#### **Some Remarks**

Robert W. Boyd
M. Parker Givens Professor of Optics
The Institute of Optics
University of Rochester

Presented at the Givens Chair Celebration, April 8, 2002.

Parker,

I greatly regret that personal circumstances have prevented me from attending tonight's affair in your honor. I hope that some of my thoughts, summarized here, may be conveyed to you by surrogate.

My association with you over the years has been characterized as one of continuous learning. Its been almost 40 years since you taught me what a curl was and how to recognize a field possessing curl properties. Some of your remarkable demonstrations of apparent paradoxes in interferometry led me to further investigate the subject of coherence in some depth. I learned from you the value of reducing a complex observation to a linked sequence of simple concepts and to set this as an analytic goal in my own work.

I also learned from you that peace and serenity might be achieved through close contact with and careful observation of other animal forms. I began to learn the equanimity that derives from accepting and living life on life's terms.

Parker, I am most proud to call you a true friend and I am very glad to see this special honor and recognition bestowed upon you this evening. I hope to extend these thoughts to you directly in the very near future.

Most Sincerely Jim Forsyth

# Renee Fleming



#### Talbot's bands

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(Received 21 February 1992; accepted 9 December 1992)

This classic experiment has been largely ignored by modern text book authors. It is worth reviewing for historical reasons and also because it provides a simple yet striking example of the role of group velocity in interferometry.

### Intuitive explanation of the phase anomaly of focused light beams

Robert W. Boyd

Institute of Optics, University of Rochester, Rochester, New York 14627 (Received 25 August 1979)

An intuitive argument is presented for the phase anomaly, that is, the 180° phase shift of a light wave in passing through a focus. The treatment is based on the geometrical properties of Gaussian light beams, and suggests a new viewpoint for understanding the origin of the phase shift. Generalizing the argument by including higher-order modes of the light field allows the case of a spherical wave to be treated.





THIS WAYSIDE SHRINE MARKS THE PLACE WHERE ON SEPTEMBER 14 1779 TWO YOUNG SOUDIERS OF THE REVOLUTION LIEUTENANT THOMAS BOYD AND SERGEANT MICHAEL PARKER MET DEATH UNDAUNTED IN THE LINE OF DUTY AFTER LINGERING TORTURE THEY MARKED WITH THEIR BLOOD THE WESTERN LIMITIN THE STATE OF NEW YORK OF THE GREAT STRUGGLE FOR AMERICAN FREEDOM. ERECTED BY THE LIVINGSTON COUNTY HISTORICAL SOCIETY AND THE STATE OF KEW Y SEPTEMBER 14. 1927





#### Where is Prof. Emil Wolf?



# Intrigue of optical physics

#### Why Interest in Quantum and NLO Imaging?

Rochester is the self-designated:

"imaging capital of the world."

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Dr. Nicholas George, Wilson Professor of Electronic Imaging

#### Why Interest in Quantum and NLO Imaging?

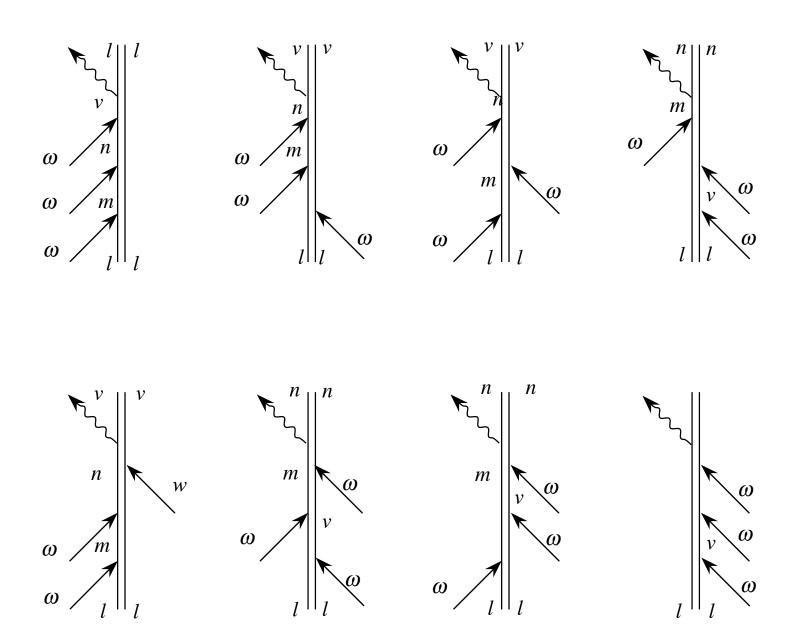
Rochester is the self-designated:

