Bibliography

Should the reader wish to pursue any of the topics discussed in this work beyond the references given in the appropriate chapters, the following literature is suggested for additional reading.

1 PHYSIOLOGY AND NEUROPHYSIOLOGY

Alpern, M. (1971). 'Rhodopsin Kinetics in the Human Eye', *J. Physiol.*, **217**, 447

Alpern, M., Rushton, W. A. H. and Torrii, S. (1970). 'The Size of Rod Signals', *J. Physiol.*, **206**, 193

Alpern, M., Rushton, W. A. H. and Torrii, S. (1970). 'The attenuation of Rod Signals by Backgrounds', *J. Physiol*, **206**, 209

Aquilar, M. and Stiles, W. S. (1954). 'Saturation of the Rod Mechanism of the Retina at High Levels of Stimulation', *Optica Acta*, **1**, 59

Bagrash, F. M., Thomas, J. P. and Shimamura, K. K. (1974). 'Size-Tuned Mechanisms: Correlation of Data on Detection and Apparent Size', *Vision Research*, **14**, 937

Baker, H. (1973). 'Area Effects and the Rapid Threshold Decrease in Early Dark Adaptation', *J. Opt. Soc. Am.*, **63**, 749

Bartley, S. H. (1951). 'The Physiology of Vision', in *Handbook of Experimental Psychology*, (Ed. S. S. Stevens) Wiley, pp. 921–984

Berny, F. (1969). 'Study of the Formation of Retinal Images and Determination of the Spherical Aberration of the Human Eye' (in French), *Vision Research*, **9**, 977

Blake, R., Cool, S. J. and Crawford, M. L. J. (1974). 'Visual Resolution in the Cat', *Vision Research*, **14**, 1211

Blakemore, C. and Sutton, P. (1969). 'Size Adaptation: a New After-effect', *Science, N.Y.* **166**, 245

Brindley, G. S. (1962). 'Beats produced by Simultaneous Stimulation of the Human Eye with Intermittent Light and Intermittent or Alternating Electric Current', *J. Physiol.*, **164**, 157

Brink, G. Van den (1962). 'Measurements of the Geometrical Aberration of the Eye', *Vision Research*, **2**, 233

Brown, J. L., Metz, J. W. and Yohman, J. R. (1969). 'Test of Scotopic Suppression of the Photopic Process', *J. Opt. Soc. Am.*, **59**, 1677

Campbell, F. W. (1960). 'Correlation of Accommodation between the Two Eye's,' *J. Opt. Soc. Am.*, **50**, 738

Campbell, F. W. and Gregory, A. H. (1960). 'The Spatial Resolving Power of the Human Retina with Oblique Incidence', *J. Opt. Soc. Am.*, **50**, 831

Campbell, F. W. and Kulilowski, J. J. (1971). 'An Electrophysiological Measure of the Psychophysical Contrast Threshold', *J. Physiol.*, **217**, 54

Campbell, F. W. and Kulikowski, J. J. (1972). 'The Visual Evoked Potential as a Function of Contrast of a Grating Pattern', *J. Physiol.*, **222**, 345

Campbell, F. W. and Maffei, L. (1971). 'The Tilt After-effect: A Fresh Look', *Vision Research*, **11**, 833

Campbell, F. W., Maffei, L. and Piccolino, M. (1973). 'The Contrast Sensitivity of the Cat', *J. Physiol.*, **229**, 719

Campbell, F. W., Robson, J. G. and Westheimer, G. (1959). 'Fluctuations of Accommodation under Steady Viewing Conditions', *J. Physiol.*, **145**, 579

Campbell, F. W. and Westheimer, G. (1959). 'Factors influencing Accommodation Responses of the Human Eye', *J. Opt. Soc. Am.*, **49**, 568

Campbell, F. W. and Westheimer, G. (1960). 'Dynamics of Accommodation Responses of the Human Eye', *J. Physiol.*, **151**, 285

Chase, R. and Kalil, R. E. (1972). 'Suppression of Visual Evoked Responses to Flashes and Pattern Shifts during Voluntary Saccades', *Vision Research*, **12**, 215

Clarke, F. J. J. (1957). 'Rapid Light Adaptation of Localised Areas of the Extra-Foveal Retina', *Optica Acta*, **4**, 69

Cleland, B. G., Levick, W. R. and Sanderson, K. J. (1973). 'Properties of Sustained and Transient Ganglion Cells in the Cat Retina', *J. Physiol.*, **228**, 649

Cobb, P. W. (1915). 'The Influence of Pupilliary Diameter on Visual Acuity', *Am. J. Physiol.*, **36**, 335

Crawford, B. H. (1947). 'Visual Adaptation in Relation to Brief Conditioning Stimuli', *Proc. Roy. Soc. B.*, **134**, 283

Crozier, W. J. and Holway, A. H. (1939). 'Theory and Measurement of Visual Mechanisms', *J. Gen. Physiol.*, **22**, 341

Dowling, J. E. and Werblin, F. S. (1969). 'Organisation of the Retina of the Mud-puppy, *Necturus Maculosus*. I. Synaptic Structure', *J. Neurophysiol*, **32**, 315

Enoch, J. M. (1960). 'Response of a Model Retinal Receptor as a Function of Wavelength', *J. Opt. Soc. Am.*, **50**, 315

Enoch, J. M. (1960). 'Waveguide Modes: Are they present, and what is their Role in the Visual Mechanism?', *J. Opt. Soc. Am.*, **50**, 1025

Enoch, J. M. (1964). 'Physical Properties of the Retinal Receptors and Response of the Retinal Receptors', *Psych. Bull.*, **614**, 242

Enoch, J. M. and Fry, G. A. (1958). 'Characteristics of a Model Retinal Receptor studied at Microwave Frequencies', *J. Opt. Soc. Am.*, **48**, 899

Fender, D. H. and Nye, P. W. (1961). 'An Investigation of the Mechanisms of Eye Movement Control', *Kybernetik*, **1**, 81

Foster, D. H. (1973). 'A Note on whether a non-linearity precedes the De Lange Filter in the Human Visual System', *Optica Acta*, **20**, 325

Fry, G. A. (1963). 'Retinal Image Formation: Review, Summary and Discussion', *J. Opt. Soc. Am.*, **53**, 94

Fry, G. A. and Alpern, M. (1953). 'The Effect on Foveal Vision produced by a Spot of Light on the Sclera near the Margin of the Retina', *J. Opt. Soc. Am.*, **43**, 187

Fry, G. A. and Bartley, S. H. (1935). 'The Relation of Stray Light in the Eye to the Retinal Action Potential', *Am. J. Physiol.*, **111**, 335

Green, D. G. (1967). 'Visual Resolution when Light enters the Eye through Different Parts of the Pupil', *J. Physiol.*, **190**, 583

Gubisch, R. W. (1967). 'Optical Performance of the Human Eye', *J. Opt. Soc. Am.*, 57, 407

Hartridge, H. (1950). *Recent Advances in the Physiology of Vision*, The Blakiston Co., Philadelphia

Hubel, D. H. and Wiesel, T. N. (1970). 'Cells Sensitive to Binocular Depth in Area 18 of the Macaque Monkey Cortex', *Nature*, **225**, 41

Ivanoff, A. (1953). 'The Aberrations of the Eye', (in French), *Ann. Opt. oculaire*, **2**, 97

Johnson, E. P. (1958). 'The Character of the b-wave in the Human ERG', *Arch. Ophth.*, **60**, 565

