## INDEX TO PHOTOGRAMMETRIC ENGINEERING VOLUME XXII, 1956

A			C		
Accuracy, model deformation, Mahoney	4	764	Calibration, camera		
ACSM-ASP consecutive meetings and coex-			Carman and Brown	4	623
hibit	3	473	error, Washer	4	727
Activities of the Board of Direction	3	458	Camera		
Address of			calibration, Carman and Brown	4	623
incoming president, Cude	3	325	mounting for photogrammetric purposes,	-	
retiring president, Park	3	325	Pallme	5	900
Advertisers index	1	7	stabilization, Pallme, panel	4	646
	2	199	Carman, P. D., camera calibration	4	623
	3	423	Christensen, D. J., eagles of geology	5	857
	4	591	Cinetheodolite testing by stars, Merritt	2	286
	5	799	Coast & Geodetic Survey, Tewinkel	2	263
Advertising in Photogrammetric Engi-		100	Coleman, C. G., report, interpretation	1	67
NEERING—rates and information	1	190	Color photography, geology, Laylander	5	853
	2	414	Colwell, Robert N., helicopter	4	613
	3	582 789	Commission V, special applications and	2	202
	5	979	measurements, <i>McNeil</i> Comparison of two basic theories of land	2	283
Aerial	3	319	classification and their adaptability to		
camera			regional photo interpretation key tech-		
calibration, Washer	4	727	niques, Heath	1	144
photography	-	121	Contents, table of	1	3
panel			contents, table of	2	195
Harman, moderator	5	899		3	419
McNeil, miniaturization	5	925		4	587
Miller, role of the airplane	5	904		5	795
Pallme, camera mounts	5	900	Contribution to the problem of analytical	J	,,,,
Trager, lenses, shutters	5	912	aerial triangulation, Jerie	1	40
Tupper, atmospheric haze	5	907	Convergent photography		
use by Ohio Highway Dept.	5	892	Bean	2	249
weather, Krick	1	33	Cude	2	219
Aerial surveys, specifications	5	977	Whitmore	2	257
Aerotriangulation			Counter weight for the multiplex printer,		
analytic, Jerie	1	40	Battisfore	1	173
Shu and McNair	4	637	Cover mapping a state from air photo-		
Aims of the Society	3	439	graphs, MacConnell and Garvin	4	702
Air photo interpretation procedures, Stone	1	123	Cude, William C.		
Airphoto inventory of pulpwood in water			biography, photo	2	219
storage, Young, Laverty, Stoeckeler	4	696	convergent photography	2	245
Altenhofen, Robert E., scribing	5	947	presidential address	3	525
American Society of Photogrammetry,	1.2				
statement of aims	3	439	D		
Analysis of errors using the graduation		0.20	Data, range and adjustment of affinity		
process, Helava	5	938	transformations in photogrammetric		
Analytical aerial triangulation		40	rectifiers, Traenkle	4	750
Jerie	1	40	Deformations, model, Mahoney	4	764
Shu and McNair	5	637 930	Determination of geographic coordinates,		
Anderson, H. E., low obliques Annual meeting	3	473	flight heights, and true orientations for		
Applications, special, McNeil	2	283	extensions of strips of aerial photo-		
Arthur, D. W. G., relative orientation	5	935	graphs, Shu and McNair	4	637
ASP 22nd annual meeting	3	473	Determination of relative orientation for		
Astrometry, van de Kamp	2	314	two overlapping photographs taken at		
Astronomy, cinetheodolite testing, Merritt	2	286	a common exposure station, Faulds	2	392
Atmospheric influence in aerial photogra-	~	200	Development and perfection of the Topogon		
phy, Bullock	5	967	lens, Richter	5	868
Awards			Differences between visual and photographic		
and honors	3	518	calibrations of air survey cameras, Car-		(00
description and recipients	3	460	man and Brown	4	623
night and annual business meeting	3	505	Distortion, lens, Lewis	4	666
			Doyle, Frederick J., education Doyle, Irving W., camera stabilization	5	963 649
В			Doyle, Irving W., Camera stabilization	4	049
Battisfore, A. E., multiplex printer	1	173	The state of the s		
Bean, Russell K., USGS instrumentation	2	249	E		
