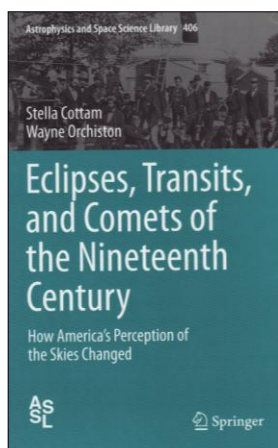


***Eclipses, Transits, and Comets of the Nineteenth Century: How America's Perceptions of the Skies Changed*, by Stella Cottam and Wayne Orchiston (Springer, 2015), pp. xii + 336, 239 illustrations. ISBN 978-3-319-08340-7 (hard cover), 160 × 240 mm, US\$129.00.**

As we approach the total solar eclipse of 21 August 2017, whose totality will cross the continental United States from northwest to southeast and whose partial phases will be visible to the north through Canada to the Arctic and to the south through Central and northern South America, it is interesting and useful to ponder how best to get the public to participate in the event. Even today, I saw a discussion of worry about potential panic concerning eye safety—a panic that easily could be averted with proper public education and outreach in the days and months leading up to the eclipse.



The recent transits of Venus, in 2004 and 2012, did not lead to a darkening of the sky (since the dimming of the sunlight was only 0.1% of the total solar irradiance), but there was interest among the general public in those parts of the world from which the events were visible. Because of Mercury's small apparent size, the 9 May 2016 transit of Mercury will be less detectable (even from its zone of visibility, which includes the Americas, Europe, and Africa), and we will have to wait until 2117 and 2125 for the next transits of Venus.

In a Ph.D. thesis completed through James Cook University in Australia, Stella Cottam described the nineteenth century public interest in America in major astronomical events, and she has now teamed with her former supervisor, Wayne Orchiston—who added additional material—to produce an interesting new book. They start with a discussion of interest shown in the Leonid Meteor Storm of 1833 (due back in about 2030) and the Great Comet of 1843 (with a Great Comet liable to appear at any time), and then move on to discuss the nineteenth century solar eclipses—especially those of 1868, famous for the discovery of helium, and the pair in 1869 and 1878 that were visible in the United States. They next discuss the 1874 and 1882 transits of Venus. For both eclipses and for transits, they discuss the then-current world-wide science, and scientists who were active in the field.

But interestingly, Cottam and Orchiston go beyond the scientific stories, however interesting they

may be. They also discuss the treatment of these events in periodicals and newspapers of the time. Major sections discuss published reports, first of the eclipses and then of the transits. A short concluding section on public participation in research is a good forerunner to some potential projects for 2017.

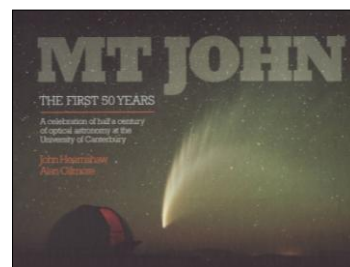
This is a beautifully-produced book, with color images throughout, and the *Scientific American* map of the 1869 eclipse path shown on page 181 resembles the forthcoming eclipse path for 21 August 2017. The wide variety of images come from many sources, not just Wikipedia, and show the research skills of the authors.

This historical book by Cottam and Orchiston is fun to read and to look through. I can recommend it to all who like to know about eclipses, transits, or nineteenth century science in general, or who otherwise want something to tell them about the interactions of science with the public—or who just want an interesting book to read.

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***Mt John – The First Fifty Years. A Celebration of Half a Century of Optical Astronomy at the University of Canterbury*, by John Hearnshaw and Alan Gilmore (Christchurch, Canterbury University Press, 2015), pp. 216, 188 illustrations. ISBN 978-1-927145-62-3 (hard cover), 310 × 240 mm, NZ\$59.99.**

Mt John Observatory (henceforth MJO) is New Zealand's premier research observatory. Sited atop a ridge near the western shore of Lake Tekapo, in the South Island, with the snow-capped Southern Alps and New Zealand's highest peak, Mt Cook, off to the west, it is in a truly beautiful setting and must be one of the most charmingly-situated observatories in the world.



This book was written by two University of Canterbury astronomers, Emeritus Professor John Hearnshaw, who for years ran the Astronomy programs at the University, and Alan Gilmore, who until recently was the Superintendent of MJO. Both have had long and intimate associations with MJO, and both are 'key players' in New Zealand's small community of professional astronomers.

There are seven chapters, and the first is an Introduction, titled 'The founding of Mt John: The quest to explore the southern sky'. After briefly