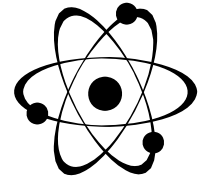




J. Murrey Atkins Library



Physics & Optical Science Newsletter

Volume 3, Issue 1

Fall, 2006

Physics & Optical Science
Liaison:

Barbara Tierney
704-687-3098
bgtierne@email.uncc.edu

Check out Services
for Faculty at:
[library.uncc.edu/
faculty](http://library.uncc.edu/faculty)

Inside this issue:

Faculty Article Delivery Service 1

Library Luncheon for New Faculty & Dept. Reps. 1

Complete IOP Serials Now Available 1

Library Tower Project Update 2

Course Proposals 2

Helpful Web Sites 2

Research Assistance 3

New additions to collections 3-9

Welcome Back!!

Welcome back for Fall Semester 2006! The Atkins Library is pleased to announce:

Faculty Article Delivery Service

The Atkins Library is pleased to offer a new Faculty Article Delivery service. UNC Charlotte faculty and staff can have any article from the library's print periodical collection scanned and sent to their desktop without leaving their office or home! With this service, faculty and staff can:

- Request any article from the library's print periodical collection
 - Have it scanned and sent to their email address
 - Most articles should be received within 24 hours on weekdays
- All at no cost!

To request an article, **just** click on the Interlibrary Loan link from the library's webpage, login to your Interlibrary Loan account, and fill out a request with your citation information. Library staff will process and fill most requests within 24 hours Monday through Friday. Please note that this service is only available to UNC Charlotte Faculty and Staff and must be made from a Faculty or Staff Interlibrary Loan account.

Library Luncheon for New Faculty and Departmental Representatives

The Library cordially invites new faculty and departmental representatives to an informal luncheon in the Library (Atkins 124) on Thursday, September 14th, 11:30am—1:00pm. Don't miss this great opportunity for a free lunch and to get to know your Library Liaison. Find out how the Library can make your teaching and research easier and more effective. Please RSVP to Melinda Livas at 7-3821 or mmlivas@email.uncc.edu

Journal "Nature" now available electronically

Nature (Jan. 1997+)

Atkins Now Has Complete Institute of Physics (IOP) Serials, Retrospective and Current

Atkins Library now has access to the following IOP titles:

- Chinese Physics
 - Chinese Physics Letters
 - Journal of Geophysics and Engineering
 - Journal of Neural Engineering
 - Journal of Physics. Conference Series (collection of individual proceedings)
 - Journal of Radiological Protection
 - Nuclear Fusion
 - Physical Biology
 - Physics in Medicine and Biology
 - Physics World Archives
 - Physiological Measurement
 - Plasma Physics & Controlled Fusion
- For 2007, access will be added for seven new IOP titles:
- Bioinspiration and Biomimetics
 - Biomedical Materials
 - Chinese Journal of Astronomy & Astrophysics
 - Computational Science & Discovery
 - Environmental Research Letters
 - Journal of Instrumentation
 - Plasma Science and Technology
 - Physica Scripta



Laptops are available for checkout from the circulation desk

“Atkins Library reserves staff will scan your materials so that students can access them via the Internet all semester long.”

Library’s Tower Project Update

It’s hard to miss the large blue crane towering over the Atkins Library! During the next 10 months, the library is replacing the brick façade on the exterior of the tower with real brick masonry. So far, all of the windows in the tower floors 5-10 have been covered so they can be removed with a minimum of disruption. In addition, one side of the library’s old brick façade has been removed. New brickwork began during the first week of classes and cast stone has been laid by nearly every window on all four sides of the building.

We have posted a construction update website linked directly from the library’s homepage at <http://library.uncc.edu/construction> which includes project updates, renderings of the new tower, history of the project and any news releases as they come available. Please bear with us during this lengthy construction project!

Course Proposals

Request for a “Consultation on Library Holdings” for a new course or program is initiated by a college or department and may come from an individual faculty member or may come from the departmental chair.

- Send the request to the liaison librarian for your department. Completing the “Library Holdings Assessment” is the responsibility of the Liaison Librarian.
- Send requests via email (preferred), or campus mail.
- Required documents include: Full course proposal and syllabus or draft syllabus of the course.