Bias adjustment, Rogers	5	866	Eagles of geology, Christensen	5	857
Blesh, T. Erwin, posture analysis	2	357	Economic		
Board of direction and committee chairmen	1	13	factors in the integrated photogrammetric		
	2	205	system of the U. S. Geological Sur-		
	3	441 ff	vey, Whitmore	2	257
15.1	4	597	Education		
Baala assissas	5	807	and research in the mapping sciences at	_	0.00
Book reviews	4	779	Ohio State University, Doyle	5	963
Born, Carl J., aerotriangulation, computers	4	664	geologists, Landen	2	271
Brandt, Robert S., aerotriangulation Bridging, Shu and McNair	1 4	179	helicopters, Colwell	4	613
Brown, H., camera calibration	4	637 623	panel, discussion, Rosenberg Electronic scanning, Williams and Rosen-	4	632
Bullock, Paul, atmosphere	5	967	berg	5	823

Elements of long-focus photographic as-			Instrumentation for the integrated photo-		
trometry, van de Kamp	2	314	grammetric system of the U. S. Geo-		
Englemann, William F., sculpture	2	366	logical Survey, Bean	2	249
Error analysis, <i>Helava</i> Errors, camera calibration, <i>Washer</i>	5	938 727	Interpretation  Trorey and Smith, photo quality	5	961
Experiences with convergent photography,	-	121	report	1	67
Cude	2	245	Inventory, pulpwood, Young, Laverty,		
			Stoeckeler	4	696
F			J, K		
Fairbanks, Karl J., Fairchild flight analyzer		334	Jerie, H. G., analytical	1	40
Faulds, Arthur H., relative orientation Fischer, William A., photogeology panel	2 5	392 841	Kamp, Peter van de, astrometry	2	314
Flight analyzer, Fairbanks	2	334	Kasper, Dr. Hugo,		
Forestry, Andersen	5	930	relative orientation	2	239
Fulton, Rex H., highways	2	405	small scale mapping  Knibiehly, Earl, contact printing	5	875 920
Future of your profession rests with you,			Krick, Irving P., weather	1	33
The obald	4	626	L		
G					
Galileo Santoni Stereosimplex model III,			Landen, David profile plotter	5	953
Hardy	2	397	training geologists	2	271
Garvin, Lester E., vegetative cover	4	702	Land use, urban, Witenstein	4	656
Gay, Sylvester P., obliques Geological Survey	4	674	Laverty, R. E., pulpwood inventory	4	696
Bean, instrumentation	2	249	Laylander, Philip A., color photos, geology	5	853
Ray, status of photogeology	5	846	Lens distortion  Hallert	1	169
Whitmore, economics	2	257	Lewis	4	666
Geologists, training for, Landen	2	271	Lewis, James G., lens distortion	4	666
Geology flatland, Melton		Fo	Library at headquarters	1	187
panel	1	52	Local sections of the Society and officers	3	444
Christensen, eagles of geology	5	857	M		
Fischer, moderator	5	841	MacConnell, William P., vegetative cover	4	702
Holman, soils	5	842	Macrophotogrammetry with the Donaldson	*	102
Laylander, color photos Ray, status of photogeology	5	853	stereocamera, McNeil	2	379
Graphic construction of controlled stereo-	5	846	Mahoney, William C., model deformations	4	764
scopic models, Hackman	2	387	Manual of Photogrammetry	1	18, 20 210, 212
Graphic determination of the over-correc-				3	428, 430
tion factor for use in the relative orien-				4	602,604
tation of vertical photographs of any terrain, Kasper	2	220		5	812,814
terram, Rasper	2	239	Manuscript preparation, articles	3	449
Н			Mapping, small scale, Kasper H.  Mass production of high quality contact	5	875
Hackman, Robert J.			prints, Knibiehly	5	920
stereoscopic drawings	2	387	McBeth, Frank H., shoreline delineation	2	400
stereo-slope comparator Hallert, Dr. Bertil	5	894	McNair, Prof. A. J., analytics	4	637
numerical corrections	2	221	McNeil, Gomer T.	2	270
radial lens distortion	1	169	macrophotogrammetry miniaturization	5	379 925
Halsman, Julius, medical	2	374	special applications	2	283
Hardy, George D., Stereosimplex	2	397	the third man	4	778
Harman, W. E., Jr., photography panel Hart, James W., Jr., medium scale charting	5	899	Measuring accuracy and its relation to		
