Illustration Credits

FRONT COVER The Ancient of Days by William Blake, © The British Museum.

Bubble Chamber © Kevin Fleming/CORBIS.

BACK COVER Portrait of Cecilia Payne-Gaposchkin by Patricia Watwood,

courtesy of Harvard University.

PROLOGUE TO PART 1

Image of Albert Einstein™ licensed by the Hebrew University of Jerusalem, represented by The Roger Richman Agency, Inc., www.albert-einstein.com

CHAPTER 1

Figure 1.1	Courtesy of History of Science Collections, University of Oklahoma.
Figure 1.3	Courtesy of History of Science Collections, University of Oklahoma.
Figure 1.5	Courtesy of Reuters/ARC/Timepix.
Figure 1.17	Courtesy of Zoology Section of "La Specola" Museum of Natural History of the University of Florence.
Figure 1.19	Courtesy of Harvard College Observatory.
page 53	Courtesy of NERAIL Photo Archive.
page 54	Courtesy of Jacky Naegelan/Reuters/TimePix.
page 54	© Cory Sorensen/CORBIS.

Figure 2.1	Courtesy of Davison Art Center, Wesleyan University.
Figure 2.2	Courtesy of AIP Emilio Segrè Visual Archives
Figure 2.3	Courtesy of Jagiellonian Library, Krakow.

Figure 2.8	Courtesy of History of Science Collections, University of Oklahoma.
Figure 2.9	Courtesy of NASA.
Figure 2.14	Courtesy of Mount Wilson Palomar Observatory.
Figure 2.16	Courtesy of British Museum.
Figure 2.17	© Roger Ressmeyer/CORBIS
Figure 2.18	© Bettmann/CORBIS
Figure 2.22	Courtesy of Jagiellonian Library, Krakow.
Figure 2.26	Courtesy of History of Science Collections, University of Oklahoma.
Figure 2.27	Courtesy of Mansell/Timepix.
Figure 2.28	Courtesy of Royal Observatory, Edinburgh/SPL/Photo Researchers, Inc.
Figure 2.29	Courtesy of NASA.
Figure 2.30	Courtesy of Harvard College Observatory.
Figure 2.37	Courtesy of Sidney Harris.
Figure 2.38	Courtesy of Instituto e Museo di Storia della Scienza, Firenze, Italy.
Figure 2.39	Courtesy of History of Science Collections, University of Oklahoma.
Figure 2.40	Courtesy of NASA.
Figure 2.42	Courtesy of History of Science Collections, University of Oklahoma.
Figure 2.43	Courtesy of Mount Wilson Palomar Observatory.
Figure 2.45	Courtesy of Lowell Observatory.
Figure 2.47	Courtesy of AIP Emilio Segrè Visual Archives
CHAPTER 3	

© Jonathan Blair/CORBIS.
Courtesy of Harvard College Observatory.
Courtesy of David Couzens.
© Tecmap Corporation/CORBIS
Courtesy of NASA.
© Mike King/CORBIS.
© The Harold & Esther Edgerton Family Trust, courtesy of Palm Press, Inc.
Courtesy of NASA.
Courtesy of NASA.
Courtesy of NASA.