Each proposal is treated on a case by case basis. The level of research required determines the level of collection assessment necessary. Some factors we consider: number of students anticipated in each offering, frequency with which the course will be offered and number of sections. Has the course been offered previously as a topics course or under a different name? Is this a new curriculum, or an expansion or variation of one previously taught? The librarian makes a decision as to whether the library’s.... “Holdings are superior” “Holdings are adequate” Holdings are adequate only if department purchases additional holdings” “Holdings are inadequate”.

Helpful Physics, Optics and Science Web Sites

International Council on Nanotechnology, Environmental, Health and Safety (EHS) database
<http://icon.rice.edu/research.cfm>

This database is maintained by Rice University for the International Council of Nanotechnology. It contains summaries and citations for research papers related to the EHS implications of nanoscale materials.

Information Literacy Standards for Science and Engineering/Technology

<http://www.ala.org/ala/acrl/acrlstandards/infolitscitech.htm>

Information literacy standards are defined for science, engineering, and technology disciplines.

Physics 2000

<http://www.colorado.edu/physics/2000/index.pl>

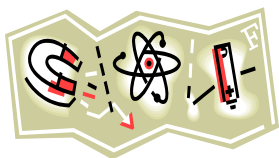
This Web site provides outstanding Java-based interactive modules for understanding key concepts of modern physics. Numerous interactive modules that are both fun and educational provide a rich teaching framework. Interactive modules include the following: Interference Experiments, Bose-Einstein Condensation, X-rays, CAT Scans, Microwave Ovens, Lasers, TV and LCD screens, Electromagnetic Waves, Quantum Atom, Polarization, Elements as Atoms, Periodic Table, and Isotopes & Radioactivity. Pedagogical principles and interactive applet usage are described.

Activity-based Physics

<http://www.physics.umd.edu/rgroups/ripe/perg/abp/>

This Web site is a multi-university project to improve the teaching of introductory physics using the results of research in physics education. This URL is an entry to the Web pages managed by the University of Maryland Physics Education Research Group. Three curricula that have been made available to physics educators are Workshop Physics, Tools for Scientific Thinking, and RealTime Physics. These curricula use the findings of physics education research, are activity based, and make use of computers for data analysis. This Web sites provides a summary of resources that are available to physics teachers.

Optics InfoBase <http://www.opticsinfobase.org>



Research Assistance for Faculty and Students

Research help is available from a variety of sources...

- Reference Desk— staffed by librarians 85 hours a week
- Phone 704-687-2241
- Live Chat (Ask a Librarian) various hours
- <http://library.uncc.edu/ask/>
- By E-mail
- In-office assistance, by appointment or drop-in
- Research Guides
- Web-based tutorials

If you have a specific question send e-mail to

bgtierne@email.uncc.edu

Ordering Materials

Submit order suggestions for Books, DVDs or other materials to the library representative for your department. Give as complete information as possible—author, title, publication date, edition, price. The library representative will submit the order to our technical services department. As before, we do not currently have funds to order new journal subscriptions unless we give up one of equal cost (for your department). We continue to receive many new journal titles through Science Direct, Wiley Inter-science, Springer, etc.

Get updates on new publications in your research area with e-alerts

Many of the library's electronic journals offer alert services to update you with new articles or table of contents in your area of research interest. Publishers such as Ingenta, Web of Science, CINAHL, Ovid, Science-Direct, and Springer-Verlag offer this service to UNC Charlotte faculty, staff and students. Once you sign up, these services will periodically send you an e-mail with information to keep you updated on your field of interest. To get more information on which journals and publishers offer this service and how to sign up, please check out the Research and Resources tab from the Faculty Services webpage at <http://library.uncc.edu/faculty>

New Digital Signage Coming to Library

The Library will be purchasing two 46 inch LCD monitors to install in the library as digital signage. One display will go by the Information Desk and the other will be installed in the blue rotunda next to Ritazza. The entire system will enable the library to publicize events, promote library services and collections, and run special events such as new programming or satellite programs from Channel 22. These monitors will be purchased with Library Parent's Fund money and hopefully installed before the end of the Fall Semester.

