

**Theory of partial coherence.
A bibliography for the period 1976 - 1980**

K. SINGH

Physics Department, Indian Institute of Technology, Delhi, New Delhi-110016, India.

Since the publication of bibliographic review on the theory of partial coherence (1) and other connected topics (2, 3) covering literature till the end of the year 1975, significantly new areas have been explored and much progress has been made concerning the theory and applications of Coherence.

Important publications have come, among others, from H.P. BALTES, W.H. CARTER, E. COLLETT, H.A. FERWERDA, A.T. FRIBERG, F. GORI, J.C. LEADER, A. MARATHAY, Y. ONTSUKA, C. PASE, B. SALEH, B. STEINLE, A. WALTHER, E. WOLF, and M.S. ZUBAIRY. Most of the research deal with the subjects of radiometry and partial coherence, directionality and spatial coherence and influence of source structure from far-zone measurements. Much emphasis has been laid on investigations concerning the relationship between the spectral spatial coherence in the source plane and in the far-zone in terms of the generalized van Cittert-Zernike theorem and its inverse.

Other interesting areas of research are the propagation of coherence through turbulent atmosphere and optical fibres. Theory of partial coherence in electron optics and electron microscopy receives also an increasing attention. Several other topics to be mentioned include explanation of Lau effect, scattering and coherence phenomena, modal structure of optical fibres, coherence modulation by ultrasonic waves, optical noise and coherence, and Wigner distribution function.

Simultaneously with the basic research in the theory of coherence, much efforts have been devoted to research on partially coherent image formation, holographic and information processing, measurement of coherence, etc. It is expected that some of these topics will be the subject matter of bibliographies in future.

I am thankful to Dr. R.D. Bahuguna for his help in the preparation of this bibliography.

- 1) K. SINGH and M. DE, Jour. Optics (India) 2, 1976, 42-49. Bibliographic review on: Studies on Partial Coherence.
- 2) K. SINGH and M. DE, Jour. Optics (India) 6, 1977, 15-20. Bibliographic review on: Studies on Partial Coherence - II, Partially Coherent Diffraction.
- 3) K. SINGH and M. DE, Jour. Optics (India) 6, 1977, 77-84. Bibliographic review on: Studies on Partial Coherence. Part II B and II C.

1976

1. G. ANTES, H.P. BALTES, B. STEINLE, Spatial Coherence of Planar Sources Specified from the Radiant Intensity. *Helv. Phys. Acta* 49, 1976, 759.
2. H.P. BALTES, B. STEINLE, M. PABST, Poincaré Cycles and Coherence of Bounded Thermal Radiation Fields. *Phys. Rev.* A12, 1976, 1866-1873.
3. H.P. BALTES, B. STEINLE, G. ANTES, Spectral Coherence and the Radiant Intensity from Statistically Homogeneous and Isotropic Planar Sources. *Opt. Comm.* 18, 1976, 242-246.
4. M.J. BEESLEY, *Laser and Their Applications*. Taylor and Francis 1976.
5. M. BERTOLOTTI et al., Spatial Coherence Properties of Light Scattered by Disclinations in a Liquid Crystal. *Appl. Opt.* 15, 1976, 2468-2470.
6. M. BERTOLOTTI et al., Spatial Coherence of Light Scattered by Media with Large Correlation Length of Refractive Index Fluctuations. *Appl. Opt.* 15, 1976, 1842-1844.
7. G. BONNET, Polychromatic Partial Coherence: Space-time Filtering and Fourier Transform. *Nouv. Rev. Opt.* 7, 1976, 235-258.
8. R.E. BURGE et al., The Phase Problem. *Proc. Roy. Soc. London* A350, 1976, 191-212.
9. D.J. CARPENTER, C. PASK, Optical Fibre Excitation by Partially Coherent Sources. *Opt. Quant. Electron.* 8, 1976, 545.
10. W.H. CARTER, L.E. SOMERS, Coherence Theory of a Radio Telescope. *IEEE Trans. Antenna and Prop.* AP-24, 1976, 815-819.
11. K.R. CARVER, Coherence Recognition in Radiometry. Tech. Memo. RSL-264-11, Remote Sensing Lab. Univ. Kansas, Lawrence, Kansas, USA.
12. S. CHOPRA, J.P. DUDEJA, Study of Polarisation of Light by Correlation Technique. *Atti Fond. G. Ronchi* 31, 1976, 603-608.
13. P. DESANTIS, Modulation Contrast and Coherence Theory. *Appl. Opt.* 15, 1976, 2385.
14. M. ELBAUM, P. DIAMONT, SNR in Photocounting Images of Rough Objects in Partially Coherent Light. *Appl. Opt.* 15, 1976, 2268-2275.
15. H.A. FERWERDA, On the Theory of Partial Coherence in Electron Microscopy. *Optik* 45, 1976, 411-426.
16. H.A. FERWERDA, Proposal for Determination of Complex Degree of Coherence for Isoplanatic Imaging. *Opt. Commun.* 19, 1976, 54-56.
17. Y. KANO, Coherent Properties of the Superposed Radiation. I. Temporal Coherence. *J. Phys. Soc. Japan* 40, 1976, 1122-1129.
18. Y. KANO, Coherent Properties of the Superposed Radiation. II. Spatial Coherence. *J. Phys. Soc. Japan* 41, 1976, 601-606.
19. V.N. KURASHEV, Yu.V. KHOROSHKOV, Use of Intensity Interferometry for Recording and Reconstruction of Images of Spatially Non-coherent Polychromatic Sources. *Sov. Jour. Quant. Electron.* 6, 1976, 11-19.
20. L. MANDEL, E. WOLF, Spectral Coherence and the Concept of Cross-spectral Purity. *J. Opt. Soc. Am.* 66, 1976, 529-535.