821

ILLUSTRATION CREDITS

Figure 3.35	Courtesy of NASA.
Figure 3.36	© Wally McNamee/CORBIS.
Figure 3.41	Courtesy of NASA.
CHAPTER 4	
Figure 4.1	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 4.2	Courtesy of Harvard College Observatory.
Figure 4.3	Courtesy of Harvard College Observatory.
Figure 4.9	Courtesy of Harvard College Observatory.
Figure 4.10	© Bettmann/CORBIS.
CHAPTER 5	
Figure 5.2	© The British Museum.
Figure 5.5	Courtesy of Metropolitan Museum of Art, Purchase, Mr. and Mrs. Charles Wrightsman Gift, in honor of Everett Fahy, 1977.
Figure 5.6	Courtesy of Cornell University Library, Division of Rare and Manuscript Collections.
Figure 5.14	Courtesy of Royal Netherlands Academy of Sciences and Lette
Figure 5.15	Courtesy of Burndy Library, Dibner Institute for the History of Science and Technology, Cambridge, Massachusetts.
Figure 5.16	© Michael Nicholson/CORBIS.
Figure 5.17	© Duomo/CORBIS.
Figure 5.18	Courtesy of Nat Farbman/Timepix.
Figure 5.21	© Owen Franken/CORBIS.
Figure 5.22	Courtesy of Albert B. Gregory.
Figure 5.24	© The Harold & Esther Edgerton Family Trust, courtesy of Palm Press, Inc.
Figure 5.25	Courtesy of David Couzens.
CHAPTER 6	
Figure 6.1	© Bettmann/CORBIS.
Figure 6.2	© CORBIS.
Figure 6.4	Courtesy of Houghton Library, Harvard University.
Figure 6.5a	© Stephen Frink/CORBIS.
Figure 6.6	Courtesy of Stan Sherer.
Figure 6.10	© Bettmann/CORBIS.

Figure 6.11	Courtesy of Science Museum/Science & Society.
Figure 6.14	Courtesy of American Society of Agricultural Engineers.
Figure 6.15	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 6.16	Courtesy of Harvard College Observatory.
Figure 6.17	Courtesy of AIP Emilio Segrè Visual Archives.

CHAPTER 7

Figure 7.2	© Bettmann/CORBIS.
Figure 7.4	Courtesy of AIP Emilio Segrè Visual Archives, Zeleny Collection.
Figure 7.6	Courtesy of Historisches Museum, Basel.
Figure 7.15	Courtesy of David Couzens.
Figure 7.16	© The Harold & Esther Edgerton Family Trust, courtesy of Palm Press, Inc.
Figure 7.17	University of Vienna, courtesy of AIP Emilio Segrè Visual Archives.
Figure 7.19	Courtesy of David Couzens.
Figure 7.22	© Peter Turnley/CORBIS.
Figure 7.23	Courtesy of David Couzens.

Excerpt from "West-Running Brook" from The Poetry of Robert Frost, edited by Edward Connery Lathem. Copyright 1928, © 1969 by Henry Holt and Company, © 1956 by Robert Frost. Reprinted by permission of Henry Holt and Company, LLC.

Figure 8.1	Courtesy of David Couzens.
Figure 8.2	Courtesy of David Couzens.
Figure 8.6	© CORBIS.
Figure 8.24	Courtesy of United States Navy.
Figure 8.36	Courtesy of United States Navy.
Figure 8.38	© Kevin Fleming/CORBIS.
Figure 8.39	Courtesy of David Couzens.
Figure 8.41	Courtesy of Bausch & Lomb.
Figure 8.44	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 8.47	Smithsonian Institution, courtesy of AIP Emilio Segrè Visual Archives.
Figure 8.49	General Electric Research Laboratory, courtesy of AIP Emilio Segrè Visual Archives.
Figure 8.50	Courtesy of Houghton Library, Harvard University.

CHAPTER 9

Figure 9.1a	Image of Albert Einstein™ © CORBIS, licensed by the Hebrew University of Jerusalem, represented by The Roger Richman Agency, Inc., www.albert-einstein.com
Figure 9.2b/c	Image of Albert Einstein™ licensed by the Hebrew University of Jerusalem, represented by The Roger Richman Agency, Inc., www.albert-einstein.com
Figure 9.16	Courtesy of Fermilab.
Figure 9.17	© Kevin Fleming/CORBIS.

PROLOGUE, PART 2

Image of Albert Einstein™ © CORBIS, licensed by the Hebrew University of Jerusalem, represented by The Roger Richman Agency, Inc., www.albert-einstein.com

Portrait of Isaac Newton property of Massachusetts Institute of Technology, Burndy Library; courtesy of AIP Emilio Segrè Visual Archives.

