TOPICAL MEETING ON
NONINVASIVE ASSESSMENT OF
THE VISUAL SYSTEM

SUNDAY, MARCH 23, 1986

COLTON

6:00 PM-9:00 PM REGISTRATION

STEINBECK LOBBY

6:00 PM-9:00 PM RECEPTION

MONDAY, MARCH 24, 1986

FERRANTE

10:45 AM-12:25 PM
SESSION II
Chris A. Johnson, University of California, Davis
Presider

10:45 AM

11:10 AM

11:35 AM

12:00 PM
MB4 Differential Growth in Acuity for Pattern Reversal and Pattern Onset/Offset Targets, Deborah A. Orel-Bixler, UC-Berkeley; Anthony M. Norcia, Smith-Kettlewell Institute of Visual Sciences. Different growth rates for infant VEP acuity development have been observed for pattern reversal and pattern onset/offset presentation modes.

FERRANTE

2:00 PM-3:40 PM
SESSION III
Joel M. Pokorny, University of Chicago, Presider

2:00 PM
MC1 Two-Color Increment Thresholds in Early Age-Related Maculopathy, Gunilla Haegerstrom-Portnoy, UC-Berkeley; Brian Brown, Queensland Institute of Technology, Australia. Two-color increment thresholds in age-related maculopathy showed depressed blue and green cone sensitivity without alteration of red cone sensitivity (compared with elderly normals).
2:25 PM
MC2  Sensitivity of Blue-Cone Pathways of Diabetics Using a Simple Clinical Test, Anthony J. Adams, Frank Zisman, UC-Berkeley; Everett Ai, Pacific Medical Center; George N. Bresnick, U. Wisconsin-Madison. A simple rapid forced-choice clinical test demonstrates selective blue-cone pathway sensitivity to be less in a group of 47 diabetics with preproliferative and proliferative retinopathy.

2:50 PM
MC3  Electroretinogram in Ischemic Retinopathies, Mary A. Johnson, Daniel Finkelstein, JHU Wilmer Eye Institute. The electroretinogram, by determining retinal function in nonperfused tissue, can help to identify retinal vascular patients at risk for the development of neovascularization.

3:15 PM
MC4  Acute and Chronic Effects of Alcohol on VEPs, Vance Zemon, Mary Conte, Rockefeller U.; John Camisa, New York Association for the Blind. Linear processing of antagonistic activity in VEPs was measured. Acute and chronic alcohol abuse produced frequency-selective changes in this activity.

5:00 PM
MD3  Stereoacuity: Preliminary Comparison of VEP and Behavioral Thresholds, J. Vernon Odom, Gung-Mei Chao, West Virginia U. Medical Center. Disparity reversal elicited VEPs. Using extrapolation, VEP stereo thresholds were calculated. VEP thresholds were similar to behavioral thresholds determined using the method of limits.

5:25 PM
MD4  VER for Diagnosis of Functional Amblyopia in Disability Evaluation Referrals, Gretchen Van Boemel, Thomas E. Ogden, Estelle Doheny Eye Foundation. The checkerboard VER has proved to be of value in establishing a minimum visual acuity in 74% of 200 patients tested for functional amblyopia.

8:30 PM-10:00 PM
DISCUSSION SESSION
Stephen A. Burns, Pittsburgh Eye and Ear Infirmary, Presider
Discussion of Transferring Laboratory Equipment and Knowledge to Clinical Practice.
FERRANTE

8:30 AM-10:10 AM
SESSION V
Dean Yager, SUNY College of Optometry, Presider

8:30 AM
TuA1 Glare Disability Following Nd:YAG Laser Posterior Capsulotomy, Paul G. Rehkopf, Joseph W. Warnicki, John C. Stuart, Antonio Capone, Jr., U. Pittsburgh School of Medicine. Following posterior capsulotomy, visual impairment is caused by glare from edges and remnants. We describe methods for assessing this problem utilizing digital image processing techniques.

8:55 AM
TuA2 Disability Glare in Radial Keratotomy, Diana L. Meade, Raymond A. Applegate, Linda R. Trick, U. Missouri-St. Louis; Jack Hartstein, Washington U. Visual disability resulting from glare is increased by radial keratotomy. Experimental methods, data analysis, and interpretation are emphasized to explain previous unsuccessful attempts to measure the large effect.

9:20 AM
TuA3 Glare Effects in Normal and Low Vision, Gary S. Rubin, Gordon E. Legge, Mary M. Schleske, U. Minnesota. Contrast thresholds were measured for letters in the presence of glare. Glare effects were larger than normal in subjects with cloudy ocular media, but smaller than normal in subjects with central field loss.

9:45 AM

STEINBECK LOBBY

10:10 AM-10:40 AM COFFEE BREAK

FERRANTE

10:40 AM-12:20 PM
SESSION VI
Mary A. Johnson, Johns Hopkins University School of Medicine, Presider

10:40 AM
TuB1 Cone Optical Density in Retinitis Pigmentosa, Ann E. Eisner, Stephen A. Burns, Louis A. Lobes, Jr., U. Pittsburgh. Using color matching techniques, we found low effective optical densities in foveal cones of retinitis pigmentosa patients with good visual acuity.