21. A.S. MARATHAY, Radiometry of Partially Coherent Fields. *J. Opt. Soc. Am.* 66, 1976, 1075A.
22. A.S. MARATHAY, Radiometry of Partially Coherent Fields I. *Opt. Acta* 23, 1976, 785-794.
23. A.S. MARATHAY, Radiometry of Partially Coherent Fields II. *Opt. Acta* 23, 1976, 795-798.
24. T.S. McKECHNIE, Coherence and Quantum Optics, Eds. L. Mandel, E. Wolf, Plenum Press 1973, book review, *Opt. Acta* 23, 1976, 501.
25. Y. OHTSUKA, Modulation Effects of a Sound Wave on the Mutual Coherence Function of Light. *Opt. Commun.* 17, 1976, 234-237.
26. Y. OHTSUKA, Effects of Sound-light Interaction of Partial Coherence in Image-forming Optical Systems. *Opt. Commun.* 17, 1976, 238-241.
27. E.P. OSTAPCHENKO, Effect of Mode Degeneration and Deformation on the Spatial Coherence of Laser Radiation. *Opt. Spectrosc.* 40, 1976, 491-494.
28. K. SINGH, M.DE, Bibliographic Review on Studies on Partial Coherence. *Jour. Opt. (India)* 5, 1976, 42-49.
29. A. SOEMARJONO, N. HIRANO, Phase Measurable Optical Heterodyne Interferometer. *Trans. IECE of Japan* E59, 1976, 1-8.
30. B. STEINLE, H.P. BALTES, Evanescent Waves, Finite Source Area, and the Inverse Scattering Problem. *Helv. Phys. Acta* 49, 1976, 793.
31. S. UEHA et al., Image Reconstruction by Using the Propagation Law of Mutual Intensity. *Opt. Commun.* 18, 1976, 488-491.
32. S. WADAKA, T. SATO, Merits of Symmetric Scanning for Detection of Coherence Function in Incoherent Imaging System. *J. Opt. Soc. Am.* 66, 1976, 145-147.
33. E. WOLF, W.H. CARTER, A Radiometric Generalization of the Van Cittert-Zernike Theorem for Fields Generated by Sources of Arbitrary State of Coherence. *Opt. Commun.* 16, 1976, 297-302.
34. E. WOLF, W.H. CARTER, Coherence and Radiometry with Quasi-homogeneous Sources. *J. Opt. Soc. Am.* 66, 1976, 1075A.
35. E. WOLF, New Theory of Radiative Energy Transfer in Free Electromagnetic Fields. *Phys. Rev. D* 13, 1976, 869-886.
36. K. YAMAMOTO et al., Influence of Light Coherence at the Exit Pupil of the Condenser on the Image Formation. *Opt. Acta* 23, 1976, 987-996.
37. M. ZAJĄC, On the Partially Coherent Near and Far Field Diffraction. *Optica Applicata* 9, 1976, 113-118.

1977

38. G.P. AGRAWAL, C.L. METHA, Evanescent Waves and the Van Cittert-Zernike Theorem in Cylindrical Geometry. *Pramana* 9, 1977, 155-161.
39. H.P. BALTES, H.G. SCHMIDT-WEINMAR, Bandlimiting at Variance with the Strong Radiation Condition. *Phys. Lett.* 60A, 1977, 275-277.
40. H.P. BALTES, Coherence and the Radiation Laws. *Appl. Phys.* 12, 1977, 221-244.
41. H.P. BALTES, B. STEINLE, Information on Planar Sources from Far-zone Spatial Coherence. *Lett. Nuovo Cimento* 18, 1977, 313-318.
42. H.P. BALTES, B. STEINLE, Radiometry with Fields of Large Coherence Area. *Nuovo Cimento* 41E, 1977, 428-440.
43. H.P. BALTES, Radiant Noise and Coherence. *Nuovo Cimento* 20, 1977, 87-90.
44. H.P. BALTES, B. STEINLE, Second Order Correlation and Radiometry. *J. Opt. Soc. Am.* 67, 1977, 1366A.