New Physics/Optical Science Acquisitions

The Library posts lists of newly acquired materials each month for your convenience. Be sure to click on the [What's New](#) link on the library's homepage to see what we have added to our collections. The following titles were added during Spring/Summer 2006:

QB54 .B37 2006

Civilized life in the universe : scientists on intelligent extraterrestrials / George Basalla. Oxford ; New York : Oxford University Press, 2006.

QB88 .Z57 2005

An acre of glass : a history and forecast of the telescope / J.B. Zirker. Baltimore, Md. : Johns Hopkins University Press, c2005.

QB521.4 .S65 2001

Solarmax [videorecording] / a Heliograph production in association with the Museum of Science and Industry ; written and directed by John Weiley ; produced by John Weiley and Robert Eather. Burbank, Calif. : SlingShot Entertainment, c2001, c1991.

QB857.5.G7 I58 2004

Impact of gravitational lensing on cosmology : proceedings of the 225th symposium of the International Astronomical Union held at the Ecole Polytechnique Federale de Lausanne, Switzerland, July 19-23, 2004 / edited by Yannick Mellier and Georges Meylan. Cambridge, UK ; New York : Cambridge University Press, 2005, c2004.

QB529 .I57 2004

Coronal and stellar mass ejections : proceedings of the 226th Symposium of the International Astronomical Union held in Beijing, China, September 13-17, 2004 / Kenneth Dere, Jingxiu Wang, Yihua Yan (eds.). Cambridge, U.K. ; New York : Cambridge University Press, 2005.

QB603.V65 F73 2005

Worlds on fire : volcanoes on the Earth, Moon, Mars, Venus and Io / Charles Frankel. Cambridge, UK ; New York : Cambridge University Press, 2005.

QB857 .I564 2004

The interplay among black holes, stars and ISM in galactic nuclei : proceedings of the 222th Symposium of the International Astronomical Union held in Gramado, Rio Grande do Sul, Brazil, March 1-5, 2004 / edited by Thaisa Storchi-Bergmann, Luis C. Ho and Cambridge, UK ; New York : Cambridge University Press, 2004.