Headquarters, new office	4	956 599	model deformations and other measure- ments made in a stereo model, Ma-		
Heath, Gordon R., interpretation	1	144	honey	4	764
Helava, U. V., errors	5	938	Medicine, Halsman	2	374
Helicopter Colwell, photography	4	612	Medium scale charting—a challenge to		
Wood, triangulation	2	613 409	photogrammetry, Hart	5	956 52
High-precision lenses and shutters, Trager	5	912	Melton, Frank A., flatland geology Members lists	1	34
Highway			corporate	3	532
Fulton, use of photogrammetry	2	405	sustaining	1	9
Miller, new program Ohio Dept., use of photogrammetry	5	834		2	201
specifications for surveys and mapping	5	892 977		3	481 593
Holman, William W., soils	5	842		5	801
Hydrographic application of photogram-			Merritt, Everett L., cinetheodolite testing	2	286
metry in the U. S. Coast & Geodetic		442	Method of shoreline delineation, McBeth	2	400
Survey, Tewinkel	2	263	Miller, Charles L., highway program	5	892
I			Miller, Raymond H., role of airplane Microscopic topography by means of sur-	5	904
Impact of the new highway program on pho-			face replicas, Scott	2	326
togrammetry, Miller	5	834	Miniaturization of aerial photography, Mc-		
Index to advertisers	1	7	Neil	5	925
	2	199	Model deformations, Mahoney	4	764
	3	423	Motion study, Fairbanks Multiplex printer, Battisfore	2	334 173
	5	591 799		•	110
Influence of atmospheric haze on the quality		• • •	N		
of aerial photographs, Tupper	5	907	New developments in photogrammetric		
Instructions for preparation of papers	3	449	training for geologists, Landen	2	271

		11.00			
New look at lens distortion, Lewis News	4	666	panel discussion (see Panel, photogeol- ogy)		
Notes, see Tables of Contents on pages	1	3	Photogrammetric and field scribing, Alten-		
Notes, see Tables of Contents on pages	2	195	hofen	5	917
	3	419	Photogrammetric profile plotter for geologic		
	4	587	use, Landen	5	953
	5	795	Photogrammetry		
of photogrammetrists	1	186	and the photography of motion, Waddell	2	351
	2	413	applied to making sculptured portraits,	•	266
	3	529	Engelman	2	366
	4	786	definition, St. Thomas	3	467
of the Sections	5	976 183	takes the position of the third man, $Mc$ - $Neil$	4	778
of the Sections	4	763	Photography, aerial		,,,
	5	973	atmospheric haze, Bullock	5	967
Nomographic solution to oblique photo			panel (see Panel)		
Mensuration, Gay	4	674	quality, Trorey and Smith	5	961
Numerical corrections, Hallert	2	221	weather, Krick	1	33
			Photo interpretation		
O			panel discussion (see Panel)		
Obituary			report, Coleman, Rogers, Stone, Young, Stoeckeler, Heath	1	67
Church, Dr. Earl	3	531 785	Trorey and Smith	5	961
Richter, Dr. Robert	4	183	Photo metric camera, Yonkler	2	363
Oblique photographs  Andersen, forestry	5	930	P. I. news	1	183
Faulds, analytics	2	392	Portrait, sculpture, Engelmann	2	366
Gay, nomographs	4	674	Postural analysis of Yale University fresh-		
Office, new headquarters	4	599	men, Blesh	2	357
Ohio Dept. of Highways-use of aerial			Posture, photo metric camera, Yonkler	2	363
photogrammetry	5	892	PRA terrain scanning system for electronic		
Ohio State University, Doyle	5	963	photogrammetry, Williams and Rosen-	5	823
Organization of the Society	1	13	preston, E. S.	3	023
	2	205 441	Use of aerial photogrammetry by Ohio		
	4	597	Highway Dept.	5	892
	5	804	Principles of numerical corrections in aerial		
Orientation, relative			photogrammetry, Hallert	2	221
Arthur	5	935	Problems		
Faulds	2	392	in comparing photo interpretation re-		
Hallert	2	221	search results from different studies, Rogers	1	132
Kasper	2	239	of relative orientation, Rassaby	4	692
Rassaby	4	692	of the photogeologist in flatland regions		0,4
P			of low dip, Melton	1	52
Pallme, E. H., camera mounts	5	900	Pryor, W. T.		
