**BOOKS, BOOKLETS, AND OTHER RESOURCES FOR THE 2017 ECLIPSE**

**Jay M. Pasachoff, Williams College and Caltech**

**eclipse@williams.edu**

*as of November 16, 2016*

*see: www.eclipses.info for my IAU Working Group on Eclipses website with useful links*

*see: www.totalsolareclipse.org for images/information about my 64 previous eclipses*

*see: www.solarcorona.com for my published books*

**small guides (inexpensive or free):**

Michael Zeiler, *See the Great American Eclipse of August 21, 2017* (incl. 2 partial-eclipse glasses), $9.99

http://greatamericaneclipse.com

Available as an eBook at <https://itunes.apple.com/us/book/see-great-american-eclipse/id1114425640?mt=11>

Pat & Fred Espenak, *Get Eclipsed: The Complete Guide to the American Eclipse* (incl. a pair of partial-eclipse glasses), $6.00

http://astropixels.com/pubs/GetEclipsed.html

Fraknoi, Andrew, & Dennis Schatz, *Guide to the 2017* Eclipse (from the National Science TeachersAssociation):

<http://www.nsta.org/publications/press/extras/files/solarscience/SolarScienceInsert.pdf>  (8-page PDF guide to eclipse information, circumstances, and viewing.)

**detailed maps and information:**

See links at Jay Pasachoff's website for the Working Group on Solar Eclipses of the International Astronomical Union:

http://eclipses.info

Michael Zeiler's website: http://GreatAmericanEclipse.com

Fred Espenak and Jay Anderson, Eclipse Bulletin: Total Solar Eclipse, 2017 August 21; b/w: http://astropixels.com/pubs/TSE2017.html, b/w: $19.99; color: $34.99

Fred Espenak, Road Atlas for the Total Solar Eclipse of 2017, http://astropixels.com/pubs/Atlas2017.html; b/w: $14.99; color: $19.99

Fred Espenak's website (superseding the "NASA Eclipse Website"):

http://EclipseWise.com

Xavier Jubier's map:

http://xjubier.free.fr/en/site\_pages/solar\_eclipses/xSE\_GoogleMap3.php?Ecl=+20170821&Acc=2&Umb=1&Lmt=1&Mag=1&Max=1&Map=ROADMAP

Xavier Jubier's eclipse website:

http://xjubier.free.fr/en/site\_pages/Solar\_Eclipses.html

Jay Anderson's website with weather and climate discussions and statistics:

http://eclipsophile.com

Jay Pasachoff's website about past and current eclipses:

http://totalsolareclipse.org

Andy Fraknoi's site with resources:

http://www.astrosociety.org/eclipse

NASA site: http://eclipse2017.nasa.gov

**new eclipse books that include the spirit of observing an eclipse:**

David Baron, *American Eclipse: A Nation’s Epic Race to Catch the Shadow of the Moon and Win the Glory of the World.* New York: Liveright, in preparation for June 6, 2017, publication, W. W. Norton/Liveright; $27.95. Pages: 384. [http://books.wwnorton.com/books/detail.aspx?id=4294993489](http://books.wwnorton.com/books/detail.aspx?id=4294993489" \t "_blank)

Tyler Nordgren, *Sun Moon Earth: The History of Solar Eclipses from Omens of Doom to Einstein and Exoplanets*, Perseus Books

listed at http://tylernordgren.com4

Publication date was September 3rd, 2016, 26.99, 264 pages

reviewed: Aug. 21, 2017: The Great American Eclipse

[http://www.wsj.com/articles/sun-moon-earth-tyler-nordgren-1475161797](http://www.wsj.com/articles/sun-moon-earth-tyler-nordgren-1475161797%22%20%5Ct%20%22_blank)

Anthony Aveni, In the Shadow of the Moon: The Science, Magic, and Mystery of Solar Eclipses

publication date: April 25, 2017. 320 pages, 32 b/w illus.
ISBN: 9780300223194. Hardcover: $28.00
[http://yalebooks.com/book/9780300223194/shadow-moon](http://yalebooks.com/book/9780300223194/shadow-moon%22%20%5Ct%20%22_blank)