45. H.P. BALDES, B. STEINLE, Fluctuating Sources and Second-order Radiometry. *J. Opt. Soc. Am.* 67, 1977, 1366A.
46. M.J. BASTIAANS, A Bound on the Temporal Degree of Coherence. *Opt. Commun.* 21, 1977, 321-323.
47. M.J. BASTIAANS, A Frequency-domain Treatment of Partial Coherence. *Opt. Acta* 24, 1977, 261-274.
48. A. BASURAY, P. MUKHERJEE, Imaging with Sources of Non-uniform Distribution. *Opt. Acta* 24, 1977, 81-87.
49. F. BODEN, An Analysis of the Second-order Spatial Coherence of Stationary Laser Oscillators with a Fabry-Pérot Resonator. *Opt. Quant. Electron.* 9, 1977, 419-425.
50. F.P. CARLSON, Introduction to Applied Optics for Engineers, Academic 1977, Chap. 9.
51. D.J. CARPENTER, C. PASK, Geometric Optic Approach to Optical Fibre Excitation by Partially Coherent Sources. *Opt. Quant. Electron.* 9, 1977, 373-382.
52. D.J. CARPENTER, C. PASK, Propagation of Partial Coherence along Optical Fibres. *Opt. Commun.* 22, 1977, 99-102.
53. D.J. CARPENTER, C. PASK, The Angular Spectrum Approach to Diffraction of Partially Coherent Light. *Opt. Acta* 24, 1977, 939.
54. D.J. CARPENTER, C. PASK, Coherence Properties in the Image of a Partially Coherent Object. *J. Opt. Soc. Am.* 67, 1977, 115-117.
55. W.H. CARTER, E. WOLF, Coherence and Radiometry with Quasi-homogeneous Planar Sources. *J. Opt. Soc. Am.* 67, 1977, 785-796.
56. K.R. CARVER, Radiometric Recognition of Coherence. *Radio Science* 12, 1977, 371-379.
57. S. CHOPRA, J.P. DUDEJA, Phase Determination of Second Order Coherence. *Opt. Commun.* 22, 1977, 54.
58. E. COLLETT, J.T. FOLEY, E. WOLF, On an Investigation of Tatarskii into the Relationship between Coherence Theory and the Theory of Radiative Transfer. *J. Opt. Soc. Am.* 67, 1977, 465-467.
59. K. DUTTA, J.W. GOODMAN, Reconstruction of Images of Partially Coherent Objects from Samples of Mutual Intensity. *J. Opt. Soc. Am.* 67, 1977, 796-803.
60. H.A. FERWERDA, M.G. Van HEEL, On the Coherence Properties of Thermionic Emission Sources. *Optik* 47, 1977, 357-362.
61. A. FERWERDA, Determination of Coherence Length from Directionality. Extended abstract, Fourth Rochester Conf. on Coherence and Quantum Optics, June 8-10, 1977.
62. J. GUR, On the Analogies between the Mathematical Formulations of Partially Coherent Fields and Speckle Pattern. *J. Opt. Soc. Am.* 67, 1977, 1289A.
63. H. HAKEN, Die Kohärenzeigenschaften des Lichts. *Acta Phys. Austriaca* 47, 1977, 59-81.
64. P.W. HAWKES, Photometry and Partial Coherence in Electron Optics: Isoplanatic Image Formation. *Optik* 42, 1977, 149-161.
65. V.M. KURASHOV, Yu.V. KHOROSTIKOV, Symmetry Properties of the Correlation Function of Radiation in a Linear System. *Opt. Spectroscop.* 42, 1977, 343.
66. J. LEADER, Atmospheric Propagation of Partially Coherent Radiation. *J. Opt. Soc. Am.* 67, 1977, 1376A.
67. M.H. LEE et al., Generalized Spherical Wave Mutual Coherence Function. *J. Opt. Soc. Am.* 67, 1977, 1279L.
68. A. MARATHAY, S. PRASAD, R.V. SHACK, Rayleigh-Sommerfeld Diffraction Theory, Partial Coherence and Lambert's Law. *J. Opt. Soc. Am.* 67, 1977, 1366A.
69. Y. MIYAZAKI, Partially Coherent Optical Waves in Random Gradient Fibers. *Opt. Quant. Electron.* 9, 1977, 153-165.
70. Y. OHTSUKA, Proposal for the Determination of the Complex Degree of Spatial Coherence. *Opt. Lett.* 1, 1977, 133-134.