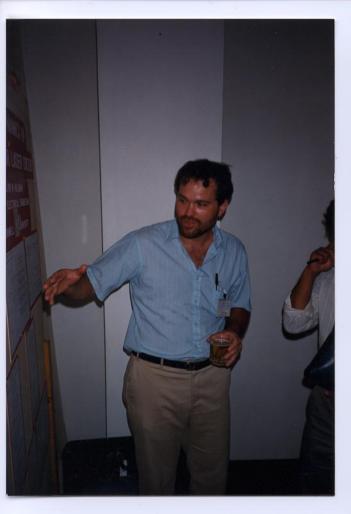
"imaging capital of the world."

(Imogene?)



Sid Caesar and Imogene Coca in 1953



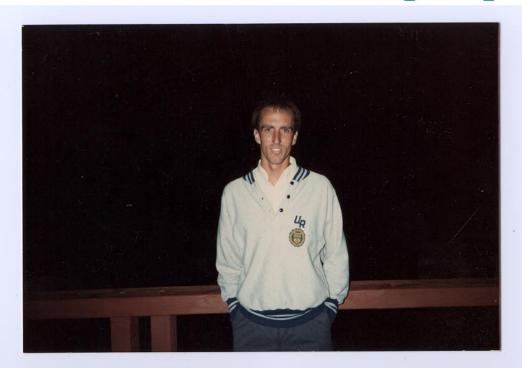








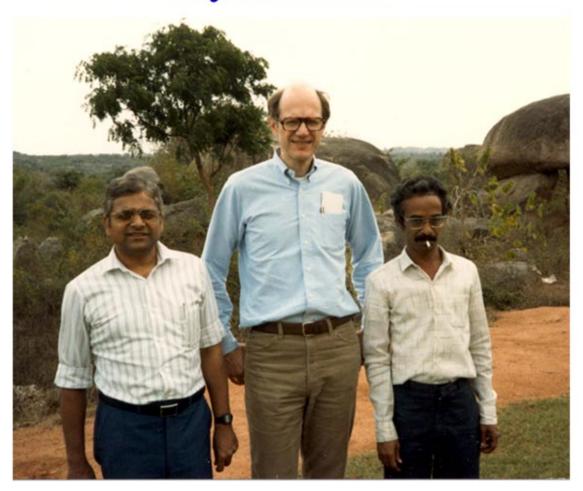
#### Mark Kramer in Albuquerque

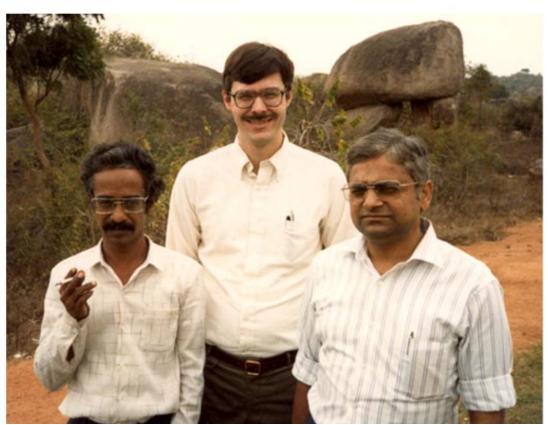






# Hyderabad









Pisa



Kurt Oughstun and Paul Narum in Lillehammer







SUSSP, 1995 St. Andrews

# NLO Materials



#### Val Thorens 1996





George Fischer

# NLO of Polymers

## Cancun, Mexico











NOMA, Cetraro,Italy 1997

# Krakow, Poland





# FRISNO 1998





# Journal of Modern Optics



Thank you!

THE END