Julesz, B. (1971). *Foundations of Cyclopean Perception*, University of Chicago Press

Koenderink, J. J. (1972). 'Contrast Enhancement and the Negative After-image', *J. Opt. Soc. Am.*, **62**, 685

Krauskopf, J. (1962). 'Light Distribution in Human Retinal Images', *J. Opt. Soc. Am.*, **52**, 1046

Krueger, H. (1973). 'An Apparatus for Continuous Objective Measurement of Refraction of the Human Eye', *Optica Acta*, **20**, 277

Lange, H. de (1958). 'Research into the Dynamic Nature of the Human Fovea-Cortex Systems with Intermittent and Modulated Light. I. Attenuation Characteristics with White and Colored Light', *J. Opt. Soc. Am.*, **48**, 777

Lange, H. de (1958). 'Research into the Dynamic Nature of the Human Fovea-Cortex Systems with Intermittent and Modulated Light. II. Phase Shift in Brightness and Delay in Colour Perception', *J. Opt. Soc. Am.*, **48**, 784

Lipetz, L. E. (1961). 'Mechanisms of Light Adaptation', *Science*, **133**, 639

Lotmar, W. (1971). 'Theoretical Eye Model with Aspherics', *J. Opt. Soc. Am.*, **61**, 1522

Lotmar, W. and Lotmar, T. (1974). 'Peripheral Astigmatism in the Human Eye: Experimental Data and Theoretical Model Predictions', *J. Opt. Soc. Am.*, **64**, 510

Lowenstein, O. and Loewenfeld, I. E. (1958). 'Electronic Pupillography', *AMA. Arch. Ophthalmol*, **59**, 352

Maffei, L. and Fiorentini, A. (1972). 'Processes of Synthesis in Visual Perception', *Nature*, **240**, 479

Makous, W. and Boothe, R. (1974). 'Cones block Signals from Rods', *Vision Research*, **14**, 285

Mansfield, R. J. W. (1973). 'Brightness Function: Effect of Area and Duration', *J. Opt. Soc. Am.*, **63**, 913

Marks, E. L. (1973). 'Brightness and Equivalent intensity of intrinsic light', *Vision Research*, **13**, 371

Marr, D. (1974). 'The Computation of Lightness by the Primate Retina', *Vision Research*, **14**, 1377

Meeteren, A. Van (1974). 'Calculations on the Optical Modulation Transfer Function of the Human Eye for White Light', *Optica Acta*, **21**, 395

Mollon, J. (1974). 'After-effects and the Brain', *New Scientist*, 21st. February

Mote, F. A., Riupelle, A. J. and Meyer, D. R. (1950). 'The Effect of Intermittent Preadapting Light upon Subsequent Dark Adaptation in the Human Eye', *J. Opt. Soc. Am.*, **40**, 584

Murray, M. J. (1974). 'A Remark on Sensory Encoding of Two-Parameter Signals', *IEEE Transactions on Biomedical Engineering*, **BME–21**, 501

Nadell, M. C. and Knoll, H. A. (1956). 'The Effect of Luminance, Target Configuration and Lenses upon Refractive State of the Eye', *Am. J. Optom*, **33**, 24

Nesteruk, V. F. and Porfirieva, N. N. (1974). 'Concerning the Law of Visual Light Sensation', *Vision Research*, **14**, 899

Normann, R. A. and Werblin, F. S. (1974). 'Control of Retinal Sensitivity I. Light and Dark Adaptation of Vertebrate Rods and Cones', *J. Gen. Physiol.*, **63**, 37

Ohzu, H. (1966). 'Comments on the Application of Fiber Optics to Retinal Studies – Part I. Image Processing by Retinal Receptors', *J. clin. Ophthal.*, Japan, **20**, 1031

Pettigrew, J. D. (1972). 'Development and Neurophysiological Basis of Stereoscopic Vision', presented at the topical meeting on *Design and Visual Interface of Biocular Systems*, Annapolis, Maryland, May

Pi, H. T. (1925). 'The Total Peripheral Aberration of the Eye', *Trans. Ophthtal. Soc.*, UK., **45**, 393

Polack, A. (1923). 'The Chromatism of the Eye', (in French), in *Bull. Soc. Ophthalmol.*, France, No. 9 bir.

Regan, D. and Richards, W. (1973). 'Brightness Contrast and Evoked Potentials', *J. Opt. Soc. Am.*, **63**, 607

Richards, W. (1969). 'Saccadic Suppression', *J. Opt. Soc. Am.*, **59**, 617

Riggs, L. A. (1969). 'Progress in the Recording of Human Retinal and Occipital Potentials', *J. Opt. Soc. Am.*, **59**, 1558

Rodieck, R. W. (1965). 'Quantitative Analysis of Cat Retinal Ganglion Cell Response to Visual Stimuli', *Vision Research*, **5**, 583

Rodieck, R. W. and Stone, J. (1965). 'Analysis of Receptive Fields of Cat Retinal Ganglion Cells', *J. Neurophysiol.*, **28**, 833

Ronchi, L. and Moreland, J. D. (1957). 'The Effect on the Human Electroretinogram of the Distribution of Flux in a Light Stimulus of Finite Duration', *Optica Acta*, 4, 31

Ronchi, L. and Mori, G. F. (1959). 'On the Factors which affect the Contrast Enhancement in a Figure with 'Quasi Perceptive Contours' and a Practical Application of such a Figure', *Atti della Fondazione Giorgio Ronchi*, 14, 495

Rushton, W. A. H. (1965). 'Bleached Rhodopsin and Visual Adaptation', *J. Physiol.*, 181, 645

Schweitzer, N. M. J. and Troelstra, A. (1964). 'On the Relationship between the Single-flash ERG and the ERG elicited by more Complex Stimuli', in *Flicker* (Junk, The Hague) 114

Sekuler, R. W., Rubin. E. L. and Cushman, W. H. (1968). 'Selectivities of Human Visual Mechanisms for Direction of Movement and Contour Orientation', *J. Opt. Soc. Am.*, 58, 1146

Simon, J. F. and Denieul, P. M. (1973). 'Influence of the Size of Test Field employed in Measurement of Modulation Transfer Function of the Eye', *J. Opt. Soc. Am.*, 63, 894

Spekreuse, H., Van der Tweel, L. H. and Zuidema, Th. (1973). 'Contrast Evoked Responses in Man', *Vision Research*, 13, 1577

Stanioch, W. (1973). 'Relation of the Electrical Activity to the Spectral Response of the Retina', in *Colour 73*, Adam Hilger, London, 263

Stark, L. (1959). 'Stability, Oscillations, and Noise in the Human Pupil Servomechanism', *Proc. I.R.E.*, 47, 1925

Stark, L. (1968). *Neurological Control Systems*, Sect. 3, Plenum Press

Valois, R. L. De (1966). 'Neural Processing of Visual Information', in *Frontiers in Physiological Psychology*, (Ed. R. W. Russell) Academic Press

Walls, G. L. (1942). *The Vertebrate Eye*, Cranbrook Institute

Werblin, F. S. (1972). 'Functional Organisation of a Vertebrate Retina: Sharpening up in Space and Intensity', in *Annals N.Y. Acad. Sci.: Patterns of Integration from Biochemical to Behavioural Processes, (Ed. G. Hadu)*, 193, 75

Werblin, F. S. (1974). 'Control of Retinal Sensitivity. II Lateral Interconnections at the Outer Plexiform Layer', *J. Gen. Physiol.*, 63, 62

