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Talk given on October 24, 1996 at the *OSA Annual Meeting—12th Interdisciplinary Laser Science Conference—Optics & Imaging in the Information Age, October 20–24, 1996*, Rochester, NY, U. S. A.

PRESELECTED LOOPHOLE-FREE BELL EXPERIMENTS

Mladen Pavičić

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Summary

A loophole-free four photon EPR experiment (with and without Bell inequalities) requiring only 67% detection efficiency, which preselects nonmaximal singlets, is proposed. The setup enables that coincidence counts reach 80% of singles counts even with low visibility.

Committees

B. Keith Jenkins, *University of Southern California, Optical Computing Chair*
Donald B. Carlin, *Optex Communications, Inc., Optical Data Storage Chair*

OPTICAL SCIENCES DIVISION

Michael Kavaya, *NASA Marshall Space Flight Center, Atmospheric and Oceanic Optics Chair*
Daniel S. Elliott, *Purdue University, Optical Physics Chair*
Howard Milchberg, *University of Maryland, X-Ray and XUV Physics Chair*
Michael Heaven, *Emory University, Fundamental and Applied Spectroscopy Chair*

ThNN

1:00 pm–3:00 pm
Fairfax (Holiday Inn)

Quantum Optics: 2

Thomas W. Mossberg, *University of Oregon, Presider*

ThNN4

1:45 pm

Preselected loophole-free Bell experiments, Mladen Pavicic, *University of Zagreb, Kaciceva 26, Post. pret 217, HR-10001 Zagreb, Croatia. E-mail: mpavicic@faust.irb.hr.* A loophole-free four photon EPR experiment (with and without Bell inequalities) requiring only 67% detection efficiency, which preselects nonmaximal singlets, is proposed. The setup enables that coincidence counts reach 80% of singles counts even with low visibility.

Technical Program

The Annual Meeting/ILS and Optics & Imaging in the Information Age Technical Program that appears as a supplement to the August 1996 issue of *Optics and Photonics News* contains 50-word abstracts of the papers to be presented. Please note that many of the sessions are joint with ILS and with OSA and the Optics & Imaging meeting.

The number of papers received necessitates the scheduling of 15 concurrent sessions during most of the five day meeting. *Please note that there will not be any sessions on Friday, October 25.* The 1204 papers scheduled for presentation include 155 OSA invited, 36 ILS invited, 10 Optics & Imaging invited 16 joint OSA and Optics & Imaging invited, and 22 joint OSA and ILS invited; 18 tutorials, 4 ILS Critical Reviews; 638 OSA contributed oral presentations, 57 ILS contributed oral presentations, 30 Joint ILS and OSA oral presentations; and 34 joint OSA and Optics & Imaging oral presentations; and a total of 157 posters (21 ILS, 7 Optics & Imaging and 129 OSA posters). Additionally there will be 2 plenary talks, and the OSA Ives Medal Address and the ILS Schawlow Prize Address.

OSA
Optical Society of America

OSA Annual Meeting & Exhibit

Sponsored by the Optical Society of America and Photonics Spectra

ILS-XII

12th Interdisciplinary Laser Science Conference

Sponsored by the Division of Laser Science of the American Physical Society in Cooperation with the Optical Society of America

Optics & Imaging in the Information Age

Sponsored by the Optical Society of America and The Society for Imaging Science and Technology (IS&T)

October 20-24, 1996

Rochester Riverside Convention Center and Holiday Inn–Genesee Plaza

Rochester, New York