Figure 10.1	Courtesy of Burndy Library, Dibner Institute for the History of Science and Technology, Cambridge, Massachusetts.
Figure 10.3	Courtesy of Burndy Library, Dibner Institute for the History of Science and Technology, Cambridge, Massachusetts.
Figure 10.5	Courtesy of Burndy Library, Dibner Institute for the History of Science and Technology, Cambridge, Massachusetts.
Figure 10.6	Courtesy of AIP Emilio Segrè Visual Archives, E. Scott Barr Collection.
Figure 10.9	© W. Perry Conway/CORBIS.
Figure 10.11	© Bettmann/CORBIS.
Figure 10.15	Courtesy of AIP Emilio Segrè Visual Archives, Landè Collection.
Figure 10.19	Courtesy of Stanford Linear Accelerator Center.
Figure 10.20	Courtesy of AIP Emilio Segrè Visual Archives, E. Scott Barr Collection.
Figure 10.23	Courtesy of Nationalhistoriske Museum, Frederiksborg, Hillerod.
Figure 10.27	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 10.31	Courtesy of Jan Curtis.

CHAPTER 11

Figure 11.1a	Courtesy of Deutsches Museum, Munich.
Figure 11.2	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 11.4	The Royal Institution, London, UK/Bridgeman Art Library International, Ltd.
Figure 11.9	© CORBIS.
Figure 11.10	Courtesy of Ted Russell/Timepix.
Figure 11.11	Courtesy of Thomas Alva Edison Foundation.
Figure 11.12	Courtesy of Queens Borough Public Library, Long Island Division, and Latimer Family Collection.
Figure 11.17	Courtesy of Manfred Krutein/Photovault.com.
Figure 11.19	© Kevin R. Morris/CORBIS.
Figure 11.21a/b	Courtesy of National Renewable Energy Laboratory.
Figure 11.22	Courtesy of National Renewable Energy Laboratory.
Figure 11.23	Courtesy of National Renewable Energy Laboratory.
Figure 11.24	Courtesy of Tennessee Valley Authority.
Figure 11.25	© Roger Ressmeyer/CORBIS.

CHAPTER 12

Figure 12.1	Courtesy of Royal Institution/Bridgeman Art Library International, Ltd.
Figure 12.2	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 12.8	Property of Deutsches Museum, Munich; courtesy of AIP Emilio Segrè Visual Archives, Physics Today Collection.
Figure 12.14	© Bettmann/CORBIS.
Figure 12.16	Courtesy of SE-IR Corporation.
Figure 12.17	Courtesy of NASA.
Figure 12.19	Courtesy of General Electric Co.
Figure 12.20	Courtesy of Brookhaven National Laboratory.

Figure 13.1 Figure 13.2	Courtesy of Science Museum/Science and Society. Courtesy of AIP Emilio Segrè Visual Archives, W.F. Meggers Collection.
Figure 13.3	Courtesy of Othmer Library of Chemical History, Chemical Heritage Foundation, Philadelphia, Pennsylvania.
Figure 13.5	Courtesy of Cavendish Library, Cambridge.