Frank Close, *Eclipse: Journeys to the Dark Side of the Moon* (to be published in 2017, Oxford University Press)

**other new eclipse books for 2017**

Mark Littmann and Fred Espenak, *Totality:* *The Great American Eclipses of 2017 and 2024*, in press for January 2017 publication, Oxford University Press

Michael Bakich, *Your Guide to the 2017 Total Solar Eclipse*, Springer International Publishing, 2016, ISBN 978-3-319-27630-4, 395 pages. $24.99 eBook; $34.99 softcover: http://www.springer.com/us/book/9783319276304

 [http://www.greatamericaneclipse.com/blog/2016/6/20/book-review-your-guide-to-the-2017-total-solar-eclipse](http://www.greatamericaneclipse.com/blog/2016/6/20/book-review-your-guide-to-the-2017-total-solar-eclipse%22%20%5Ct%20%22_blank)

comments from Michael Zeiler: My take is that this is an excellent guide for first-time eclipse observers. There is quite a bit of information packed into 395 pages and there is strong content on frequently asked questions, cool facts, proper equipment for viewing the eclipse, community planning, how to observe the eclipse, and more.
[http://www.greatamericaneclipse.com/blog/2016/6/20/book-review-your-guide-to-the-2017-total-solar-eclipse](http://www.greatamericaneclipse.com/blog/2016/6/20/book-review-your-guide-to-the-2017-total-solar-eclipse%22%20%5Ct%20%22_blank)

 Michael Bakich's podcast at <https://itunes.apple.com/us/podcast/2017-total-solar-eclipse-podcast/id968037305?mt=2>

**older eclipse books that include the spirit of observing an eclipse:**

Kate Russo, *The total solar eclipse of 2012 in Far North Queensland. (FC Productions, 2013).* *see*[*http://www.beingintheshadow.com/books/totality-the-total-solar-eclipse-of-2012/*](http://www.beingintheshadow.com/books/totality-the-total-solar-eclipse-of-2012/)

Kate Russo*,* [*Total Addiction: The Life of an Eclipse Chaser*](http://www.beingintheshadow.com/books/total-addiction-the-life-of-an-eclipse-chaser/) (Springer, 2012)

http://www.beingintheshadow.com/books/total-addiction-the-life-of-an-eclipse-chaser/

Mike Reynolds and Richard A. Sweetsir, *Observe Eclipses!* (1995), order from him directly: fallingstars@ootwastro.com or the Astronomical League: [https://store.astroleague.org/index.php?main\_page=product\_info&cPath=1&products\_id=9&zenid=cfflk9u20qkcm80t897m0o8n93](https://store.astroleague.org/index.php?main_page=product_info&cPath=1&products_id=9&zenid=cfflk9u20qkcm80t897m0o8n93" \t "_blank)

**magazine articles**

Jay M. Pasachoff, "The Solar Corona," *Scientific American*, July 2017 (in preparation), new version of an article by the same title:

1973, "The Solar Corona," *Scientific American* **229**, #4 (October), 68-79; included in *New Frontiers in Astronomy*, O. Gingerich, ed., W. H. Freeman & Co., 1975.

**community eclipse planning:**

Kate Russo, [White Paper: Community Eclipse Planning](http://www.beingintheshadow.com/books/white-paper-community-eclipse-planning/)

http://www.beingintheshadow.com/books/white-paper-community-eclipse-planning/

**Pasachoff guide with updated eclipse coverage**:

Jay Pasachoff, *Peterson Field Guide to the Stars and Planets*, July 2016 printing; list $19.00 ($12.50 at amazon prime); shows "Pluto Flyby Included" on the cover

http://www.hmhco.com/shop/books/A-Field-Guide-to-Stars-and-Planets/9780395934319

http://solarcorona.com

Jay Pasachoff, *Peterson First Guide to Astronomy*, 3rd printing (2016; © 2014), $7.95

http://www.hmhco.com/shop/books/Peterson-First-Guide-to-Astronomy-Second-Edition/9780544165625#

http://solarcorona.com

**eclipse posters in retro style:**

http://www.tylernordgren.com/

**popular books about solar science:**

Leon Golub and Jay M. Pasachoff, *Nearest Star: The Exciting Science of Our Sun* (Cambridge U. Press, 2014), 2nd ed.; with Chapter 5 about eclipses, pp. 128-168.

http://solarcorona.com

Jay M. Pasachoff, *The Complete Idiot’s Guide to the Sun*, Alpha, New York, 2003. A personal, light- hearted survey, including anecdotes. The book is available as a free download, www.williams.edu/ astronomy/sun.