11:05 AM

11:30 AM
TuB3 Studies of the Residual Rod Signals in Congenital Stationary Night Blind Patients, Rockefeller S. L. Young, Texas Tech U. Stile's pl 0 mechanism in night blind patients was found to light adapt poorly, even though their rod (ERG) a-wave appears to behave normally.

11:55 AM
TuB4 Photopigment Bleaching in Central Serous Retinopathy, Stephen A. Burns, Ann E. Eisner, Louis A. Lobes, Jr., U. Pittsburgh. We measure abnormalities in central serous retinopathy due to low half bleach illuminances, slow photopigment kinetics, and low optical density of the cone photopigments.

12:20 PM BUSINESS MEETING

2:30 PM-6:00 PM Buses to Aquarium
(Further details will be available at the meeting.)
FERRANTE

8:30 AM-10:10 AM
SESSION VII
Stephen A. Burns, Pittsburgh Eye and Ear Infirmary, Presider

8:30 AM
WA1 Aging of the Human Lens, Joel Pokorny, Vivianne C. Smith, Margaret Lutze, U. Chicago. The optical density of the human lens changes during life. We review controversies concerning both the spectral density function and the rate of such changes.

8:55 AM
WA2 Interaction of Age and Illuminance in the Farnsworth-Munsell 100-hue Test: Normative Data and Method of Analysis, Kenneth Knoblauch, Felicia Saunders, Roger Hynes, Kent E. Higgins, Francisco de Monasterio, NIH National Eye Institute. Effects of age and illuminance on error distributions of Farnsworth-Munsell 100-hue test scores were examined for a group of normal observers, using three quantitative indices.

9:20 AM
WA3 D-15 Test Results in People Aged Seventy and Older, Alvin Eisner, Good Samaritan Hospital & Medical Center. D-15 tritan errors characteristic of individuals aged seventy and older in good ocular health tend to be among chips 0–4 rather than among chips 8–14.

9:45 AM
WA4 Age-Related Color Vision Changes Comparing F-M 100-hue, Lanthony Desaturated D-15 and Gunkel Chromagraph, R. D. Gunkel, M. S. Roy, NIH National Eye Institute. Color vision was tested in 100 normal subjects using F-M 100-hue, Lanthony desaturated D-15 and Gunkel chromagraph to compare tests and assess age-related changes in color vision.

STEINBECK LOBBY

10:10 AM-10:40 AM COFFEE BREAK

FERRANTE

10:40 AM-12:20 PM
SESSION VIII
Raymond A. Applegate, University School of Optometry, Berkeley, Presider

10:40 AM
WB1 In Vivo Measurements on Human Lens Using Quasi-Elastic Light Scattering, Peter C. Magnante, Reichert Scientific Instruments; Teodosio Libondi, First Medical School, Italy; George B. Benedek, Massachusetts Institute of Technology; Leo T. Chylack, Jr., Massachusetts Eye & Ear Infirmary. Quasi-elastic light scattering was used to measure in vivo changes in the association of human lens protein constituents that occur with aging and cataractogenesis.
WEDNESDAY, MARCH 26, 1986—Continued

2:50 PM
WC3 Automated Kinetic Perimetry: an Efficient Method of Evaluating the Peripheral Visual Field, Chris A. Johnson, John L. Keltner, Richard A. Lewis, UC-Davis. Procedures for conducting automated kinetic perimetry of the peripheral visual field were evaluated in glaucoma and neuro-ophthalmologic patients with peripheral visual field loss.

3:15 PM
WC4 Spatio-Temporal Considerations in Multiflash Campimetry, Mike Dixon, Edward M. Brussell, Charles W. White, Myriam Muermans, Concordia U., Canada. Constant time-average displays allow sensitivity to vary inversely with temporal duty cycle and small regions of reduced sensitivity (12-min wide) to be detected.

STEINBECK LOBBY

3:40 PM-4:10 PM COFFEE BREAK

FERRANTE

4:10 PM-5:50 PM
SESSION X
Gary S. Rubin, Johns Hopkins University School of Medicine, Presider

4:10 PM
WD1 Saccadic Latency as a Measure of Afferent Visual Function, Mitchell Brigell, U. Illinois Eye & Ear Infirmary. Latency of saccadic eye movements to visual targets were used to measure localized optic nerve defects in patients with resolved optic neuritis or chiasmal compression.

4:35 PM

5:00 PM
WD3 Studies of Artificial Scotoma Effects, Robert W. Hammon, D. H. Kelly, SRI International. Retinal scotomas were simulated to determine the effects of scotomas on visual performance as measured by contrast sensitivity and image tracking performance. Several effects are discussed.

5:25 PM
WD4 Use of Cross-Polarizing Filters for Threshold Central Visual Field Testing, Alfredo A. Sadun, Mark Borchert, Betty Johnson, USC School of Medicine; Michael Wall, Tulane Medical School. Cross-polarizing filters in a newly developed device permitted variances in contrast during Amsler grid testing. This threshold test was much more sensitive than conventional field tests.

5:50 PM ADJOURN