Werblin, F. S. and Copenhagen, D. R. (1974). 'Control of Retinal Sensitivity. III Lateral Interconnections at the Inner Plexiform Layer', *J. Gen. Physiol.*, 63, 88

Weisel T. N. (1960). 'Receptive Fields of Ganglion Cells in the Cat's Retina', *J. Physiol.*, 153, 583

2 VISUAL PERFORMANCE

Baker, C. A. and Steedman, W. C. (1961). 'Perceived Movement in Depth as Function of Object Luminance', *Science* (Washington), 133, 1356

Baker, H. D. (1953). 'The Instantaneous Threshold and Early Dark Adaptation', *J. Opt. Soc. Am.*, 43, 798

Barlow, H. B. (1956). 'Retinal Noise and Absolute Threshold', *J. Opt. Soc. Am.*, 46, 634

Baron, W. S. and Westheimer, G. (1973). 'Visual Acuity as a Function of Exposure Duration', *J. Opt. Soc. Am.*, 63, 212

Békésy, G. V. (1972). 'Mach Bands measured by a Compensation Method', *Vision Research*, 12, 1485

Blackwell, H. R. and Smith, S. W. (1959). 'The Effects of Target Size and Shape on Visual Detection: II Continuous Foveal Targets at Zero Background Luminance', University of Michigan, Eng. Research Inst. Rep. 2144–334–T

Bloomfield, J. R. (1972). 'Peripheral Acuity with Complex Stimuli at Two Viewing Distances', *AGARD Conference Proceedings No. 100*, (Ed. H. F. Huddleston) London, p. B6–1

Bouman, M. A. and Van den Brink, G. (1952). 'On the Integrate Capacity in Time and Space of the Human Peripheral Retina', *J. Opt. Soc. Am.*, **42**, 617

Boynton, R. M. (1973). 'Implications of the Minimally Distinct Border', *J. Opt. Soc. Am.*, **63**, 1037

Brown, B. (1972). 'Resolution Thresholds for Moving Targets at the Fovea and in the Peripheral Retina', *Vision Research*, **12**, 293

Brown, B. (1972). 'Dynamic Visual Acuity, Eye Movements and Peripheral Acuity for Moving Targets', *Vision Research*, **12**, 305

Brown, J. L., Graham, C. H., Leibowitz, H. and Ranken, H. B. (1953). 'Luminance Thresholds for Resolution of Visual Detail during Dark Adaptation', *J. Opt. Soc. Am.*, **43**, 197

Campbell, F. W. and Gregory, A. H. (1960). 'Effect of Size of Pupil on Visual Acuity', *Nature*, **187**, 1121

Campbell, F. W. and Westheimer, G. (1958). 'Sensitivity of the Eye to Difference in Focus', *J. Physiol.*, **143**, 18P

Clark, W. C. (1958). 'Relation between the Threshold for Single and Multiple Light Pulses', Doctorial Dissertation, University of Michigan

Crawford, W. A. (1960). 'The Perception of Moving Objects. IV. Accuracy of Fixation Required in the Perception of Detail in Moving Objects', Flying Personnel Research Committee (GB) Memo. No. 150d October

Crawford, W. A. (1960). 'The Perception of Moving Objects, V. The Moment of Perception', Flying Personnel Research Committee (GB) Memo. No. 150e September

Dudley, L. P. (1965). 'Stereoscopy', Chapter 2 in *Applied Optics and Optical Engineering*, (Ed. R. Kingslake) Vol. 2, Academic Press

Fankhauser, F. and Enoch, J. M. (1962). 'The Effects of Blur upon Perimetric Thresholds', *A.M.A. Arch. of Ophthal.*, **86**, 240

Fry, G. A. (1947). 'The Relation of the Configuration of a Brightness Contrast Border to its Visibility', *J. Opt. Soc. Am.*, **37**, 166

Gilmour, J. D. (1973). 'A Systematic Approach for Prediction and Improvement of Target Acquisition Performance', in *Rep. OA 6201, Vol. I: A Collection of Unclassified Technical Papers on Target Acquisition*, Martin Marietta Aerospace, Orlando, Florida, p. 179

Gottsdanker, R., Frick, T. W., and Lockard, R. B. (1961). 'Identifying the Acceleration of Visual Targets', *Brit. J. Psychol.*, **52**, 31

Hay, G. A. and Chesters, M. S. (1972). 'Signal-transfer Functions in Threshold and Suprathreshold Vision', *J. Opt. Soc. Am.*, **62**, 990

Hills, B. L. (1968). 'Pattern Detection and Recognition in the Human Visual System', Ph.D. Thesis, Dept. of Electrical and Electronic Engineering, University of Nottingham

Holladay, L. L. (1926). 'The Fundamentals of Glare and Visibility', *J. Opt. Soc. Am.*, **12**, 271.

Holladay L. L. (1927). 'Action of a Light Source in the Field of View in Lowering Visibility', *J. Opt. Soc. Am.*, **14**, 1

Keesey, U. T. (1960). 'Effects of Involuntary Eye Movements on Visual Acuity', *J. Opt. Soc. Am.*, **50**, 769

Kelly, D. H. (1959). 'Effects of Sharp Edges in a Flickering Field', *J. Opt. Soc. Am.*, **49**, 730

Krauskopf, J. (1957). 'Effect of Retinal Motion on Contrast Thresholds for Maintained Vision', *J. Opt. Soc. Am.*, **47**, 740

Kristofferson, A. B. (1957). 'Visual Detection as influenced by Target Form', in *Form Discrimination as related to Military Problems*, (J. W. Wulfeck and J. H. Taylor, Eds.) Nat. Acad. Sci. NRC, Washington DC 109

Latour, P. L. (1962). 'Visual Thresholds during Eye Movements', *Vision Research*, **2**, 261

Leibowitz, J. (1952). 'The Effect of Pupil Size on Visual Acuity for Photometrically Equated Test Fields at Various Levels of Luminance', *J. Opt. Soc. Am.*, **42**, 416

Meeteren, A. Van and Vos, J. J. (1972). 'Resolution and Contrast Sensitivity at Low Luminances', *Vision Research*, **12**, 825

Mitrani, L., Yakimoff, N. and Mateeff, St. (1973). 'Saccadic Suppression in the Presence of Structural Backgrounds', *Vision Research*, **13**, 517

Otero, J. M. (1951). 'Influence of the State of Accommodation on the Visual Performance of the Human Eye', *J. Opt. Soc. Am.*, **41**, 942

Ronchi, L. (1972). *An Annotated Bibliography on Variability and Periodicities of Visual Responsiveness*, Fondazione 'Giorgio Ronchi', XVII, Firenze

Ronchi, L. and Barca, L. (1972). 'On the Influence of Eye Version on the Visibility of Small Targets', *Atti della Fondazione Giorgio Ronchi*, **27**, 79

Salvi, G. and Innocenti, F. B. (1971). 'On the Relative Visibility of Single Break and Double Break Rings', *Atti della Fondazione Giorgio Ronchi*, **26**, 109

Steinman, R. M. (1965). 'Effect of Target Size, Luminance and Color on Monocular Fixation', *J. Opt. Soc. Am.*, **55**, 1158

Stigmar, G. (1971). 'Blurred Visual Stimuli', *Acta Ophthalmol.*, **49**, 364

Stiles, W. S. and Crawford, B. H. (1937). 'The Effect of a Glaring Light Source on Extrafoveal Vision', *Proc. R. Soc. B.*, **122**, 255