Leon Golub and Jay M. Pasachoff, *The Sun*, in press for the Science Museum, London (Reaktion Books, 2017; reaktionbooks.co.uk, for publication in June 2017).

Distributed in the U.S. by University of Chicago Press:

[http://press.uchicago.edu/ucp/books/book/distributed/S/bo26297673.html](http://press.uchicago.edu/ucp/books/book/distributed/S/bo26297673.html%22%20%5Ct%20%22_blank)

**web: 365daysofastronomy.org**

Pasachoff, Jay M., 2016, 365daysofastronomy.com for March 6, 2016:

 20160309-Indonesia-total-eclipse.wav

http://cosmoquest.org/x/365daysofastronomy/2016/03/06/mar-6th-the-indonesian-total-solar-eclipse-of-89-march-2016/

Pasachoff, Jay M., 2016, 365daysofastronomy.com for August 21, 2016:

 20160821-minusfirst-anniversary-US-eclipse.wav

http://cosmoquest.org/x/365daysofastronomy/2016/08/21/

earlier:

http://365daysofastronomy.org/2009/07/16/july-16th-the-july-22nd-total-solar-eclipse/

Pasachoff, Jay M., 2015, Academic Minute about eclipses of 2015 and 2017.

http://academicminute.org/2015/03/jay-pasachoff-williams-college-todays-total-solar-eclipse/

**books on historic eclipse observations:**

Stella Cottam and Wayne Orchiston, *Eclipses, Transits, and Comets of the Nineteenth Century: How America's Perception of the Skies Changed* (Springer, 2016), eBook for $99.

http://www.springer.com/us/book/9783319083407

Book review by Jay Pasachoff: *Journal of Astronomical History and Heritage*, **18**, #1, March/April, 112. http://adsabs.harvard.edu/abs/2015JAHH...18..112P

Alex Pang, *Empire and the Sun: Victorian Solar Eclipse Expeditions* (Stanford University Press, 2002), $25.95. http://www.sup.org/books/title/?id=1216

David Baron, *American Eclipse: Thomas Edison and the Celestial Event that Illuminated a Nation*, in preparation for 2017 publication, W. W. Norton

**popular book about eclipses:**

Mark Littmann, Fred Espenak, and Ken Willcox, *Totality: Eclipses of the Sun*, 3rd ed., (Oxford University Press, 2008; updated 2009)

https://www.amazon.com/Totality-Eclipses-Sun-Mark-Littmann/dp/019956552X

**other eclipse books**

Marc Nussbaum, *Total Solar Eclipse 2017: Your Guide to the Next US Eclipse*, (2015; $19.99 at amazon.com; ISBN 9780692513729)

Martin Mobberley, *Total Solar Eclipses and How to Observe Them (Astronomers' Observing Guides)*, (Springer, 2007)

Jay M. Pasachoff and Michael Covington, *The Cambridge Eclipse Photography Guide* (Cambridge University Press, 1993).

Philip S. Harrington, *Eclipse!: The What, Where, When, Why, and How Guide to Watching Solar and Lunar Eclipses* (John Wiley, 1997).

Jack B. Zirker, *Total Eclipses of the Sun* (republished by Princeton University Press; paperback 2014 and hardback 2016; 1981, 1991, 1995).

**Books for educators**

Schatz., Dennis and Andrew Fraknoi, *Solar Science: Exploring Sunspots, Seasons, Eclipses and More*, 2016, National Science Teachers Association Press. (A book of 45 hands-on activities for in or out of the classroom use by teachers, museum and nature center educators, librarians, etc. Includes a booklet on the 2017 eclipse and eclipse glasses.)