71. D.C. O'SHEA, W.R. CALLEN, W.T. RHODES, *An Introduction to Lasers and Their Applications*. Addison-Wesley, 1977.
72. C. PASK, Derivation of Source-field Coherence Properties from Radiation Angular Distribution. *Opt. Acta* 24, 1977, 235-240.
73. B. SALEH, *Photoelectron Statistics with Applications to Spectroscopy and Optical Communication*, Springer-Verlag, 1977.
74. H.G. SCHMIDT-WEINMAR, H.P. BALTES, Bandlimiting in Conflict with Spatial Bounding of Radiative Sources. *Helv. Phys. Acta* 50, 1977, 669-673.
75. B. STADNIK, Solutions of Problems of Optical Diffraction in Anisotropic Media by Use of Distribution. *Optica Applicata* 7, 1977, 3-8.
76. B. STEINLE, H.P. BALTES, Correlation of Fluctuating Scatterers from Radiometric and Interferometric Data. *Helv. Phys. Acta* 50, 1977, 664-666.
77. B. STEINLE, H.P. BALTES, Radiant Intensity and Spatial Coherence for Finite Planar Sources. *J. Opt. Soc. Am.* 67, 1977, 247.
78. B.J. THOMPSON, Image Formation with Coherent Light; A Tutorial Review, [in] *Coherent Optical Engineering*, Eds. F.T. Arcobbi and V. Degiorgio, North-Holland 1977, 49-61.
79. E. WOLF, Coherence and Radiometry. *J. Opt. Soc. Am.* 67, 1977, 1413A.
80. M.S. ZUBAIRY, E. WOLF, Exact Equations for Radiative Transfer of Energy and Momentum in Free Electromagnetic Fields. *Opt. Commun.* 20, 1977, 321-324.

1978

81. H.P. BALTES, B. STEINLE, Fluctuating Sources and Second-order Radiometry. *Nuovo Cimento* 44B, 1978, 423-441.
82. H.P. BALTES (Ed.), *Inverse Source Problems in Optics*, Springer-Verlag 1978.
83. H.P. BALTES, J. GEIST, A. WALTHER, Radiometry and Coherence, [in] *Inverse Source Problems in Optics*, Ed. H.P. Baltes, Springer-Verlag 1978.
84. H.P. BALTES, B. STEINLE, G. ANTES, Radiometric and Correlation Properties of Bounded Planar Sources, [in] *Proc. Fourth Rochester Symp. on Coherence and Quantum Optics*, Eds. L. Mandel and E. Wolf, Plenum Press, 1978, p. 11.
85. H.P. BALTES, Inverse Problems in Optics, [in] *Internat. Conf. on Lasers' 78*, Orlando, Florida, USA, Dec. 11-15, 1978, pp. 716-722.
86. M.J. BASTIAANS, The Wigner Distribution Function Applied to Optical Signals and Systems. *Opt. Commun.* 25, 1978, 26-30.
87. M. BERTOLOTTI, F. SCUDIERI, Spatial Coherence of Light Scattered by Liquid Crystals, [in] *Coherence and Quantum Optics IV*, Eds. L. Mandel, E. Wolf, Plenum Press 1978, pp. 319-332.
88. A. BOIVIN, C. DECKERS, New Sampling Theorem for Complex Degree of Coherence for Reconstructing an Isotropic Luminous Source. *Opt. Commun.* 25, 1978, 144-147.
89. W.H. CARTER, Radiant Intensity from Inhomogeneous Sources and the Concept of Averaged Cross-spectral Density. *Opt. Commun.* 25, 1978, 1-4.
90. W.H. CARTER, E. WOLF, Some Relationships between the Correlation Coefficients of Planar Sources and of Their Far Fields. *Opt. Commun.* 25, 1978, 288-292.
91. W. H. CARTER, M. BERTOLOTTI, An Analysis of the Far-field Coherence and Radiant Intensity of Light Scattered from Liquid Crystals. *J. Opt. Soc. Am.* 68, 1978, 329-333.
92. E. COLLETT, E. WOLF, Is Complete Spatial Coherence Necessary for the Generation of Highly Directional Light Beams? *Opt. Lett.* 2, 1978, 27-29.

