

OPTICAL SOCIETY

ROCHESTER SECTION

ROSA News

December 2011

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An update on the *Optics Suitcase*: making a worldwide impact! By Stephen D. Jacobs and Terri M. Donlon

The *Optics Suitcase* Program was initiated by our committee in 1999, at the request of President Donald Golini to become more involved with youth outreach in the community. We developed the idea of a 40 minute in-school presentation to children ages 9-13 that could be given by our members, and initial funding was provided by ROSA to purchase a set of supplies to create a portable *Suitcase*. Three demo experiments exploring color in white light through diffraction, polarization and selective reflection from liquid crystals were assembled into take-home theme packets, with the intention of giving these out to the students.

Since that time, the *Optics Suitcase* has grown in stature as a tool for informing youth about career choices in optics and photonics technologies. It is distributed, free of charge, to those applying for it through OSA [<http://www.osa.org/forms/opticssuitcase.aspx>]. In mid-summer 2011, there was a waiting list of over 100 applicants for *Suitcases* (more below).

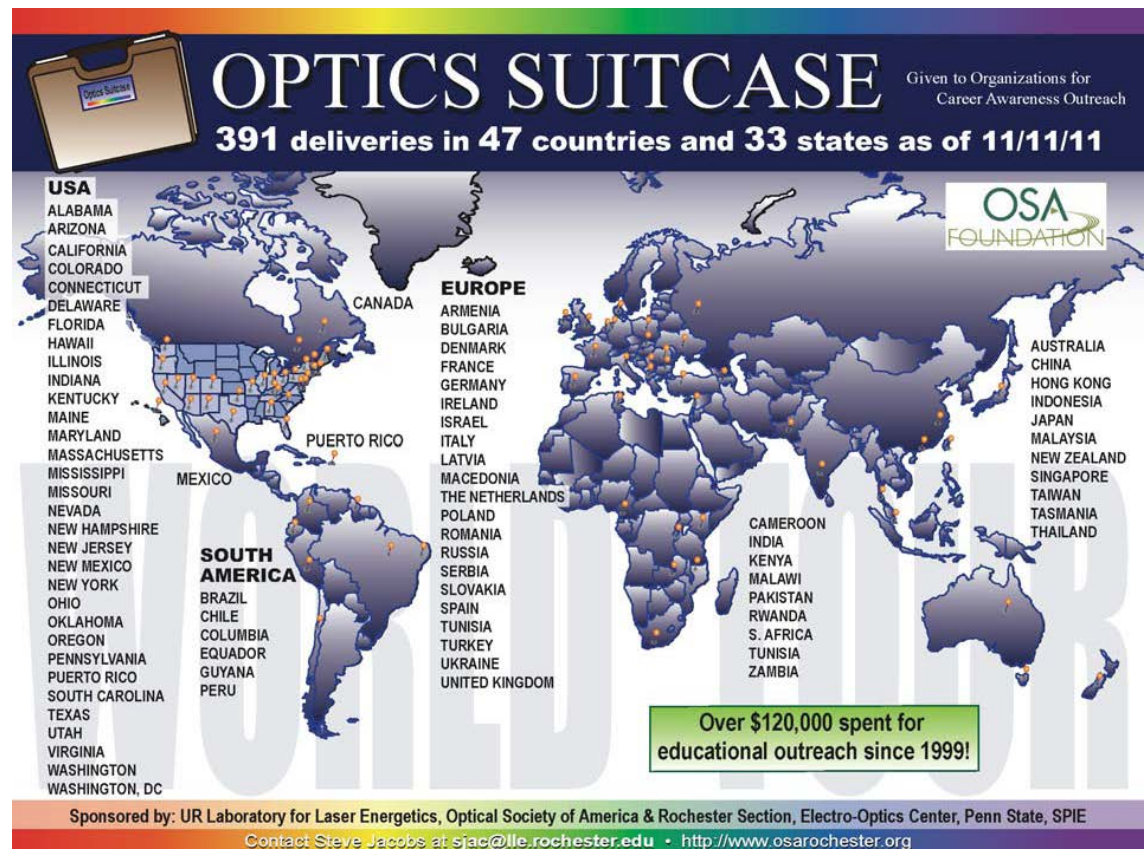
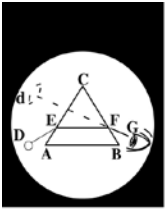


Figure 1. Distribution of the *Optics Suitcase* throughout the USA and the world.



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Some recent *Suitcase* highlights are as follows:

- In December, 2010, a four-day program was conducted by the OSA Foundation in partnership with the Greater Milwaukee Foundation, wherein over 575 children learned about light using our theme packets. All *Suitcases* were supplied by ROSA.
<http://www.osa-foundation.org/news/newsletters/december2010pdf>
- In March, 2011, the Teaching Guide was translated by the OSA Foundation into four languages - Spanish, German, Portuguese and Mandarin Chinese.
<http://www.osa-foundation.org/opticssuitcase/teachingguide>
- The map in Figure 1 shows that, since 1999, over 391 *Optics Suitcases* were shipped to teachers in public / private schools, companies, museum and science centers, after school groups, national laboratories and universities located in 33 states and 47 countries.