The *Universe in the Classroom* is available on the Astronomical Society of the Pacific's website: http://astrosociety.org/publications/universe-in-the-classroom/
Fall 2016: *Getting Ready for the All American Eclipse: An NGSS Storyline Approach to Classroom Instruction*, by Brian Kruse (Astronomical Society of the Pacific):

https://www.astrosociety.org/wp-content/uploads/2016/10/uitc93.pdf

**children's books and magazines:**

Patricia Totten Espenak, *Total Eclipse or Bust!: A Family Road Trip* (astropixels.com, 2016); $14.99

Ruth A. Sonneborn, *Someone Is Eating the Sun* (Random House Pictureback, 1974);

https://www.amazon.com/s/ref=nb\_sb\_noss\_2?url=search-alias%3Dstripbooks&field-keywords=someone+is+eating+the+sun

Naomi Pasachoff, ed., January 2017 issue of *Dig Into History* (Cricket Publishing; target: ages 9-14; vol. 19, no. 1), $4.95; $3.95 for 2-99 copies; $2.95 for 100 or more copies. Theme: *What's Up with Eclipses?*

http://shop.cricketmedia.com/Dig-Magazine-for-Kids.html, 1-800-821-0115

Andrew Fraknoi & Dennis Schatz, *When The Sun Goes Dark* (National Science Teachers Association Press, 2016). A guide to eclipses for kids ages 9 to 14.

Wendy Mass, *Every Soul A Star* (Little Brown, 2009). Middle-school novel.

Jay M. Pasachoff, "When the Moon Hides the Sun," *Odyssey*, May/June, 2011, 36-39.

Nancy Coffelt, *The Big Eclipse* (2016): amazon.com has: "The Big Eclipse, by acclaimed children's illustrator and author Nancy Coffelt, introduces a cast of charming animal characters as they follow the path of the 2017 eclipse across America, capturing their sense of wonder and excitement. Readers will learn what causes eclipses, about strange eclipse effects, eclipse myths and even learn what hippos do when day turns to night. The book tells why it's important to protect your eyes when viewing the sun, especially during an eclipse--and how to do so safely. Each book comes with a safe solar eclipse viewer."

**Girl-Scout guides**

in progress from Lou Mayo of NASA: <astronomer2go@verizon.net>

with a book being written by his daughter

**video about the sun, including eclipses:**

Jay Pasachoff, *Colors and Motions of the Sun* (target: grades 9 to 12) (1st ed.: 2007; 2nd ed.: 2013), duration about 8 minutes

http://solar-center.stanford.edu/cmos/

*Colors of the Sun* (target: middle school; preceded the Williams College higher-level version)

http://solar-center.stanford.edu/colors/

Aram Friedman, the 2009 eclipse wide-angle video

http://www.ansibletech.com/solareclipse2009.html

**videos about eclipses:**

Solar Eclipse 1973 June 30 Mauritania--Part 1 of 2

<http://youtu.be/juImmdasMSY>

Solar Eclipse 1973 June 30 Mauritania--Part 2 of 2

<http://youtu.be/Z6JfBAALRQQ>

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Solar Eclipse 1973 June 30 Kenya--Part 1 of 2

<http://youtu.be/W9BmDtCdKi8>

Solar Eclipse 1973 June 30 Kenya--Part 2 of 2

<http://youtu.be/W8ujcpKiWMQ>

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Solar Eclipse Movie Archive Channel

<http://www.youtube.com/user/mkentrianakis>

2009 National Geographic: YAP Films

Solar Eclipse 2009 July 22 China--Storm Worlds

<http://youtu.be/zQbRf0fnIHI>

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2010 National Geographic Documentary: 1080i Films

