of the Max Planck memorial sessions was brought to focus by the fact that they took place in Berlin, a city which unhappily symbolizes the tragic split of humanity today and in which the stark realities of this split are projected constantly into the daily life of the people. The celebration clearly showed that science has created human values that extend beyond any political or national boundaries.

The life of Max Planck is marked by his devotion to the task of using these values to support the cause of peace and human understanding.

Wolfgang Pauli, recipient of this year's Planck Medal, is professor of physics at the Eidgenössische Technische Hochschule in Zurich, Switzerland. (*Bettina*)

Gustav Hertz, one of the main speakers, is professor of physics at the University of Leipzig and director of the Institute for Isotope Separation in East Germany. In 1951 he and James Franck jointly received the Max Planck Medal. (*Ullstein-Eschen*)

Lise Meitner (Stockholm) and Max von Laue (director of the Fritz-Haber Institute) in discussion during an intermission in the meeting. (*Ullstein-Croner*)