Thorn, F. and Boynton, R. M. (1974). 'Human Binocular Summation at Absolute Threshold', *Vision Research*, **14**, 445

Yarbus, A. L. (1967) *Eye Movements and Vision*, Plenum Press

3 RECOGNITION

Alluisi, E. A., Hawkes, G. R. and Hall, T. J. (1964). 'Effects of Distortion on the Identification of Visual Forms under Two Levels of Multiple Task Performance', *J. Eng. Psychol.*, **3**, 29

Anderson, N. S. (1957). 'Pattern Recognition: A Probability Approach', in *Form Discrimination as related to Military Problems*, (Eds. J. W. Wulfeck and J. H. Taylor), Nat. Acad. Sci. NRC, Washington DC pp. 45–49

Attneave, F. (1951). 'The Relative Importance of Parts of a Contour', Research Note P & MS: 51–8, Human Resources Center, San Antonio, Texas

Bailey, H. H. (1973). 'Target Acquisition through Visual Recognition: an Early Model', in *Rep. OA6201, Vol. I: A Collection of Unclassified Papers on Target Acquisition*, Martin Marietta Aerospace, Orlando, Florida, p. 115

Borg, G. (1964). 'Studies of Visual Gestalt Strength', Report, Dept. Education, Umea University, Sweden

Clark, H. J. and Knoll, R. L. (1968). 'Variables underlying the Recognition of Random Shapes', in *AGARD Conference Proceedings No. 41*, Paper A.3

Erickson, R. A. and Hemingway, J. C. (1970). 'Image Identification on Television', NWC TP 5025, Naval Weapons Center, China Lake, California

Forsyth, G. A. and Brown, D. R. (1967). 'Recognition-discrimination Performance as a Function of Stimulus Characteristics to which a Subject attends', Paper read at Midwestern Psychological Association, Chicago, May

French, R. S. (1954). 'Identification of Dot Patterns from Memory as a Function of Complexity', *J. Exp. Psychol.*, **47**, 22

Glezer, V. D., Leushina, L. I., Nevskaya, A. A. and Prazdnikova, N. V. (1974), 'Studies on Visual Pattern Recognition in Man and Animals', *Vision Research*, **14**, 555

Kause, R. H. (1965). 'Interpretation of Complex Images – Literature Survey', GER–10830 REV.A. Akron, Ohio, February

Østerberg, H. and Smith, L. W. (1964). 'Resolution of Shape of Self-radiant Line Elements', *J. Opt. Soc. Am.*, **54**, 599

Rock, I. (1974). 'The Perception of Disoriented Figures', *Scientific American*, 78
Rusis, G. and Snyder, H. L. (1965). 'Laboratory Studies in Air-to-Ground Target Recognition: II. The Effect of TV Camera Field of View', Autonetics Report T5–133/3111
Rusis, G. and Calhoun, R. L. (1965). 'Laboratory Studies in Air-to-Ground Target Recognition: III. The Effects of Aircraft Speed and Time-to-go Information'. Autonetics Report T5–134/3111
Vanderplas, J. M. and Garvin, E. A. (1959). 'Complexity, Association Value and Practice as Factors in Shape Recognition following Paired Associates Training', *J. Exp. Psychol.*, 57, 155

4 COLOUR VISION

Benham, C. E. (1894). 'Artificial Spectrum Top', *Nature*, 51, 113
Bidwell, S. (1897). 'On Subjective Colour Phenomena attending Sudden Changes of Illumination', *Proc. R. Soc.*, 50, 368
Boynton, R. M. (1971). 'Colour Vision' in *Experimental Psychology*, (Ed. L. A. Riggs & J. Kling) Holt, Rinehart and Winston, pp. 315–368
Brindley, G. S., Croz, J. J. du and Rushton, W. A. H. (1966). 'The Flicker Fusion Frequency of the Blue-sensitive Mechanism of Colour Vision', *J. Physiol.*, 183, 497
Clarke, F. J. J. (1973). 'Needs and Prospects for a Tetrachromatic System of Large Field Colorimetry', in *Colour 73*, Adam Hilger, London, 319
Coates, E., Kiszka, R. C., Provost, J. R. and Rigg, B. (1973). 'The Accuracy of Colour-difference Equations in relation to Perceived Colour Differences', in *Colour 73*, Adam Hilger, London, 300
Granger, E. M. and Heurtley, J. C. (1973). 'Visual Chromaticity-modulation Transfer Function', *J. Opt. Soc. Am.*, 63, 1173
Halsey, R. M. and Chapanis, A. (1954). 'Chromaticity-Confusion Contours in a Complex Viewing Situation', *J. Opt. Soc. Am.*, 44, 442
Horst, G. J. C. Van der (1969). 'Fourier Analysis and Colour Discrimination', *J. Opt. Soc. Am.*, 59, 1670
Kilmer, E. and Kilmer, W. (1968). 'Temporal Reversal of Land Effect Colour Rules', *Nature*, 218, 883
Kuehni, R. G. (1973). 'Is there a Special Significance to Colours of Dominant Wavelength 495 nm and 570 nm in Colour Vision?, in *Colour 73*, Adam Hilger, London, 286
Lange, H. de (1958). 'Research into the Dynamic Nature of the Human Fovea-Cortex Systems with Intermittent and Modulated Light. I. Attenuation Characteristics with White and Coloured Light', *J. Opt. Soc. Am.*, 48, 777
Lange, H. de (1958). 'Research into the Dynamic Nature of the Human Fovea-Cortex Systems with intermittent and Modulated Light. II. Phase Shift in Brightness and Delay in Colour Perception', *J. Opt. Soc. Am.*, 48, 784
MacNichol, E. F. (Jr.), Feinberg, R. and Hárosi, F. I. (1973). 'Colour Discrimination Processes in the Retina', in *Colour 73*, Adam Hilger, London, 191
Mollon, J. D. and Krauskopf, J. (1973). 'Reaction Time as a Measure of the Temporal Response Properties of Individual Colour Mechanisms', *Vision Research*, 13, 27
Parsons, Sir J. H. (1924). *Colour Vision*, Cambridge University Press
Pointer, M. R. (1973). 'The Effect of White Light Adaptation on Colour Discrimination', in *Colour 73*, Adam Hilger, London, 283
Regan, D. and Tyler, C. W. (1971). 'Temporal Summation and its Limit for Wavelength Changes: An Analog of Bloch's Law for Colour Vision', *J. Opt. Soc. Am.*, 61, 1414
Rentschler, I. (1973). 'Colour Discrimination at a Blurred Border', in *Colour 73*, Adam Hilger, London, 273

Rubinstein, C. B. and Limb, J. O. (1973). 'Colour Border Sharpness', in *Colour 73*, Adam Hilger, London, 377

Sperling, H. G. and Lewis, W. G. (1959). 'Some Comparisons between Foveal Spectral Sensitivity Data obtained at High Brightness and Absolute Threshold', *J. Opt. Soc. Am.*, **49**, 983

Stanioch, W. (1973). 'Relation of the Electrical Activity to the Spectral Response of the Retina', in *Colour 73*, Adam Hilger, London, 263

Uttal, W. R. (1973). 'Chromatic and Intensive Effects in Dot-pattern Masking: Evidence for Different Time Constants in Colour Vision', *J. Opt. Soc. Am.*, **63**, 1490