93. E. COLLETT, E. WOLF, New Equivalence Theorem for Radiant intensity from Planar Sources of Different States of Spatial Coherence. *J. Opt. Soc. Am.* 68, 1978, 1410A.
94. B. DAINO et al., A New Method for Measuring the Index of Profile of Optical Fibres. Fourth European Conf. on Optical Communications, Geneva, Sept. 1978.
95. A.H. FERWERDA, M.G. VAN HEEL, Determination of Coherence Length from Directionality, [in] *Coherence and Quantum Optics IV*, Eds. L. Mandel, E. Wolf, Plenum Press, 1978.
96. J.R. FIENUP, Reconstruction of an Object from the Modulus of Its Fourier Transform. *Opt. Lett.* 3, 1978, 27-29.
97. J.T. FOLEY, M.S. ZUBAIRY, Directionality of Gaussian Schell-model Beams. *J. Opt. Soc. Am.* 68, 1978, 1410A.
98. J.T. FOLEY, M.S. ZUBAIRY, The Directionality of Gaussian Schell-model Beams. *Opt. Commun.* 26, 1978, 297-300.
99. A.T. FRIBERG, On the Existence of a Radiance Function for a Partially Coherent Planar Source, [in] *Coherence and Quantum Optics IV*, Eds. L. Mandel, E. Wolf, Plenum Press 1978, p. 449.
100. A.T. FRIBERG, On the Question of the Existence of Nonradiating Primary Planar Sources of Finite Extent. *J. Opt. Soc. Am.* 68, 1978, 1281-1283.
101. A.T. FRIBERG, E. WOLF, Reciprocity Relations between the Far Field and the Source Field Generated by a Planar Source of any State of Coherence. *J. Opt. Soc. Am.* 68 1978, 1140 A.
102. F. GORI, C. PALMA, Partially Coherent Sources Which Give Rise to Highly Directional Light Beams. *Opt. Commun.* 27, 1978, 185-188.
103. J.P. GRIGAY, The Ambiguity Function in Diffraction and Isoplanatic Imaging by Partially Coherent Beams. *Opt. Commun.* 25, 1978, 136-138.
104. Y. IMAI, Y. OHTSUKA, Laser Speckle Reduction by Ultrasonic Modulation. *Opt. Comm.* 27, 1978, 18-22.
105. K. KOJIMA, Partially Coherent Wave Propagation and Generalized Van Cittert-Zernike Theorem. *Jap. J. Appl. Phys.* 17, 1978, 155-160.
106. D.K. LAMBERTS, P.L. RICHARDS, New Results in the Theory of a Plane Mirror Interferometer. *J. Opt. Soc. Am.* 68, 1978, 1124.
107. J.C. LEADER, Far-zone Range Criteria for Quasi-homogeneous Partially Coherent Sources. *J. Opt. Soc. Am.* 68, 1978, 1332-1338.
108. J.C. LEADER, Atmospheric Propagation of Partially Coherent Radiation. *J. Opt. Soc. Am.* 68; 1978, 175-185.
109. J.C. LEADER, Intensity Fluctuations Resulting From Partially Coherent Light Propagation through Atmospheric Turbulence. *J. Opt. Soc. Am.* 68, 1978, 1369A.
110. J.C. LEADER, The Generalized Partial Coherence of a Radiation Source and Its Far-Field. *Opt. Acta*, 25, 1978, 395-413.
111. L. MANDEL, E. WOLF (Eds.), *Coherence and Quantum Optics*, Proc. Fourth Rochester Conf., Plenum Press, 1978.
112. A. MARATHAY et al., Directionality of Light from Coherent, Partially Coherent and Noncoherent Sources. *J. Opt. Soc. Am.* 68, 1978, 1410A.
113. G. ROSS, Light Scattering in Amorphous Media. The Object Wave and Its Coherence. *Opt. Acta*. 25, 1978, 57-66.
114. C.J. SHEPPARD, T. WILSON, Image Formation in Scanning Microscopes with Partially Coherent Source and Detector. *Opt. Acta* 25, 1978, 315.
115. A. WALTHER, Theorem on the Uniqueness of the Generalized Radiance. *Opt. Lett.* 3 1978, 127-129.
116. A. WALTHER, Propagation of the Generalized Radiance through Optical Instruments. *J. Opt. Soc. Am.* 68, 1978, 1404A.

117. A. WALTHER, Propagation of the Generalized Radiance through Lenses. *J. Opt. Soc. Am.* 68, 1978, 1606-1610.
118. A. WALTHER, [in] *Inverse Source Problems in Optics*, Ed. H.P. Baltès, Springer-Verlag 1978, Chap. 5.
119. S.G. WANG, M.A. PLONUS, Irradiance Scintillation of a Partially Coherent Source in Extremely Strong Turbulence. *J. Opt. Soc. Am.* 68, 1978, 1369A.
120. E. WOLF, W.H. CARTER, On the Radiation Efficiency of Quasi-homogeneous Sources of Different Degrees of Spatial Coherence, [in] *Coherence and Quantum Optics V*, Eds. L. Mandel, E. Wolf, Plenum Press 1978, p. 415.
121. E. WOLF, Coherence and Radiometry. *J. Opt. Soc. Am.* 68, 1978, 6-17.
122. E. WOLF, The Radiant Intensity from Planar Sources of any State of Coherence. *J. Opt. Soc. Am.* 68, 1978, 1597-1605.
123. E. WOLF, W.H. CARTER, Coherence and Radiant Intensity in Scalar Wave Fields Generated by Fluctuating Primary Planar Sources. *J. Opt. Soc. Am.* 68, 1978, 953-964.
124. E. WOLF, E. COLLETT, Partially Coherent Sources which Produce the Same Far-field Intensity Distribution as a Laser. *Opt. Commun.* 25, 1978, 293-196.
125. M.S. ZUBAIRY, Radiative Energy Transfer in the Presence of Random Source Distributions, [in] *Coherence and Quantum Optics*, Eds. L. Mandel, E. Wolf, Plenum Press, 1978, 459-467.
126. M.S. ZUBAIRY, Doctoral Dissertation, Univ. Rochester, N.Y. 1978.