In 2011, applications skyrocketed, and the OSAF began to give priority to newly formed OSA and OSA/SPIE student chapters. For example, 26 *Suitcases* were handed out at the OSA Student Leadership Conference during the OSA Annual Meeting in San Jose, CA, on October 14th. Most of these groups were from outside of the USA. We have not been able to keep up with the demand for the *Optics Suitcase*. This is a good thing, we think. OSA and OSAF have recently stepped up their appeals for funding, and they have moved to assist us in the manufacturing and distribution process.

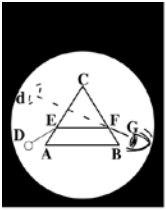
With the help of Grace Klonoski, Senior Director, Foundation, Membership & Education Services, deep discounts were obtained for linear polarizer sheets from Edmund Optics, and for liquid crystal sheets from LCR Hallcrest. By reducing the cost of our supplies, we are stretching contributed dollars to reach more children. The manufacturing process is also being streamlined. Our committee will concentrate on the ordering of supplies (see Figure 2) and the assembly /



shipment of *Suitcases* to OSA headquarters in Washington, DC. Gale Mamatova, OSA Manager of Education and Member Services, will oversee communication with applicants, selection of recipients and the domestic/overseas distribution process.

The *Optics Suitcase* Program is now 12 years old and stronger than ever. Thank you, our sponsors: ROSA, OSA, OSAF, SPIE, Mr. James Ferguson (1934-2008), APS and LLE/U of R.

Figure 2. Assembly of *Optics Suitcases* by Terri Donlon in facilities at LLE/U of R.

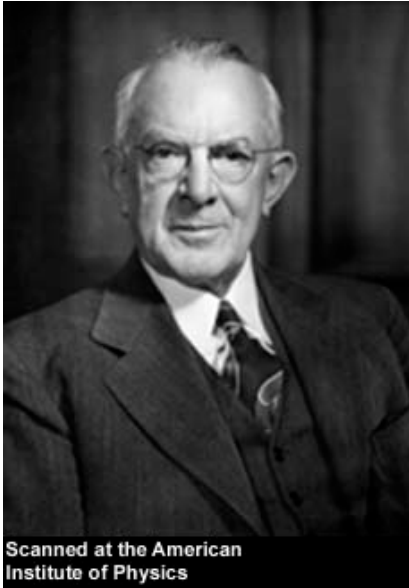


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ROCHESTER SECTION

Loyd A. Jones

April 12, 1884 – May 15, 1954



Scanned at the American
Institute of Physics

Served as OSA-RS president:
1920

cut-out silhouettes of camouflaged ships were suspended from a framework, at a height that made the ships appear to be floating on the water.

Jones was a prolific inventor. He was responsible for at least eighteen registered patents, and authored dozens of articles on such subjects as photometry, physical optics, illuminating engineering, colorimetry, photography and motion pictures. One of his wartime inventions was a scope-like observation device called a visibility meter (U.S. Patent No. 1,437,809), which measured a ship's visibility in an ocean setting. In 1943, he was awarded the Ives Medal recognizing overall distinction in optics. The Frederic Ives Medal is the highest award of the Society. It was endowed in 1928 by Herbert E. Ives, a distinguished charter member and OSA President in 1924 and 1925.

1924-1925: President of the Society of Motion Picture Engineers

1929-1943: Professor of Optics, University of Rochester

1930-1931: OSA President

Links/Papers:

- http://en.wikipedia.org/wiki/Loyd_A._Jones
- Photographic granularity and graininess. VII. A microphotometer for the measurement of granularity, JOSA, Vol. 41, Issue 3, pp. 192-200
- Photographic granularity and graininess. VIII. A method of measuring granularity in terms of the scanning area giving a threshold luminance gradient, JOSA, Vol. 45, Issue 2, pp. 107-
- Scientific American Supplement (1919), "A Theatre for Studying Camouflaged Ship Models," (December 13), pp. 348-349
- <http://camoupeia.blogspot.com/2011/04/wwi-ship-camouflage-teams.html>
- <http://www.rockwell-center.org/exploring-illustration/the-dazzling-ideas-of-science/>

A Bit of History ... by Mari de Wit

This month's spotlight is on Loyd Jones who served as our local ROSA president in 1920. He was born Loyd Ancile Jones in York, Nebraska. He was educated at the University of Nebraska, where he received a Bachelor's degree in 1908 and Masters degree in science in 1910. He was also awarded an honorary doctorate from the University of Rochester in 1933.

Following graduate school, Jones moved to Washington D.C., where he worked for several years as a laboratory assistant at the U.S. Bureau of Standards. In 1912, he joined the scientific research staff at Eastman Kodak Company, where he became chief physicist in 1916, a position he continued with until his retirement.

Did you know... When the U.S. became involved in World War I, George Eastman offered the U.S. Navy the expertise of Jones (who served in the U.S. Naval Reserves) and others for the purpose of researching naval camouflage in relation to optics and physics [Ackerman 1930, p. 310]. In connection with his research of naval camouflage, Jones and his staff developed in the laboratory an "experimental ocean," which used an observation tank, artificial sun, movable sky, and other components that simulated outdoor viewing conditions, as miniature camouflaged ships were observed through a submarine periscope. He also developed an outdoor observation stage on the shore of Lake Ontario. Painted