Yates, J. T. (1974). 'Chromatic Information Processing in the Foveal Projection (Area Striata) of Unanaesthetized Primate', *Vision Research*, **14**, 163

5 STABILISED VISION

Bossler, F. B. (1968). 'Visual Image Stabilisation Measurements and Specifications', *Applied Optics.*, 7, 1155

Campbell, F. W. and Robson, J. G. (1961). 'A Fresh Approach to Stabilised Retinal Images', *J. Physiol.*, **158**, 1

Ditchburn, R. W., Fender D. H. and Mayne, S. (1959). 'Vision with Controlled Movements of the Retinal Image', *J. Physiol.*, **145**, 98

Evans, C. R. and Piggins, D. J. (1963). 'A Comparison of the Behaviour of Geometrical Shapes when viewed under Conditions of Steady Fixation, and with Apparatus for Producing a Stabilised Retinal Image', *B.J. of Phys. Opt.*, **20**, 1

Gerrits, H. J. M. and Vendrik, A. J. H. (1970). 'Artificial Movements of a Stabilised Image', *Vision Research*, **10**, 1443

Keesey, U. T. (1969). 'Visibility of a Stabilised Target as a Function of Frequency and Amplitude of Luminance Variation', *J. Opt. Soc. Am.*, **59**, 604

Ratliff, F. (1958). 'A Stationary Retinal Image requiring no Attachments to the Eye', *J. Opt. Soc. Am.*, **48**, 274

Tulunay–Keesy, U. (1973). 'Stabilised Target Visibility as a Function of Contrast and Flicker Frequency', *Vision Research*, **13**, 1367

6 STATISTICS, PROBABILITY AND OTHER MATHEMATICAL PROCESSES

Aitken, A. C. (1962). *Statistical Mathematics*, Oliver and Boyd

Bendat, J. S. and Piersol, A. G. (1971). *Random Data: Analysis and Measurement Procedures*, Wiley-Interscience

Dirac, P. A. M. (1958). *The Principles of Quantum Mechanics*, 4th Edn., Clarendon Press

Finney, D. J. (1947). *Probit Analysis*, Cambridge University Press

Green, D. M. and Swets, J. A. (1966). *Signal Detection Theory and Psychophysics*, Wiley

Jennison, R. C. (1961). *Fourier Transforms and Convolutions for the Experimentalist*, Pergamon Press

Johnson, C. B. (1973). 'Point-spread Functions, Line-spread Functions and Edge-response Functions associated with MTF's of the Form $\exp[-(\omega/\omega_c)^n]^3$', *Applied Optics*, **12**, 1031

Marchand, E. W. (1964). 'Derivation of the Point Spread Function from the Line Spread Function', *J. Opt. Soc. Am.*, **54**, 915

Marchand, E. W. (1965). 'From Line to Point Spread Function: The General Case', *J. Opt. Soc. Am.*, **55**, 352

Miller, G. A. and Frick, F. C. (1949). 'Statistical Behavioristics and Sequences of Responses', *Psychol. Review.*, **56**, 311

Peterson, W. W. and Birdsall, T. G. (1953). 'The Theory of Signal Detectability', Electronic Defense Group, University of Michigan, Tech. Rep. No. 13

Raynor, A. J. (1972). 'The Use of Kelly's Repertory Grid Technique for assessing Subjective Estimates of Important Parameters for Target Acquisition', *AGARD Conference Proceedings No. 100*, (Ed. H. F. Huddleston), London, p. B14–1

Rosenfeld, A. and Thurston, M. (1970). 'Edge and Curve Detection for Visual Scene Analysis', Tech. Report No. 70–128, Computer Science Center, University of Maryland, AFCRL–70–0488

Shannon, C. E. (1948). 'A Mathematical Theory of Communication', *Bell Systems Tech. J.*, **27**, 379 and 623

Shannon, C. E. and Weaver, W. (1964). *The Mathematical Theory of Communication*, University of Illinois Press

Shaw, R. (1962). 'The Application of Fourier Techniques and Information Theory to the Assessment of Photographic Image Quality', *Phot. Sci. & Eng.*, **6**, 281

Torgerson, W. S. (1967). *Theory and Methods of Scaling*, Wiley

Winer, B. J. (1962). *Statistical Principles in Experimental Design*, McGraw-Hill

Woodward, P. M. (1953). *Probability and Information Theory with Applications to Radar*, Pergamon Press

7 VISION MODELLING

Bliss, J. C. and MacCurdy, W. B. (1961). 'Linear Models for Contrast Phenomena', *J. Opt. Soc. Am.*, **51**, 1373

Bouman, M. A. (1953). 'Visual Thresholds for Line-Shaped Targets', *J. Opt. Soc. Am.*, **43**, 209

Bouman, M. A. and Velden, H. A. van der (1947). 'The Two-Quanta Explanation of the Dependence of the Threshold Values and Visual Acuity on the Visual Angle and Time of Observation', *J. Opt. Soc. Am.*, **37**, 908

Bouman, M. A. and Velden, H. A. van der (1948). 'The Two-Quanta Hypothesis as a General Explanation for the Behaviour of Threshold Values and Visual Acuity for the Several Receptors of the Human Eye', *J. Opt. Soc. Am.*, **38**, 570

Bouman, M. A., Vos, J. J. and Walraven, P. L. (1963). 'Fluctuation Theory of Luminance and Chromaticity Discrimination', *J. Opt. Soc. Am.*, **53**, 121

Breitmeyer, B. G. (1973). 'A Relationship between the Detection of Size, Rate, Orientation and Direction in the Human Visual System', *Vision Research*, **13**, 41

Bruscaglioni, R. (1952). 'The Equation of Visual Adaptation and the Enhancement of the Sensitivity to Contrast and of the Perception Threshold for Varying Luminance. (in Italian) *Atti della Fondazione Giorgio Ronchi*, **7**, 1

Bryngdahl, O. (1964). 'Visual Transfer Characteristics from Mach Band Measurements', *Kybernetik*, **2**, 71

Crandall, W. E. (1973). 'Digital Retinal Vision Theory', in *Colour 73*, Adam Hilger, London, 265

Davies, E. B. (1971). 'The Effect of Length/Breadth Ratio on Thresholds for Visual Detection', RAE Tech. Memo. WE1359

Greening, C. P. and Wyman, M. J. (1970). 'Experimental Evaluation of a Visual Detection Model', *Human Factors*, **12**, 435

Harris, J. L. (Sr.) (1968). 'Image Processing as it relates to the Human System', in *Current Developments in Optics and Vision*, Meeting of Committee on Vision, 1967, 78–88. Ac. Sci., Washington DC

Kornfeld, G. H. and Lawson, W. R. (1971). 'Visual Perception Models', *J. Opt. Soc. Am.*, **61**, 811

Matin, L. (1968). 'Critical Duration, the Differential Luminance Threshold, Critical Flicker Frequency and Visual Adaptation: a Theoretical Treatment', *J. Opt. Soc. Am.*, **58**, 404

Merchant, J. (1965). 'Sampling Theory for the Human Visual Sense', *J. Opt. Soc. Am.*, **55**, 1291

Pinegin, N. I. and Travnikova, N. P. (1971). 'The Probability of Visual Detection of Objects as a Function of their Angular Size, Contrast and Search Time', *Optical Technol.*, **38**, 257

Ronchi, L. (1968). 'Bruscaglioni's Equation of Vision (1939–1941) versus Rose's Model (1946–1948).' *Atti della Fondazione Giorgio Ronchi*, **23**, 782