Solar Eclipse 2010 July 11 Easter Island--Part 1 of 5

<http://youtu.be/Vc0UpnGaMvg>

Solar Eclipse 2010 July 11 Easter Island--Part 2 of 5

<http://youtu.be/fEF0b3PYITs>

Solar Eclipse 2010 July 11 Easter Island--Part 3 of 5

<http://youtu.be/D2jeuE33Avg>

Solar Eclipse 2010 July 11 Easter Island--Part 4 of 5

<http://youtu.be/qJj0zFEqPXE>

Solar Eclipse 2010 July 11 Easter Island--Part 5 of 5

<http://youtu.be/4kNB9G89dxY>

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National Geographic 1973 film

Part 1: [http://youtu.be/juImmdasMSY](http://youtu.be/juImmdasMSY%22%20%5Ct%20%22_blank)

Part 2: [http://youtu.be/Z6JfBAALRQQ](http://youtu.be/Z6JfBAALRQQ%22%20%5Ct%20%22_blank)

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Additional b-roll:

[http://youtu.be/W9BmDtCdKi8](http://youtu.be/W9BmDtCdKi8%22%20%5Ct%20%22_blank)

[http://youtu.be/W8ujcpKiWMQ](http://youtu.be/W8ujcpKiWMQ%22%20%5Ct%20%22_blank)

**American Institute of Physics Resource Letter:**

Jay M. Pasachoff, 2010, "Resource Letter SP-1 on Solar Physics," *American Journal of Physics*, **78**, September, 890-901.

**Eclipse-related articles:**

Jay M. Pasachoff, 1973, "The Solar Corona," *Scientific American* **229**, #4 (October), pp. 68-79; included in *New Frontiers in Astronomy*, O. Gingerich, ed., W. H. Freeman & Co., 1975.

with a new *Scientific Article* in preparation for July 2017 publication.

Bhola N. Dwivedi and Kenneth J. H. Phillips, "The Paradox of the Sun's Hot Corona," *Scientific American* **284**, #6(June), 2002, pp. 38-47

**U.S. Naval Observatory resources, including maps and calculators:**

http://aa.usno.navy.mil/data/docs/Eclipse2017.php

See also: 2024 April 8 Total Solar Eclipse

<http://aa.usno.navy.mil/data/docs/Eclipse2024.php>

In conjunction with Her Majesty's Nautical Almanac Office, USNO also has a general eclipse portal:

<http://astro.ukho.gov.uk/eclbin/query_usno.cgi>

**other lists of eclipse-related books:**

http://www.eclipse2017.org/2017/books.htm from Dan McGlaun

**providers of partial-eclipse glasses:**

Thousand Oaks Optical, http://thousandoaksoptical.com

Rainbow Symphony, http://rainbowsymphony.com

American Paper Optics, http://www.eclipseglasses.com

***Europe:***

Assistpoint, Ltd, www.eclipseglasses.co.uk

Baader Planetarium

**simple spectroscopes for classes**

Sets of 25 ready-to-assemble solar spectroscopes, along with study guides and classroom resources designed to match National Science Standards (US) for various grade levels, are available from Astronomers Without Borders. Created by the outreach office of the Solar Dynamics Observatory (SDO) with a grant from NASA, these spectroscopes are now available worldwide.

<http://store.astronomerswithoutborders.org/index.php?main_page=product_info&cPath=14&products_id=32>

**American Association for the Advancement of Science (AAAS) symposium**

American Association for the Advancement of Science Annual Meeting

http://meetings.aaas.org/registration/?IntCmp=AM-17-AAAS-hp-regNOW-71

Title:  Bringing the Excitement of the 2017 Solar Eclipse to the Public

   Date: Friday, February 17, 2017
   Time: 10:00 AM to 11:30 AM
   Facility: Hynes Convention Center, Boston

**Session Description:**

Transient astronomical events, such as a total solar eclipse, are unparalleled experiences to witness the wonders and clockwork of the Universe. They invariably leave an indelible impact on anyone lucky enough to have witnessed them. The total solar eclipse of August 21, 2017, offers such a rare opportunity; it boasts the first path of totality over the US from coast to coast in 99 years.