1979

127. H.P. BALTÈS, B. STEINLE, Reply to Foley and Wolf, *J. Opt. Soc. Am.* 69, 1979, 910.
128. H.P. BALTÈS et al., Diffuse Reflectance and Coherence. *Infrared Phys.* 19, 1979, 461-464.
129. M.J. BASTIAANS, Transport Equations for the Wigner Distribution Function. *Opt. Acta* 26, 1979, 1265-1277.
130. M.J. BASTIAANS, Transport Equations for the Wigner Distribution Function in an Inhomogeneous and Dispersive Medium. *Opt. Acta* 26, 1979, 1333-1344.
131. M.J. BASTIAANS, Wigner Distribution Function and Its Application to First Order Optics. *J. Opt. Soc. Am.* 69, 1979, 1710-1716.
132. M.J. BASTIAANS, The Wigner Distribution Function and Hamilton's Characteristics of a Geometric-optical System. *Opt. Commun.* 30, 1979, 321-326.
133. H. BREMMER, The Wigner Distribution and Transport Equations in Radiation Problems. *J. Appl. Sci. Eng.* A3, 1979, 251-260.
134. J.N. BUTTERS, Applications of Coherence, *Proc. SPIE 194*, 1979, Ed. W.H. Carter, book review, *Opt. Laser Tech.*, Feb. 1981, 52.
135. W.H. CARTER, E. WOLF, Radiation from Fluctuating Three-dimensional Scalar Sources. *J. Opt. Soc. Am.* 69, 1979, 1413A.
136. P. CHMELA, Effect of Coherence of Generating Radiation on Optical Parametric up Conversion. *Opt. Quant. Electron.* 11, 1979, 287-295.
137. T.W. COLE, Mutual Coherence Function in Radio Astronomy. *J. Opt. Soc. Am.* 69, 1979, 554-557.
138. E. COLLETT, E. WOLF, Quasi-homogeneous Gaussian Light Beams. *J. Opt. Soc. Am.* 69, 1979, 1413A.
139. E. COLLETT, E. WOLF, New Equivalence Theorems for Planar Sources that Generate the Same Distribution of Radial Intensity. *J. Opt. Soc. Am.* 69, 1979, 942.
140. D. COURJON, J. BULABOIS, Modifications of the Coherence Properties of a Light Beam; Applications in Optical Processing. *Proc. SPIE 194*, 1979, 129.

141. B. CROCIIGNANI, B. DAINO, Coherence Effects of the Electromagnetic Field Propagating in a Multimode Optical Fiber. *Fiber and Integrated Optics* 41, 1979, 319.
142. B. DAINO et al., Spatial Coherence and Index-profiling in Optical Fibres. *Opt. Acta* 26, 1979, 923-928.
143. C. DECKERS, A. BOIVIN, Object Luminance Reconstruction through Sampling of the Complex Degree of Coherence in the Far-field. *J. Opt. Soc. Am.* 69, 1979, 1485A.
144. P. DE SANTIS et al., Generalized Collet-Wolf Sources. *Opt. Commun.* 28, 1979, 151-155.
145. P. DE SANTIS et al., An Example of a Collet-Wolf Source. 29, 1979, 256-260.
146. A.J. DE VANEY, Optical Coherence: Self-perpetrating Science. *Opt. Spectra* 13, 1979, 37-41.
147. F.M. DICKEY, D.J. MOORE, White Light Optical Processor for Edge Enhancement and Spectral Filtering. *Appl. Opt.* 62, 1979, 1679A.
148. J.P. DUDEJA, S. CHOPRA, Amplitude Correlation Method for the Measurement of Optical Polarization. *J. Opt. (India)* 8, 1979, 44.
149. J.D. FARINA et al., Directional Beams from Quasi-homogeneous Optical Sources. *J. Opt. Soc. Am.* 69, 1979, 1414A.
150. J.T. FOLEY, E. WOLF, Note on the Far-field of a Gaussian Beam. *J. Opt. Soc. Am.* 69, 1979, 761-764.
151. M. FRANÇON, *Optical Image Formation and Processing*, Academic Press, 1979.
152. A.T. FRIEBERG, Radiometric Laws with Partially Coherent Light. *J. Opt. Soc. Am.* 69, 1979, 1414A.
153. A.T. FRIEBERG, On the Existence of a Radiance Function for Finite Planar Sources of Arbitrary States of Coherence. *J. Opt. Soc. Am.* 69, 1979, 192-198.
154. A.T. FRIEBERG, Effects of Coherence in Radiometry. *SPIE Proc.* 194, 1979, 55-70.
155. A.T. FRIEBERG, Radiation from Partially Coherent Sources. *SPIE Proc.* 194, 1979, 71-83.
156. J.W. GOODMAN, Role of Coherence Concepts in the Study of Speckle. *SPIE Proc.* 194, 1979, 86-94.
157. F. GORI, Quasi-homogeneous Sources and Geometrical Optics. *Opt. Lett.* 4, 1979, 354-356.
158. F. GORI, Law Effect and Coherence Theory. *Opt. Commun.* 31, 1979, 4-8.
159. P.W. HAWKES, Coherence in Electron Optics, [in] *Advances in Optical and Electron Microscopy*, Vol. 7, Eds. R. Barer, V.E. Coslett, Academic Press, 1979.
160. B.J. HOENDERS et al., K-correlations and Facet Models in Diffuse Scattering. *Opt. Acta* 26, 1979, 1307-1319.
161. J.C. LEADER, Intensity Fluctuations Resulting from the Propagation of Partially Coherent Beam Waves in the Turbulent Atmosphere. *SPIE Proc.* 194, 1979, 107-121.
162. J.C. LEADER, Intensity Fluctuations Resulting from Partially Coherent Light Propagating through Atmospheric Turbulence. *J. Opt. Soc. Am.* 69, 1979, 73-84.
163. R.F. LUTOMIRSKI, Atmospheric Effects on Optical Coherence. *Proc. SPIE* 194, 1979, 122.
164. R. MARTÍN-HERRANO, Expansion of Complex Degree of Coherence. *Nuovo Cimento* 54B, 1979, 205.
165. D. MCGUIRE, Source Coherence and Far-field Intensity Patterns. *Opt. Commun.* 29, 1979, 17-21.
166. J.L. MCMILLAN et al., Second Order Coherence Effects Due to the Superposition of Two Independent Thermal Light Beams. *Opt. Acta* 26, 1979, 1125-1128.
167. Y. OHTSUKA, Optical Coherence Modulation by Two Ultrasonic Waves. *Can. J. Phys.* 57, 1979, 1420.