Schiffman, H. and Crovitz, H. F. (1972). 'A Two-stage Model of Brightness', *Vision Research*, **12**, 2121

Smith, L. J. (1966), 'Theoretical Visual and Televisual Detection Ranges based on Target Size and Contrast', RAE Tech. Rep. No. 66157

Sperling, G. and Sondhi, M. M. (1968). 'Model for Luminance Discrimination and Flicker Detection', *J. Opt. Soc. Am.*, **58**, 1133

Sutherland, N. S. (1968). 'Outlines of a Theory of Visual Pattern Recognition in Animals and Man', *Proc. R. Soc. B.*, **171**, 297

Walraven, A. L. (1973). 'Theoretical Models of the Colour Vision Network', in *Colour 73*, Adam Hilger, London, 11

8 VISUAL SEARCH

Davies, E. B. (1965). 'Contrast Thresholds for Air to Ground Vision', RAE Tech. Rep. 65089

Enoch, J. M. and Fry, G. A. (1958). 'Visual Search of a Complex Display: A Summary Report', MCRL TP No. (696)–17–282, Ohio State University, Columbus, Ohio

Erickson, R. A. (1964). 'Visual Search for Targets: Laboratory Experiments', NOTS TP 3328, Naval Ordnance Test Station, China Lake, California

Greening, C. P. (1972). 'The Likelihood of Looking at a Target', in *AGARD Conference Proceedings No. 100*, (Ed. H. F. Huddleston), London, p. B1–1

Howarth, C. I. and Bloomfield, J. R. (1968). 'Towards a Theory of Visual Search', in *AGARD Conference Proceedings No. 41*, Paper A.2

Koopman, B. O. (1956). 'The Theory of Search, I. Kinematic Bases', *Operations Research*, **4**, 324

Koopman, B. O. (1957). 'The Theory of Search, III. Optimum Distribution of Searching Effort', *Operations Research*, **5**, 613

Pinegin, N. I. and Trasnikova, N. P. (1971). 'The Probability of Visual Detection of Objects as a Function of their Angular Size, Contrast and Search Time', *Optical Technol.*, **38**, 257

Smith, L. J. (1968). 'The Application of Visual Lobe Search Theory to Air to Ground Target Detection', RAE Tech. Rep. 68253

Teichner, W. H. and Krebs, M. J. (1973). 'Visual Search for Symbolically-coded Targets', in Report OA 6201, Volume I: A Collection of Unclassified Technical Papers on Target Acquisition. Martin Marietta Aerospace, Orlando, Florida, p. 149

Williams, L. G. (1966). 'A Study of Visual Search using Eye Movement Recordings', Honeywell Inc. Rep. No. 12009–IR1

9 VISUAL AIDS

Blackwell, H. R. (1968). 'Visual Factors related to the Design and Use of Direct-view Electro-optical Devices', in *Current Developments in Optics and Vision*, Meeting of Committee on Vision, 1967, 93–108. Ac. Sc. Washington DC

Carvennec, F. le (1969). 'Photo-electronic Image Devices', in *Advances in Electronic and Electron Physics*, (Eds. J. D. McGee, D. McMullen, E. Kaham and B. L. Morgan). Academic Press 28A, 265

Catchpole, C. E. (1971). 'The Channel Image Intensifier', Chap. 8 of *Photoelectronic Imaging Devices*, Volume 2, (Eds. L. M. Biberman and S. Nudelman), Plenum

Coleman, H. S. (1947). 'Stray Light in Optical Systems', *J. Opt. Soc. Am.*, 37, 434

Desvignes, F., Revuz, J. and Zeida, R. (1969). 'Photoelectric Solid-State Devices and the Perception of Images in the Infra-red', *Philips Tech. Review*, 30, 264

Fink, D. G. (1957). *Television Engineering Handbook*, McGraw-Hill

Hall, J. A. (1971). 'Evaluation of Signal-generating Image Tubes', Chapter 4 of *Photoelectronic Imaging Devices*, Vol. 2, (Eds. L. M. Biberman and S. Nudelman), Plenum

Harker, G. S. (1972). 'Vision: Monocular, Bi-ocular, Binocular', USAMRL Rep. No. 984

Keesee, R. L. (1973). 'Detectability Thresholds for Line-scan Displays', in *Report OA 6201, Volume I: A Collection of Unclassified Technical Papers on Target Acquisition*, Martin Marietta Aerospace, Orlando, Florida, p. 89

Lawson, W. R. (1971). 'Electro-optical System Evaluation', in *Photoelectronic Imaging Devices*, Vol. 1, p. 375, L. M. Biberman and S. Nudelman (Eds.) Plenum

Mees, C. E. K. and James, T. H. (1966). *The Theory of the Photographic Process*, MacMillan Co. New York

Meeteran, A. van and Boogaard, J. (1972). 'Visual Contrast Sensitivity with Ideal Image Intensifiers', Institute for Perception RVO–TNO, Report IZF1972–18

Richards, W. (1969). 'Saccadic Suppression', *J. Opt. Soc. Am.*, 59, 617

Rosell, F. A. (1971). 'Television Camera Tube Performance and Data', in *Low-light-level Devices: a Designer's Manual*, IDA Rep. R169, 175

Schade, O. H. (1973). 'Image Reproduction by a Line Raster Process', in *Perception of Displayed Information*, (L. M. Biberman, Ed.), Plenum

Snyder, H. L. (1972). 'A Unitary Measure of Video System Image Quality' in *A Collection of Unclassified Technical Papers on Target Acquisition, Rep. OA 6201*, Vol. I, Office of Naval Research, Orlando Florida

10 OPTICAL QUALITY

Anon. (1971). 'Recommendations for Measurement of the Optical Transfer Function of Optical Devices', *British Standard BS 4779*

Aznarez, J., Corno, J., Lamare, M. and Simon, J. (1974). 'Contribution to the Determination of Transfer Functions by the Edge Trace Method', *Optica Acta.*, 2, 809

Barakat, R. (1965). 'Determination of the Optical Transfer Function directly from the Edge Spread Function', *J. Opt. Soc. Am.*, 55, 1217

Barnard, T. W. (1972). 'Image Evaluation by means of Target Recognition', *Phot. Sci. and Eng.*, 16, 144

Biberman, L. M. (1973). 'Image Quality', in *Perception of Displayed Information*, (L. M. Biberman, Ed.) Plenum

Brock, G. C. (1968). 'A Review of Current Image Evaluation Techniques', *J. Phot. Sci.*, 16, 241

Coleman, H. S. (1947). 'Stray Light in Optical Systems', *J. Opt. Soc. Am.*, 37, 434

Coleman, H. S. (1947). 'The Reduction in Image Contrast caused by the Aberrations in Telescopic Systems', *J. Opt. Soc. Am.*, 37, 684

De Velis, J. B. (1965). 'Comparison of Methods for Image Evaluation', *J. Opt. Soc. Am.*, 55, 165

Dixon, F. A. (1961). 'Optical Frequency Response in relation to other Methods of Image Assessment', Weapons Research Establishment Tech. Note OID19; Australia

Dow Smith, F. (1963). 'Optical Image Evaluation and the Transfer Function', *Applied Optics*, 2, 335

Dubenskov, V. P., Tybkina, A. I. and Marinchenko, YuM. (1972). 'The Effect of Vibration on the Visual Resolution of a Telescope', *Optical Technol.*, **39**, 522