**Organizer:**

Jay Pasachoff

Chair, International Astronomical Union Working Group on Eclipses

Williams College

Hopkins Observatory

33 Lab Campus Drive

Williamstown, MA

**Co-Organizer:**

Angela Speck

Professor of Physics

University of Missouri

Dept. of Physics and Astronomy

Columbia, MO

**Discussant:**

Michael Kentrianakis

Project Manager

American Astronomical Society 2017 Eclipse Task Force

**Speakers:**

Jay Pasachoff

Chair, International Astronomical Union Working Group on Eclipses

Williams College

Hopkins Observatory

Williamstown, MA

Talk Title: Science at Solar Eclipses

Talk Description: I describe some scientific projects linking solar eclipse data with satellite data from recent eclipses and discuss plans for the 2017 eclipse observations.

Tyler Nordgren

Professor of Astronomy and Physics

University of Redlands

Redlands, CA

Talk Title: Unique Science Engagement Opportunities for the All-American 2017 Eclipse

Talk Description: On August 21, 2017, nine million people along a band crossing the full width of the United States will see a total solar eclipse from their home locations (while three times that many live within an hour's drive). Not since 1979 has any totality been visible anywhere in the continental U.S. However, this event's opportunity for citizen science and education depends critically on successfully communicating the location, timing, safety, rarity, and beauty of this event.

Charles Fulco

Independent Science Consultant

Talk Title: Using the Unique Eclipse Circumstances to Engage Students

Talk Description: I discuss how teachers can and should use actual observations of the eclipse to involve students, and how they can and should prepare students for the event.

Angela Speck

Professor of Physics

University of Missouri

Dept. of Physics and Astronomy

Columbia, MO

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American Association of Physics Teachers meeting, Atlanta

· Jay Pasachoff, Richtmyer Memorial Lecture Award, to be scheduled

· Workshop, Toby Dittrich, tdittric@pcc.edu

* Sun, Feb 19, 9:00 a.m. - 12:00 p.m.

[http://www.aapt.org/Conferences/wm2017/workshops.cfm](http://www.aapt.org/Conferences/wm2017/workshops.cfm%22%20%5Ct%20%22_blank)

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http://[365daysofastronomy.org/2009/07/16/july-16th-the-july-22nd-total-solar-eclipse/](http://365daysofastronomy.org/2009/07/16/july-16th-the-july-22nd-total-solar-eclipse/%22%20%5Ct%20%22_blank)

[http://365daysofastronomy.org/2010/07/10/july-10th-total-solar-eclipse-in-easter-island/](http://365daysofastronomy.org/2010/07/10/july-10th-total-solar-eclipse-in-easter-island/%22%20%5Ct%20%22_blank)

[http://365daysofastronomy.org/2011/06/05/june-5th-transit-of-venus/](http://365daysofastronomy.org/2011/06/05/june-5th-transit-of-venus/%22%20%5Ct%20%22_blank)

[http://cosmoquest.org/x/365daysofastronomy/2016/03/06/mar-6th-the-indonesian-total-solar-eclipse-of-89-march-2016/](http://cosmoquest.org/x/365daysofastronomy/2016/03/06/mar-6th-the-indonesian-total-solar-eclipse-of-89-march-2016/%22%20%5Ct%20%22_blank)

Pasachoff, Jay M., 2015, Academic Minute about eclipses of 2015 and 2017.

[http://academicminute.org/2015/03/jay-pasachoff-williams-college-todays-total-solar-eclipse/](http://academicminute.org/2015/03/jay-pasachoff-williams-college-todays-total-solar-eclipse/%22%20%5Ct%20%22_blank)

**American Association of Physics Teachers (AAPT) meeting, Atlanta, GA**

February 19, 2017, 9:00-noon: workshop led by Toby Dittrich aided by Jay Pasachoff

https://www.aapt.org/Conferences/wm2017/workshops.cfm

February 19, 2017, afternoon: Jay Pasachoff is given the Richtmyer Memorial Lecture Award and gives the lecture about "Observing the Great American Eclipse of August 21, 2017"

https://www.aapt.org/Conferences/WM2017/plenary\_awardee.cfm

https://www.aapt.org/Programs/awards/richtmyer.cfm