168. Y. OHTSUKA, Spatial Coherence Control of a Laser Beam by Ultrasonic Waves and Its Applications. Proc. SPIE 194, 1970, 142.
169. G.O. REYNOLDS, J.B. DEVELIS, Review of Optical Coherence Effects in Instrument Design. Proc. SPIE 124, 1979, 2.
170. W.T. RHODES, L.L. WEBB, Partially Coherent Sources, Highly Directional Beams and Fourier Optics. J. Opt. Soc. Am. 69, 1979, 1414A.
171. B.J. RYE, Antenna Parameters for Incoherent Backscatter Heterodyne Lidar. Appl. Opt. 18, 1979, 1390-1398.
172. B.E.A. SALEH, Optical Bilinear Transformations: General Properties. Opt. Acta. 26, 1979, 777-799.
173. B. E.A. SALEH, Coherence and Quantum Optics IV, Eds. L. Mandel, E. Wolf, Plenum Press 1978, book review, J. Opt. Soc. Am. 69, 1979, 173.
174. B.E.A. SALEH, Intensity Distribution Due to a Partially Coherent Field and the Collett-Wolf Equivalence Theorem in the Fresnel Zone. Opt. Commun. 30, 1979, 135-138.
175. B.E.A. SALEH, Correction of Nonlinear Blur Due to Partial Optical Coherence. Proc. SPIE 194, 1979, 136.
176. H.G. SCHMIDT-WEINMAR et al., Superresolution of Space-limited Source Field by Non-uniform Plane Waves. Optik 52, 1979, 205.
177. R.W. SMITH, Coherence and Quantum Optics, Eds. L. Mandel, E. Wolf, Plenum Press 1978, book review, Opt. Acta 26, 1979, 1240.
178. R. SUDOL, B.J. THOMPSON, An Explanation of the Lan Effect Based on Coherence Theory. Opt. Commun. 31, 1979, 105-118.
179. R. SUDOL, B.J. THOMPSON, Lan Effect Interpreted in the Context of the Theory of Partial Coherence. J. Opt. Soc. Am. 69, 1979, 1455A.
180. B.J. THOMPSON, C. ROYCHOUDHURI, On the Propagation of Coherent and Partially Coherent Light. Opt. Acta 26, 1979, 21-34.
181. W.T. WELFORD, Coherence and Quantum Optics IV, Eds. L. Mandel, E. Wolf, Plenum Press 1978, book review, Appl. Opt. 18, 1979, A173.

1980

182. H.P. BALTES, H.A. FERWERDA, Partially Coherent Sources with Phase Profile and the Van Cittert-Zernike Theorem. Lett. Nuovo. Cimento 27, 1980, 541-543.
183. H.P. BALTES, Progress in Inverse Optical Problems, [in] Inverse Scattering Problems in Optik, Ed. H.P. Baltes, Springer-Verlag 1980.
184. H.P. BALTES (Ed.), Inverse Scattering Problems in Optics, Springer-Verlag 1980.
185. R. BARAKAT, Moment Estimator Approach to the Retrieval Problem in Coherence Theory. J. Opt. Soc. Am. 70, 1980, 688-693.
186. M.J. BASTIAANS, The Wigner Distribution Function and Its Applications to Optics. [in] Optics in Four Dimensions, ICO, Ensenada, B.C. Mexico, Aug. 4-8, 1980.
187. R.H.T. BATES, Inverse Source Problems in Optics, Ed. H.P. Baltes, Springer-Verlag 1978, book review, J. Opt. Soc. Am. 70, 1980, 467.
188. R.N. BRACEWELL, Image Formation from Coherence Functions in Astronomy, Ed. C. Van-schoonveld, D. Reidel, Amsterdam 1979, book review, J. Opt. Soc. Am. 70, 1980, 570.
189. A.A. BUGAEV, S. YU. KULIKOVSKII, Spatial Coherence in the Alford and Gold Experiment. Opt. Spectrosc. 48, 1980, 641.
190. W.H. CARTER, Four Definitions for the Term Emittance. Appl. Opt. 19, 1980, 3419-3420.
191. P. CHAVEL, Optical Noise and Temporal Coherence. J. Opt. Soc. Am. 70, 1980, 935-943.