Gilmore, H. R. (1967). 'Models of the Point Spread Function of Photographic Emulsions based on a Simplified Diffusion Calculation', *J. Opt. Soc. Am.*, **57**, 75

Gullick, S. A. (1970). 'A Survey of Methods of Evaluation of the Imaging Performance of Optical Systems', Study Note No. 10 of Ministry of Technology Contract KV/B/813/CB6 4B, BAC (GW) Ref. L50/22/PHY/186/1153

Harris, J. L. (1964). 'Resolving Power and Decision Theory', *J. Opt. Soc. Am.*, **54**, 606

Hopkins, H. H. (1966). 'The use of Diffraction Based Criteria of Image Quality in Automatic Optical Design', *Optica Acta*, **13**, 343

Hufnagel, R. E. (1965). 'Search for a Summary Measure of Image Quality – Part II', *J. Opt. Soc. Am.*, **55**, 1564

Kelsall, D. (1973). 'Rapid Interferometric Technique for MTF Measurements in the Visible or Infra-red Region', *Applied Optics*, **12**, 1398

Niederpruem, C. J., Nelson, C. N. and Yule, J. A. C. (1966). 'Contrast Index', *Phot. Sci. & Eng.*, **10**, 35

Perrin, F. H. and Altman, J. H. (1951). 'Photographic Sharpness and Resolving Power. II. The Resolving-power Cameras in the Kodak Research Laboratory' *J. Opt. Soc. Am.*, **41**, 265

Preston, K. (1963). 'Modulation Transfer Function Instrumentation', Perkin Elmer Symposium on Practical Application of Modulation Transfer Functions, 6–1

Roetling, P. G. (1970). 'Image Enhancement by Noise Suppression', *J. Opt. Soc. Am.*, **60**, 867

Rosell, F. A. (1969). 'Limiting Resolution of Low-light-level Imaging Sensors', *J. Opt. Soc. Am.*, **59**, 539

Rosenau, M. D. (1963). 'Image-motion Modulation Transfer Functions', Perkin Elmer Symposium on Practical Applications of Modulation Transfer Functions, 5–1

Rosenhauer, K. and Rosenbruch, K. J. (1967/8). 'On the Influence of Stray Light on the OTF', *Optik*, **26**

Schade, O. H. (1971). 'Resolving Power Functions and Integrals of High-definition Television and Photographic Cameras – a New Concept in Image Evaluation', *RCA Review*, December

Scott, F. (1963). 'Film Modulation Transfer Functions', *Perkin Elmer Symposium on Practical Application of Modulation Transfer Functions*, 4–1

Scott, F. (1968). 'The Search for a Summary Measure of Image Quality – A Progress Report', *Phot. Sci. and Eng.*, **12**, 154

Shaw, R. (1962). 'The Application of Fourier Techniques and Information Theory to the Assessment of Photographic Image Quality', *Phot. Sci. and Eng.*, **6**, 281

Simon, J. F. and Denieul, P. M. (1973). 'Influence of the Size of Test Field employed in Measurement of Modulation Transfer Function of the Eye', *J. Opt. Soc. Am.*, **63**, 894

Snyder, H. L. (1972). 'A Unitary Measure of Video System Image Quality' in *A Collection of Unclassified Technical Papers on Target Acquisition, Rep. OA 6201*, Vol. I, Office of Naval Research, Orlando, Florida

Williams, T. L., Leach, B. A. and Biddles, B. J. (1972). 'A Workshop Instrument for Testing Binocular and Other Sights using the MTF Criterion', *Opt. and Laser Technol.*, **4**, 115

11 SPATIAL FREQUENCY RESPONSE

Abadi, R. V. and Kulikowski, J. J. (1973). 'Linear Summation of Spatial Harmonics in Human Vision', *Vision Research*, **13**, 1625

Atkinson, J. and Campbell, F. W. (1974). 'The Effect of Phase on the Perception of Compound Gratings', *Vision Research*, **14**, 159

Blakemore, C. and Campbell, F. W. (1968). 'Adaptation to Spatial Stimuli', *J. Physiol.*, **200**, 11P

Blakemore, C., Nachmias, J. and Sutton, P. (1970). 'Perceived Spatial Frequency Shift: Evidence of Frequency Selective Neurons in the Human Brain', *J. Physiol.*, **210**, 727

Burton, G. J. (1973). 'Evidence for Non-linear Response Processes in the Human Visual System from Measurements on the Thresholds of Spatial Beat Frequencies', *Vision Research*, **13**, 1211

Campbell, F. W., Cooper, G. F., Robson, J. G. and Sachs, M. B. (1969). 'The Spatial Selectivity of Visual Cells of the Cat and the Squirrel Monkey', *J. Physiol.*, **204**, 120

Campbell, F. W. and Maffei, L. (1974). 'Contrast and Spatial Frequency', *Scientific American*, 106

Campbell, F. W., Nachmias, J. and Jukes, J. (1970). 'Spatial-frequency Discrimination in Human Vision', *J. Opt. Soc. Am.*, **60**, 555

Foster, D. H. and Idris, I. I. M. (1974). 'Spatio-temporal Interaction between Visual Colour Mechanisms', *Vision Research*, **14**, 35

Fry, G. A. (1969). 'Visibility of Sine-wave Gratings', *J. Opt. Soc. Am.*, **59**, 610

Graham, N. (1972). 'Spatial Frequency Channels in Human Vision: Effects of Luminance and Pattern Drift Rate', *Vision Research*, **12**, 53

Lohmann, A. W. (1968), 'Experiments in Spatial Filtering', in *Current Developments in Optics and Vision*, Meeting of Committee on Vision, 1967, 89–92, Ac. Sci., Washington DC

Lowry, E. M. and DePalma, J. J. (1961). 'Sine-wave Response of the Visual System. I. The Mach Phenomenon', *J. Opt. Soc. Am.*, **51**, 740

Macleod. I. D. G. and Rosenfeld A. (1974). 'The Visibility of Gratings: Spatial Frequency Channels or Bar-detecting Units? *Vision Research*, **14**, 909

Maffei, L. and Fiorentini, A. (1973) 'The Visual Cortex as a Spatial Frequency Analyser', *Vision Research*, **13**, 1255

Meeteren, A. van and Boogaard, J. (1972). 'Visual Contrast Sensitivity with Ideal Image Intensifiers', Institute for Perception RVO–TNO, Rep. IZF1972–18

Meeteren, A. van and Vos, J. J. (1972). 'Resolution and Contrast Sensitivity at Low Luminances', *Vision Research*, **12**, 825

Nachmias, J. and Sansbury, R. V. (1974). 'Grating Contrast: Discrimination may be better than Detection', *Vision Research*, **14**, 1039

Nachmias, J., Sansbury, R., Vassilev, A. and Weber, A. (1973). 'Adaptation to Square-wave Gratings in Search of the Elusive Third harmonic', *Vision Research*, **13**, 1335

Nes, F. L., Koenderink, J. J., Nas, H. and Bouman, M. A. (1967). 'Spatio-temperal Modulation Transfer in the Human Eye', *J. Opt. Soc. Am.*, **57**, 1082

Stecher, S., Sigel, C. and Lange, R. V. (1973). 'Spatial Frequency Channels in Human Vision and the Threshold for Adaptation', *Vision Research*, **13**, 1691

Westheimer, G. (1960). 'Modulation Thresholds for Sinusoidal Light Distribution on the Retina', *J. Physiol.*, **152**, 67