- QB981 .C414 2006
Epic of evolution : seven ages of the cosmos / Eric Chaisson ; illustrated by Lola Judith Chaisson. New York : Columbia University Press, c2006.
- QB61 .T32 2005
Teaching and learning astronomy : effective strategies for educators worldwide / [Edited by] Jay M. Pasachoff, John R. Percy. Cambridge, U.K. ; New York : Cambridge University Press, c2005.
- QB981 .M89 2005
Physical foundations of cosmology / Viatcheslav Mukhanov. Cambridge, UK ; New York : Cambridge University Press, 2005.
- QB981 .S886 2005
The cosmic landscape : string theory and the illusion of intelligent design / Leonard Susskind. New York : Little, Brown and Co., 2005.
- QB41.C763 V66 2006
Uncentering the Earth : Copernicus and The revolutions of the heavenly spheres / William T. Vollmann. New York : Norton, c2006.
LOCATION = Browsing Collection.
- QB497 .D52 2005
A Dictionary of space exploration / edited by E. Julius Dasch. Oxford ; New York : Oxford University Press, 2005.
- QB817 .V37 2005
Gravitational radiation, luminous black holes, and gamma-ray burst supernovae / Maurice H.P.M. van Putten. Cambridge, UK ; New York : Cambridge University Press, 2005.
- QB860 .I58 2005
Probing galaxies through quasar absorption lines : proceedings of the 199th colloquium of the International Astronomical Union held in Shanghai, People's Republic of China, March 14-18, 2005 / edited by Peter R. Williams, Cheng-gang Shu, and Brice Ménard. Cambridge, UK ; New York : Cambridge University Press, 2005.
- QC7.5 .N49 2006
The new physics for the twenty-first century / edited by Gordon Fraser. Cambridge, UK ; New York : Cambridge University Press, 2006.
- QC30 .S93 2006
Cliff's nodes : editorials from The physics teacher / Clifford Swartz. Baltimore : Johns Hopkins University Press, 2006.
- QC173.4.I57 B37 2005
Interfacial science : an introduction / Geoffrey Barnes, Ian Gentle. Oxford ; New York : Oxford University Press, 2005.
- QC981.8.C5 G644 2006
Global climate change / edited by Paul McCaffrey. Bronx, NY : H. W. Wilson Company, 2006.
- QC5 .R596 2004
Encyclopedia of physics / Joe Rosen. New York : Facts on File, c2004.
- QC20.7.D5 F45 2005
The Lévy Laplacian / M.N. Feller. Cambridge, UK ; New York : Cambridge University Press, 2005.
- QC30 .S67 2006
Physics demonstrations : a sourcebook for teachers of physics / Julien Clinton Sprott. Madison, WI : University of Wisconsin Press, c2006.
- QC173.65 .B76 2005
Physical relativity : space-time structure from a dynamical perspective / Harvey R. Brown. Oxford : Clarendon Press ; Oxford ; New York : Oxford University Press, 2005.
- QC773.3.R9 K69 2004
Stalin's great science : the times and adventures of Soviet physicists / Alexei B. Kojevnikov. London : Imperial College Press ; Singapore ; River Edge, NJ : Distributed by World Scientific, c2004.
- QC787.P7 W68 2004
Utilisation and reliability of high power proton accelerators : workshop proceedings, Daejeon, Republic of Korea, 16-19 May 2004.[Paris] : Nuclear Energy Agency, Organisation for Economic Co-operation and Development, c2005.
- QC793.5.E62 A73 2006
Representing electrons : a biographical approach to theoretical entities / Theodore Arabatzis. Chicago : University of Chicago Press, 2006.
- QC794.6.S85 M37 2005
Chern-Simons theory, matrix models, and topological strings / Marcos Mariño. Oxford : Clarendon Press ; Oxford ; New York : Oxford University Press, 2005.
- QC880.4.B35 V55 2005
Baroclinic tides : theoretical modeling and observational evidence / Vasilij Vlasenko, Nataliya Stashchuk, Kolumban Hutter. Cambridge ; New York : Cambridge University Press, c2005.