Panel discussions			Specifications for aerial surveys and map-	- 2	0.77
aerial photography	u	000	ping for highways	5	977
Harman, moderator	5	899	Publications of the Society	3	449
McNeil, miniaturization	5 5	925 904	Pulpwood inventory, Young, Laverty, Stoeckeler	4	696
Miller, role of airplane Pallme, camera mounts	5	900	Siococcia		0,0
Trager, lenses shutters	5	912	Q		
Tupper, haze	5	907	Quality of photographs, Trorey and Smith	5	961
future of photogrammetric education			Quantitative		
Doyle	4	633	evaluation of photo interpretation map-		
Meyer	4	634	ping, Young, Stoeckeler	1	137
Moffitt  Passubara moderator	4	635	photography: the fragmentation of a science, St. Thomas	3	467
Rosenberg, moderator photogeology	4	632	Questions and an appeal from the Manual		231
Christensen, eagles of geology	5	857	Sales Committee	3	528
Fischer, moderator	5	841	Y 21		
Holman, soils	5	842	R		-
Laylander, color photos	5	853	Raasveldt, Henri C., Stereoscopy	4	708
Ray, status of	5	846	Rassaby, H. S., relative orientation	4	692
stabilization problems in military and commercial aircraft			Ray, Dr. Richard G., photogeology status Rectification, Traenkle	5 4	846 741
Alter, camera installation	4	651	Rectification, Traenkie	4	750
Beck, camera installation problems	4	650	Reduction process of resection problems by		130
Doyle, integration of camera mounts	4	649	photogrammetric rectifiers, Traenkle	4	741
Levick, airplane stabilization	4	647	Relative orientation, Faulds	2	392
Pallme, moderator, history	4	646	Hallert	2	221
Sewell, image resolution	4	652	Kasper	2	239
Stewart, design problems	4	648	of photographs taken from the same sta-	_	025
Park, W. Sidney, retiring address	3	525	tion, D. W. G. Arthur	5	935 692
Performance estimate comparing conven- tional geologic mapping with that ac-			Rassaby, H. S. Report(s), committee	4	505
complished with the aid of color photo-			Report of Commission VII (photographic	J	505
graphs, Laylander	5	853	interpretation) of the International		
Perspective drawing, Hackman	2	387	Society of Photogrammetry)	1	67
Photogeology		-	Report of the president and secretary, in-		
Melton, flatland	1	52	terpretation, Coleman, Rogers	1	67

Report on application of aerial photography			St. Thomas, Jean, quantitative photography	3	467	
to urban land use inventory, analyzis			Stoeckeler, Ernest G.			
and planning, Witenstein	4	656	interpretation	1	137	
Research, Doyle	5	963	pulpwood inventory	4	696	
Research, helicopter, Colwell Resection, rectification, Traenkle	4	613	Suggestions for adjusting bias of photo points in mountainous country, Rogers	5	860	
Resection, rectification, Traenkie	4	741 750	Sustaining members	1	9	
Resolving Power	1	186	Custaming members	2	201	
Tresort mg 1 office	2	412		3	481	
	3	530		4	593	
	4	787		5	801	
	5	977	System-testing cinetheodolites by stars,			
Reviews of books, publications and papers	4	779	Merritt	2	286	
Richter, Dr. Robert, obituary	4	785	T			
Topogon lens	5	868	Table of contents			
Rogers, Earl J., adjusting bias photo interpretation	1	866 132	Table of contents	1	3	
report on interpretation	1	67		2	195	
Role of the airplane in aerial photography,		0,		3	419	
Miller	5	904		4	587	
Rosenberg, Paul, Education discussion	4	632		5	795	
Electronic Scanning	5	823	Tailoring, photo metric camera, Yonkler	2	363	
			Taking of helicopter photography for use in			
S			photogrammetric research and train-		612	
Santoni Stereosimplex, Hardy	2	397	ing, Colwell	4	613	
Scanning, electronic	5	823	Teller committee report Tewinkel, G. C., hydrographic application	2	525 263	
Scott, David B., microscopic topography	2	326	Theobald, Dr. John T., professional future	4	626	
Scribing, Altenhofen	5	917	Topogon lens, Richter	5	868	
Sculpture, Engelmann Sections, news	2	366	Topography, microscopic, Scott	2	326	
Semi-annual meeting, 1956	3	763 473	Traenkle, Dr. C. A.			