192. E. COLLETT, E. WOLF, Beams Generated by Gaussian Quasi-homogeneous Sources. *Opt. Commun.* 32, 1980, 27-31.
193. D. COURJON, J. BULBOIS, Besançon: Coherence et radiometrie. *J. Opt. (Paris)* 11, 1980, 135.
194. J. C. DALNTY, Imaging Processes and Coherence in Physics, Eds. M. Schlenker et al., Springer-Verlag, 1980, book review, *Appl. Opt.* 19, 1980, 3781.
195. J.D. FARINA et al., Generation of Highly Directional Beams from a Globally Incoherent Source. *Opt. Commun.* 32, 1980, 203-208.
196. A.T. FRIBERG, Phase Space Methods for Partially Coherent Wavefields [in] *Optics in Four Dimensions*, ICO Ensenada, B.C. Mexico, 4-8 Aug. 1980.
197. B.R. FRIEDEN, Inverse Source Problems in Optics, Ed. H.P. Baltes, Springer-Verlag 1978, book review, *Appl. Opt.* 19, 1980, 1952.
198. A.S. GLASS et al., Interference of Source Structure from Far-zone Measurements of Partially Coherent Radiation. *Helv. Phys. Acta* 53, 1980, 322-325.
199. F. GORI, Directionality and Spatial Coherence, *Opt. Acta* 27, 1980, 1025-1034.
200. F. GORI, Collett-Wolf Sources and Multimode Lasers. *Opt. Commun.* 34, 1980, 301-305.
201. Y. IMAI, Y. OHTSUKA, Optical Coherence Modulation by Ultrasonic Waves. 1 - Dependence of Partial Coherence on Ultrasonic Parameters. *Appl. Opt.* 19, 1980, 542-547.
202. K. ITOH, Y. OHTSUKA, Coherence Control by Laser Scanning. *Appl. Opt.* 19, 1980, 3184-3188.
203. J.C. LEADER, Beam Properties of Partially Coherent Curved Beam Waves in the Turbulent Atmosphere. *J. Opt. Soc. Am.* 70, 1980, 682-688.
204. D. McGUIRE, Coherent Detection of Partially Coherent Sources. *Opt. Lett.* 5, 1980, 73-75.
205. S.E. MORAN, On the Transport Theory of Mutual Intensity Function Propagations in a Multiple Scattering Medium. *Radio Sci.* 12, 1980, 1195-1205.
206. M. NIETO-VESPERINAS et al., The Optical Theorems: A New Interpretation for Partially Coherent Light. *Optik* 55, 1980, 165-171.
207. Y. OHTSUKA et al., Acoustically Modified Spatial Coherence in Optical Fresnel Diffraction Region. *Opt. Commun.* 35, 1980, 159.
208. S. PIAZZOLA, C. DE MARCHIS, Spatial Coherence in Optical Fibers. *Opt. Commun.* 32, 1980, 380-382.
209. R.K. RANEY, SAR Response to Partially Coherent Phenomena. *IEEE Trans.* AP-28, 1980, 777-787.
210. S.R. ROBINSON, P.S. IDELL, Free Space Propagation Model for Coherence Separable Broadband Optical Fields. *J. Opt. Soc. Am.* 70, 1980, 432.
211. M. SCHLENKER et al. (Eds.), *Imaging Processes and Coherence in Physics*, Springer-Verlag 1980.
212. P. SPANO, Connection between Spatial Coherence and Modal Structure in Optical Fibers and Semiconductor Lasers. *Opt. Commun.* 32, 1980, 265-270.
213. P. SPANO et al., Study of Modal Structure of a Semiconductors Laser by Measurement of the Complex Degree of Coherence. *Ann. des Telecomm.* 35, 1980, 231-235.
214. R. SUDOL, Fresnel Images, Coherence Theory and the Lau Effect. *SPIE Proc.* 240, 1980, 155-164.
215. E. WOLF, A New Description of Second-order Coherence Phenomena in the Space-frequency Domain, [in] *Optics in Four Dimensions*, ICO Conf. Ensenada, 4-8 Aug. 1980.
216. E. WOLF et al. On a Relationship between Spatial Coherence and Temporal Coherence in Free Fields, [in] *Optics in Four Dimensions*, ICO Conf. Ensenada, B.C. Mexico, 4-8 Aug. 1980.