- QC176.8.M46 H45 2003
Mesoscopic electronics in solid state nanostructures / Thomas Heinzl. Weinheim : Wiley-VCH, 2003.
- QC355.3 .B76 2003
Modern classical optics / Geoffrey Brooker. Oxford ; New York : Oxford University Press, 2003.
- QC670 .S65 2004
Dynamics of charged particles and their radiation field / Herbert Spohn. Cambridge, U.K. ; New York : Cambridge University Press, c2004.
- QC793.2 .S35 2004
Deep down things : the breathtaking beauty of particle physics / Bruce A. Schumm. Baltimore, Md. : Johns Hopkins University Press, 2004.
- QC793.3.Q35 W38 2004
The quantum quark / Andrew Watson. Cambridge ; New York : Cambridge University Press, 2004.
- QC981.8.G56 H68 2004
Global warming : the complete briefing / John T. Houghton. 3rd ed. Cambridge, UK ; New York : Cambridge University, 2004.
- QC6 .P49 2000b
Physics by inquiry [videorecording] / WGBH Boston Video. South Burlington, Vt. : WGBH Boston Video : WGBH Educational Foundation, c2000. LOCATION = Audiovisual--2nd Floor.
- QC7 .D27 2004
Nobel laureates and twentieth-century physics / Mauro Dardo. Cambridge, UK ; New York : Cambridge University Press, 2004.
- QC16.B658 H86 2004
Light is a messenger : the life and science of William Lawrence Bragg / Graeme K. Hunter. Oxford ; New York : Oxford University Press, 2004.
- QC16.E5 C35 2005
The Einstein almanac / Alice Calaprice. Baltimore, Md. : Johns Hopkins University Press, 2005.
- QC16.E5 R54 2005
Einstein 1905 : the standard of greatness / John S. Rigden. Cambridge, Mass. : Harvard University Press, 2005.
- QC16.F46 F49 2004
Fermi remembered / edited by James W. Cronin. Chicago : University of Chicago Press, c2004.
- QC20 .P366 2005
The road to reality : a complete guide to the laws of the universe / Roger Penrose. New York : A.A. Knopf, 2005.
- QC168 .B66 2004
Kinetic theory of granular gases / Nikolai V. Brilliantov and Thorsten Pöschel. Oxford ; New York : Oxford University Press, 2004.
- QC174.12 .A32 2004
Quantum theory as an emergent phenomenon : the statistical mechanics of matrix models as the precursor of quantum field theory / Stephen L. Adler. Cambridge, UK ; New York : Cambridge University Press, 2004.
- QC174.12 .R335 2004
Quantum physics, illusion or reality? / Alastair I.M. Rae. 2nd ed. Cambridge : Cambridge University Press, 2004.
- QC174.17.P7 B78 2004
Many-body quantum theory in condensed matter physics : an introduction / Henrik Bruus, Karsten Flensberg. Oxford ; New York : Oxford University Press, 2004.
- QC174.86.C6 R833 2004
Thermodynamic formalism : the mathematical structures of equilibrium statistical mechanics / David Ruelle. 2nd ed. Cambridge : Cambridge University Press, 2004.
- QC793.5.P427 S24 2005
Optical properties of photonic crystals / Kazuaki Sakoda. 2nd ed. Berlin ; New York : Springer, c2005.
- QC806 .F625 2005
The solid earth : an introduction to global geophysics / C.M.R. Fowler. 2nd ed. Cambridge, UK ; New York : Cambridge University Press, 2005.
- Television Networks : Distributed in the U.S. by New Video, c2003, c2002.
LOCATION = Audiovisual--2nd Floor.
- QC981.8.C5 L58 2005
Little Ice Age [videorecording] : big chill / The History Channel ; produced by Ron Nelson ; produced by Actuality Productions Inc., History Television Network Productions. [New York, N.Y.?] : A&E Television Networks, c2005, c2002.
LOCATION = Audiovisual--2nd Floor.
- QC981.8.G56 S59 1998
The sizzling planet [videorecording] / Produced by CBS NEWS Productions in association with The History Channel ; a presentation of The History Channel. [New York] : A&E Television Networks : Marketed and distributed in the U.S. by New Video : CBS News Productions : CBS Worldwide Inc. : CBS INC., c1998, c2002 [1996?] c1999.
LOCATION = Audiovisual--2nd Floor.

QC966 .L5 2003

Lightning [videorecording] / produced by Greystone Communications, Inc. for the History Channel ; producer, Barry Nye ; director, Jim Lindsay.

[New York] : Arts and Entertainment Network : A&E
QC929.A8 F74 2005

Snowstruck : in the grip of avalanches / Jill Fredston.
Orlando : Harcourt, c2005.

LOCATION = Browsing Collection.

QC945 .Z43 2005

Category 5 : the story of Camille, lessons unlearned from America's most violent hurricane / Ernest Zebrowski & Judith A. Howard.

Ann Arbor : University of Michigan Press, c2005.

QC981.8.G56 G5835 2005

Global warming [videorecording] : the signs and the science / [written by Michael Taylor and David Kennard ; a production of Stonehaven Production Services and South Carolina ETV ; produced by David Kennard]
Widescreen version.

[South Carolina ; Alexandria, Va.] : Distributed by PBS Home Video : South Carolina Educational Television Network, c2005.

LOCATION = Audiovisual--2nd Floor.

QC981.8.G56 W453 2000

What's up with the weather? [videorecording] / a FRONTLINE/NOVA coproduction with the Palfreman Film Group ; WGBH Educational Foundation ; written, produced and directed by Jon Palfreman.

South Burlington, Vt. : WGBH Boston Video : WGBH Educational Foundation, c2000.

LOCATION = Audiovisual--2nd Floor.

QC984.O5 D45 1994

Spatial and temporal variability of soil moisture in Oklahoma / by Tracy L. DeLiberty.

Elmer, N.J. : C.W. Thornthwaite Associates, Laboratory of Climatology ; Newark, Del. : University of Delaware, Center for Climatic Research, Dept. of Geography, 1994.

LOCATION = General Collections.