Several uses of air photo interpretation to	3	473	affinity rectification	4	750	
the soils engineer, Holman	5	842	rectification	4	741	
Shoreline delineation, McBeth	2	400	Trager, Herbert, lenses, shutters	5	912	
Shu, Dr. C. S., analytics	4	637	Training for geologists, Landen	2	271	
Singleton, Robert, stereoscopy	1	175	Training, helicopter, Colwell	4	613	
Slope comparator, Hackman	5	894	Triangulation with helicopters, Wood Triangulation, Shu and McNair	2	409	
Small scale cartography, Kasper	5	875	Trorey, Lyle G., photo quality	5	637 961	
Smith, J. Harry G., photo quality	5	961	Tupper, J. L., atmospheric haze	5	907	
Society, the aims	2	420	1 wppor, 5. D., atmosphere mase	J	,,,	
new quarters for Washington office	3	439 599	U			
Soil(s)	-	377	Urban land use, Witenstein	4	656	
geology, Holman	5	842	Use of photogrammetry in highway work,	100	10000	
Some		0.0	Fulton	2	405	
considerations on the application of			Use of twin low-oblique photographs for			
photogrammetry for small-scale car-			forest inventories in southeast Alaska,			
tography, Kasper	5	875	Andersen	5	930	
of the major technological achievements	1	29	V			
preliminary results of the determination			Vegetative cover, MacConnell and Garvin	4	702	
of radial distortion in aerial pictures,  Hallert	1	169	Vertical aerotriangulation adjustment		102	
thoughts on aerotriangulation, Brandt	1	179	utilizing electronic computers, Born	4	664	
Sources of error in various methods of air-		117	Vertical exaggeration and perceptual			
plane camera calibration, Washer	4	727	models, Singleton	1	175	
Special applications and measurements,			***			
McNeil	2	283	W			
Specifications for aerial surveys and map-			Waddell, John H., motion photography	2	351	
ping for highways	5	977	Washer, Dr. Francis E., camera calibration	4	727	
Stabilization			Weather engineering services for aerial pho-		22	
panel, Pallme Star testing, cinetheodolite, Merritt	4	646	tography, Krick	1	33	
Statement of aims of the Society	3	286	We require objective measures of the qual- ity of photographs used for interpreta-			
Status of photogeology in the U. S. Geo-	3	439	tion, Trorey and Smith	5	961	
logical Survey, Ray	5	846	Whitmore, George D.		201	
Stereomodel, how it is formed and deformed.	-	0.0	economics, USGS	2	257	
Raasveldt	4	708	Williams, Dr. Ross E.,			
Stereoscopic			electronic scanning	5	823	
drawing, Hackman	2	387	education panel discussion	4	632	
medical photography, Halsman	2	374	Witenstein, Matthew M., land use	4	656	
vertical exaggeration, Singleton	1	175	Wood, Kendall B., helicopters	2	409	
Stereo slope comparator—on instrument	2	397	V			
Stereo-slope comparator—an instrument for measuring angles of slope in stereo-			Yonkler, Theodore			
scopic models, Hackman	5	894	photo metric camera	2	363	
Stockpile, pulpwood, Young, Laverty,		071	Young, Harold E.	_	- 50	
Stoeckeler	4	696	interpretation	1	137	
Stone, Kirk H., interpretation	1	123	pulpwood inventory	4	696	