Figure 13.6	Courtesy of California Institute of Technology Archives.
Figure 13.11	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 13.12	Courtesy of AIP Emilio Segrè Visual Archives, gift of Jost Lemmerich.
Figure 13.13	Photograph by Aufnahme u. Verlag v. A. Baumann Nacht, München courtesy of AIP Emilio Segrè Visual Archives, Landè Collection.
Figure 13.14	© Bettmann/CORBIS.
Figure 13.16	Courtesy of Eastman Kodak Company.
Figure 13.17	© Steve Chenn/CORBIS.
Figure 13.18	Courtesy of Straus Center for Conservation, Harvard University Art Museums.
Figure 13.19	Courtesy of U.S. Department of the Interior National Park Service, Edison National Historic Site.
CHAPTER 14	
Figure 14.6	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 14.11a	Courtesy of AIP Emilio Segrè Visual Archives, Margrethe Bohr Collection.
Figure 14.11b	Courtesy of AIP Emilio Segrè Visual Archives, W.F. Meggers Gallery of Nobel Laureates.
Figure 14.11c	Courtesy of AIP Emilio Segrè Visual Archives, Margrethe Bohr Collection.
Figure 14.15	Courtesy of University of California, Lawrence Livermore National Laboratory, and the Department of Energy, under whose auspices the work was performed.
CHAPTER 15	
Figure 15.1	Courtesy of AIP Emilio Segrè Visual Archives, W.F. Meggers Collection.
Figure 15.3	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 15.4	Courtesy of Prof. Harry Meiners, Rensselaer Polytechnic Institute
Figure 15.7	Photo by Francis Simon, courtesy of AIP Emilio Segrè Visual Archives.
Figure 15.8	Max Planck Institute, courtesy of AIP Emilio Segrè Visual Archives.
Figure 15.9	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 15.11	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 15.12	Institut International de Physique Solvay, courtesy of AIP Emilio Segrè Visual Archives.

CHAPTER 16

Collected Papers of Albert Einstein, Volume 2, edited by John nel and David Cassidy (Princeton University Press, 1990).
chael S. Yamashita/CORBIS.
tesy of NASA.
arles O'Rear/CORBIS.

CHAPTER 17

Figure 17.1	Courtesy of Burndy Library, Dibner Institute for the History of Science and Technology, Cambridge, Massachusetts; courtesy of AIP Emilio Segrè Visual Archives.
Figure 17.3a	Courtesy of AIP Emilio Segrè Visual Archives, W.F. Meggers Collection.
Figure 17.3b	Courtesy of AIP Emilio Segrè Visual Archives, E. Scott Barr Collection.
Figure 17.3c	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 17.3d	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 17.8	Courtesy of University of Pennsylvania Library, Edgar Fahs Smith Collection.

Figure 18.4	Berkeley National Laboratory, University of California, Berkeley; courtesy of AIP Emilio Segrè Visual Archives.
Figure 18.5	Photo by Börtzells Esselte, Nobel Foundation; courtesy of AIP Emilio Segrè Visual Archives, Weber and Fermi Film Collections.
Figure 18.8	Courtesy of Los Alamos National Laboratory.
Figure 18.9	Berkeley National Laboratory, University of California, Berkeley; courtesy of AIP Emilio Segrè Visual Archives.
Figure 18.10a/b/c	Courtesy of Fermilab.
Figure 18.14	Courtesy of Argonne National Laboratory.
Figure 18.15	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 18.17	Courtesy of AIP Emilio Segrè Visual Archives.
Figure 18.19	Courtesy of AIP Emilio Segrè Visual Archives, Herzfeld Collection.
Figure 18.20	Courtesy of Argonne National Laboratory.
Figure 18.23	© Hulton-Deutsch Collection/CORBIS.
Figure 18.25	Courtesy of AIP Emilio Segrè Visual Archives.

827

ILLUSTRATION CREDITS

Figure 18.26	© Bettmann/CORBIS.
Figure 18.27	© Bettmann/CORBIS.
Figure 18.29	© Roger Ressmeyer/CORBIS.
Figure 18.30	Photo by K.G. Somsekhar, AIP Emilio Segrè Visual Archives.
Figure 18.31	Courtesy of NASA.
Figure 18.32	Painting by Patricia Watwood, courtesy of Harvard University.
Figure 18.33	Courtesy of Oskar Reinhart Collection "Am Römerholz," Winterthur, Switzerland.

COLOR PLATES

Plate 1 © Roger Antrobus/CORBIS.

Plate 4 The Museum of Modern Art, New York. Lillie P. Bliss Collection.

Photograph © 2001, The Museum of Modern Art, New York.

Plate 5 Courtesy of J. Talbot, University of Ottawa.