QC175.16.M6 P37 2006

Van der Waals forces : a handbook for biologists, chemists, engineers, and physicists / V. Adrian Parsegian.
Cambridge, UK ; New York : Cambridge University Press, 2006.

QC311.5 .L38 2005

Statistical thermodynamics : fundamentals and applications / Normand M. Laurendeau.

New York : Cambridge University Press, 2005.

QC945 .H8677 2005

Hurricane Katrina [videorecording] : the storm that drowned a city / NOVA ; WGBH Boston Video.

Letterboxed [ed.] [Boston, Mass.] : WGBH Boston Video : NOVA, c2005.

LOCATION = Audiovisual--2nd Floor.

QC955.5.U5 T95 1996

Twister [videorecording] : fury on the plains / the Tornado Project and Music Video Productions ; produced, written and directed by Thomas Grazulis.

New York : GoodTimes Home Video, [1996], c1995.

LOCATION = Audiovisual--2nd Floor.

QC6 .R26 2005

Warped passages : unraveling the mysteries of the Universe's hidden dimensions / Lisa Randall.

New York : Ecco, c2005.

LOCATION = Browsing Collection.

QC16.H85 A2 2005

Rider of the pale horse : a memoir of Los Alamos and beyond / McAllister Hull with Amy Bianco ; illustrated by John Hull.

Albuquerque : University of New Mexico Press, c2005.

QC16.N7 C51 2005

Isaac Newton / Gale E. Christianson.

Oxford ; New York : Oxford University Press, 2005.

QC24.5 .M864 2005

Knowing : the nature of physical law / Michael Munowitz.

Oxford ; New York : Oxford University Press, c2005.

QC176.A1 P53

Thin films and nanostructures.

San Diego : Academic Press, c2002-

QC176.8.F74 G36 2005

Electrons and disorder in solids / V.F. Gantmakher ; translated by Lucia I. Man.

Oxford : Clarendon Press ; Oxford ; New York : Oxford University Press, 2005.

QC689.5.L37 T74 2000

Frequency-resolved optical gating : the measurement of ultrashort laser pulses / Rick Trebino.

Boston : Kluwer Academic, c2000.

QC794.6.G7 B76 2004

The grand unified theory of physics / by Joseph M. Brown.
Starkville, Miss. : Basic Research Press, 2004.

QC926.32 .G67 2005

Ice : the nature, the history, and the uses of an astonishing substance / Mariana Gosnell.

New York : Alfred A. Knopf, 2005.

LOCATION = Browsing Collection.

QC 176.8 .N35 C36 2004

Nanostructures & nanomaterials : synthesis, properties & applications / Guozhong Cao. London : Imperial College Press ; Hackensack, N.J. : Distributed in USA by World Scientific Pub. Co., c2004.

QC178 .K54 2004

Quantum gravity / Claus Kiefer. Oxford, U.K. : Clarendon Press ; New York : Oxford University Press, c2004.

QC480.8 .X73 1996

X-rays in natural science and medicine : proceedings of a symposium held in Uppsala University, March 23-24, 1995 / editor, C. Nordling. Stockholm, Sweden : Royal Swedish Academy of Sciences, 1996.

QC665.E4 G87 2004

Electromagnetic field theory fundamentals / Bhag Singh Guru, Hüseyin R. Hiziroglu. 2nd ed. Cambridge, UK ; New York : Cambridge University Press, 2004.

QC20.7.A37 B45 2004

Chiral algebras / Alexander Beilinson, Vladimir Drinfeld. Providence, R.I. : American Mathematical Society, c2004.

QC174.12 .G55 2004

Elementary quantum mechanics in one dimension / Robert Gilmore. Baltimore : Johns Hopkins University Press, c2004.

QC174.17.P7 L56 2003

Modern many-particle physics : atomic gases, quantum dots and quantum fluids / Enrico Lipparini. River Edge, N.J. : World Scientific, c2003.

QC174.52.P37 F8513 2004

Path integrals and quantum anomalies / Kazuo Fujikawa and Hiroshi Suzuki. Oxford : Clarendon Press ; New York : Published in the United States by Oxford University Press, 2004.