12 RECEPTIVE FIELD STUDIES

Barlow, H. B. (1958). 'Temporal and Spatial Summation in Human Vision at Different Background Intensities', *J. Physiol.*, **141**, 337

Békésy, G. Von. (1968). 'Mach and Hering-type Lateral Inhibition in Vision', *Vision Research*, **8**, 1483

Brown, D. R., Schmidt, M. J., Fulgham, D. D. and Cosgrove, M. P. (1973). 'Human Receptive Field Characterisitics: Probe Analysis of Stabilised Images', *Vision Research*, **13**, 231

Cavonius, C. R. and Hilz, R. (1973). 'Invariance of Visual Receptive-field Size and Visual Acuity with Viewing Distance', *J. Opt. Soc. Am.*, **63**, 929

Fiorentini, A. and Maffei, L. (1973). 'Contrast in Night Vision', *Vision Research*, **13**, 73
Fiorentini, A. and Zoli, M. T. (1966). 'Detection of a Target superimposed to a Step Pattern of Illumination', *Atti della Fondazione Giorgio Ronchi*, **21**, 338
Fry, G. A. and Bartley, S. H. (1935). 'The Effect of one Border in the Visual Field upon the Threshold of Another', *Am. J. Physiol.*, **112**, 414
Hartline, H. K., Ratliff, F. and Miller, W. H. (1961). 'Inhibitory Interaction in the Retina and its Significance in Vision', in *Nervous Inhibition*, (E. Florey, Ed.), Pergamon Press, 241–284
Luria, S. M. and Ryan, A. (1973). 'Adaptation to a Masking Stimulus', *J. Opt. Soc. Am.*, **63**, 201
Maffei, L. (1968). 'Inhibitory and Facilitatory Spatial Interactions in the Retinal Receptive Fields', *Vision Research*, **8**, 1187
Saunders, R. McD. (1974). 'The Contribution of Spatial and Border Interactions to the "Westheimer Effect",' *Vision Research*, **14**, 379
Thomas, J. P. (1968). 'Linearity of Spatial Integrations involving Inhibitory Interactions', *Vision Research*, **8**, 49

13 NOISE

Benton, S. A. (1971). 'Properties of Granularity Wiener Spectra', *J. Opt. Soc. Am.*, **61**, 524
Berwart, L. (1969). 'Wiener Spectrum of Experimental Emulsions with Cubic Homogeneous Grains, Comparison of the Spectra with the Wiener Spectra of Commercial Emulsions', *J. Phot. Sci.*, **17**, 41
Coltman, J. W. and Anderson, A. E. (1960). 'Noise Limitations to Resolving Power in Electronic Imaging', *Proc. I.R.E.*, **48**, 858
Davies, E. B. and Alpin, J. E. (1965). 'Preliminary Visual Experiments on Background and Noise Effects using a Television Display', RAE Tech. Memo. WE1169(E)
Doerner, E. C. (1962). 'Wiener-Spectrum Analysis of Photographic Granularity., *J. Opt. Soc. Am.*, **52**, 669
Doerner, E. C. (1965). 'The Use of the Wiener Spectrum (Power–Spectrum) for studying the Granularity of Photographic Systems', Paper presented at the Congrès Internationale de Science Photographique, Paris
Erikson, R. A. and Hemingway, J. C. (1970). 'Visibility of Raster Lines in a Television Display', *J. Opt. Soc. Am.*, **60**, 700
Gorokhovskiy, Yu. N. and Filimonov, R. P. (1973). 'Some Measurements of Wiener Spectra of Photographic Noise', *Optical Technol.*, **40**, 653
Roetling, P. G. (1970). 'Image Enhancement by Noise Suppression', *J. Opt. Soc. Am.*, **60**, 867
Rosell, F. A. and Willson, R. H. (1973). 'Recent Psychophysical Experiments and the Display Signal-to-noise Ratio Concept', in *Perception of Displayed Information*, (L. M. Biberman, Ed.) Plenum
Shaw, R. (1972). 'Photon Fluctuations and Photographic Noise', *J. Phot. Sci.*, **20**, 64
Shaw, R. (1972). 'The Photographic Process as a Photon Counting Device', *J. Phot. Sci.*, **20**, 174
Shaw, R. and Shipman, A. (1969). 'Practical Factors influencing the Signal-to-noise Ratio of Photographic Images', *J. Phot. Sci.*, **17**, 205
Weinberg, H. and Cooper, R. (1972). 'The Recognition Index: A Pattern Recognition Techique for Noisy Signals', *Electroenceph. Clin. Neurophysiol.*, **33**, 608
Yoneyama, M. (1973). 'Spatial Filtering for Noise Reduction in a Multirecording Telecine System', *Applied Optics*, **12**, 2721

14 ATMOSPHERICS

Clifford, S. F. (1971). 'Temporal-frequency Spectra for Spherical Wave Propagating through Atmospheric Turbulence', *J. Opt. Soc. Am.*, **61**, 1285

Consortini, A., Ronchi, L. and Moroder, E. (1973). 'Role of the Outer Scale of Turbulence in Atmospheric Degradation of Optical Images', *J. Opt. Soc. Am.*, **63**, 1246

Coulman, C. E. and Hall, D. N. B. (1967). 'Optical Effects of Thermal Structure in the Lower Atmosphere', *Applied Optics*, **6**, 497

Duntley, S. Q. (1948). 'The Visibility of Distant Objects', *J. Opt. Soc. Am.*, **38**, 237

Gambling, D. J. and Billard, B. (1967). 'A Study of the Polarisation of Skylight', *Aust. J. Phys.*, **20**, 675

Hampton, W. M. (1933). 'The Visibility of Objects in a Searchlight Beam', *Proc. Phys. Soc.*, London, **45**, 663

Harger, R. O. (1967). 'On Processing Optical Images Propagated through the Atmosphere', *IEEE Trans. on Aerospace and Electronic Systems*, AES3, 819

Hufnagel, R. E. (1963). 'Random Wavefront Effects', *Perkin Elmer Symposium on Practical Application of Modulation Transfer Functions*, 3–1

Korff, D. (1973). 'Analysis of a Method for obtaining Near-diffraction-limited Information in the Presence of Atmospheric Turbulence', *J. Opt. Soc. Am.*, **63**, 971

Lahart, M. J. (1974). 'Maximum-likelihood Restoration of Non-stationary Imagery', *J. Opt. Soc. Am.*, **64**, 17

Lutomirski, R. F. and Yura, H. T. (1974). 'Imaging of Extended Objects through a Turbulent Atmosphere', *Applied Optics*, **13**, 431

Rosenau, M. D. (Jnr) (1962). 'The Alteration of Object Modulation by Real Atmospheres as it affects Aerial Photography', *Phot. Sci. and Eng.*, **6**, 265

Wagner, H. F. and Bartsch, G. (1973). 'A Field Apparatus for Scanning Skylight Intensities', *J. Phys. E.*, **6**, 1084

15 FIELD TRIALS

Bryson, M. R. (1973). 'Air-to-Ground and Ground-to-Air Detection Experiments', in *Rep. OA 6201, Vol. I: A Collection of Unclassified Technical Papers on Target Acquisition*, Martin Marietta Aerospace, Orlando, Florida, P. 17

Rosenau, M. D. (Jnr) (1962). 'The Alteration of Object Modulation by Real Atmospheres as it affects Aerial Photography', *Phot. Sci. and Eng.*, **6**, 265