

~~RESTRICTED DATA~~

ATOMIC ENERGY  
COMMISSION  
1968  
~~SPECIFIC RESTRICTED DATA SOURCE REQUIRED~~

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H-1 LB-2 P62

37

CONSOLIDATED CLOUD TOP DATA

(All heights are in thousands of feet MSL)

U. S. Weather Bureau,  
Washington 25, D. C.

10-26-55  
W.G. S.P.-LRQ

Shot Number	Max. cloud height observed associated with period of initial rapid rise	Other cloud heights observed at or subsequent to time of stabilisation	Absolute cloud height observed	Time, in minutes, after burst time, of observation	Method of observation	Sources of data	
TRAPOT 1	21.5	21.5	8.0 Photo. EG&G			Fpo (Final point of observation) One camera and cloud drift correction used. Cloud still rising.	
18 Feb 55		18.1	4.0 Theod. Proj 9.4				
		18.3	5.0 " "				
		17.5					
		18.0	15.0 Airoft			Fpo. Cloud still rising. Some peaks to 20,000' observed.	
2	24.2	24.2	8.0 Photo. EG&G			Two cameras in good agreement. Cloud drift corrections used.	
22 Feb 55		22.8	20.0 " "			Fpo. Cloud leveling off. Cameras not in such good agreement.	
		24.7	4.5 Theod. Proj 9.4				
		23.6	9.5 " "				
2.5		24.9	10.0 Airoft			Fpo. Cloud top leveling off.	
		24.0	20.0 " "				
4	30.3	30.3	8.5 Photo. EG&G			Two cameras in good agreement and cloud drift correction used.	
23 Mar 55		27.7	3.0 " "			Fpo. Cloud top rising slowly after sinking to 26,000' at 18 mins.	
		30.4	9.0 Theod. Proj 9.4			Agrees well with photo data.	
		29.2	12.0 " "			Fpo. Cloud top sinking slowly.	
7		30.0	8.0 Airoft				
		27.0	49.0 " "				

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	45.0	45.0	10.0 Photo. EG&G	Cloud drift correction used but two cameras not in good agreement. Fpo. Cloud top leveling off.
7 Mar 55	43.0		21.0 "	
	44.6		6.5 Theod. Proj 9.4	
	47.0	47.0	10.0 "	
	43	40.5	50.0 Airoft "	
		41.0	100.0 "	
8	37.0		14.0 Photo. EG&G	Two cameras in fair agreement. Cloud drift correction used.
12 Mar 55	37.5	37.5	30.0 "	Fpo. Cloud top leveled off.
	37.5		14.0 Theod. Proj 9.4	Agrees well with photo.
	39.6	39.6	19.5 "	Fpo. Height doubtful. Cloud top still rising.
3.6		36.0	37.0 Airoft "	Sole observation.
8	40.0	40.0	13.5 Photo. EG&G	Cloud drift correction used and two cameras in fair agreement.
22 Mar 55	39.0		24.0 "	Fpo. Cloud top leveling off.
		54.3	15.0 Theod. Proj 9.4	Fpo. Cloud still rising. Very doubtful due to drift toward observer.
8.4	40.0		15.0 Airoft "	Agrees with photo data.
	38.4		18.0 "	
	39.2		47.0 "	
E			Photo. EG&G	No data taken for this shot.
23 Mar 55	11.6	11.6	5.5 Theod. Proj 9.4	
	9.2		11.5 "	Fpo. Cloud top sinking slowly.
		12.0	10.0 Airoft "	Agrees well with theodolite data.
1.2 645	10.5		12.0 "	
8	32.1		10.0 Photo. EG&G	Cloud drift correction used and two cameras in fair agreement.
29 Mar 55	32.8	32.8	26.0 "	Fpo. Cloud top rising after sinking to 31,200' at 17 mins.
0455 PST	30.4	30.4	9.0 Theod. Proj 9.4	Disagreement with photo data is opposite to the usual sense, perhaps due to wind shear.
	29.8		15.0 "	Fpo. Cloud top fluctuating at about 30,000'.
15.5	31.2		10.0 Airoft "	
	30.7		17.0 "	
	29.0		30.0 "	
9			Photo. EG&G	None, due to overexposure of film.
29 Mar 55	31.7	31.7	10.0 Theod. Proj 9.4	Fpo. Cloud top still rising.
... PST	27.5		10.0 Airoft "	Does not agree with theodolite.
		31.5	17.0 "	
	28.7		24.0 "	

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710	55.0	55.0	4.3 Photo. EG&G	Ppo. One camera observation. Cloud leveled and dissipating. Data for edge of torous ring, perhaps doubtful.
6 Apr 55		54.8	7.0 Theod. Proj 9.4	Does not agree with photo data.
	52.1-		4.0 " "	
	60.0-			
3.2 11k	65.0	8.0 Aircraft "	Aircraft well below estimated height.	
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11	15.2	15.2	6.0 Photo. EG&G	Cloud drift correction used and two cameras in fair agreement.
7 Apr 55	15.1	13.0	" "	Ppo. Cloud top leveled off.
	15.5	6.5 Theod. Proj 9.4	Agrees well with photo data.	
	15.7	8.0 " "		
	14.6	9.0 " "		
1.5	15.2	12.0 Aircraft "	Ppo. This point doubtful. Cloud top apparently leveled at 15,500'. Agrees well with photo and theodolite data.	
	15.0	15.0 " "		
	15.0	30.0 " "		
-----	-----	-----	-----	-----
12	40.2	40.2	8.0 Photo. EG&G	Cloud drift corrections used and four camera films in good agreement.
15 Apr 55	39.5	14.0	" "	Ppo. Cloud top leveled off.
	41.2	8.0 Theod. Proj 9.4		
	41.5	11.0 " "	Ppo. Cloud top rising slowly after sinking to 41,000' at 9 mins.	
24	41.5-	11.0 Aircraft "	Agrees well with theodolite data.	
	41.7	23.0 " "		
	41.7	32.0 " "		
-----	42.8	-----	-----	-----
13	43.0	43.0	9.5 Photo. EG&G	Cloud drift correction used and two cameras in good agreement.
5 May 55	42.0	30.0	" "	Ppo. Cloud top leveling off.
	51.0	14.0 Theod. Proj 9.4	Ppo. Cloud top still rising steadily. Data doubtful after 5 mins	
30	40.5	15.0 Aircraft "		
-----	-----	-----	-----	-----
14	35.8	35.8	5.0 Photo. EG&G	Cloud drift correction used and two camera's in good agreement.
15 May 55	35.0	9.0	" "	Cloud top steady for 4 mins after sinking to 34,600' at 7 mins.
	34.0	16.5 " "	Ppo. Cloud top sinking slowly.	
	39.9	5.5 Theod. Proj 9.4	Data inconsistent with Photo data after 3 mins.	
29	40.9	12.5 " "	Ppo. Cloud top leveling off.	
	37.2	15.0 Aircraft "	Data very doubtful.	

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## CASTLE

			EGG	
1	114.0	114.0	5.0 Photo. ITR-933 Proj 9.1	Main cloud top presumably lowers thereafter.
23 Feb 54		129.0	8.0 "	Data for thunderhead cloud above main cloud.
15 M		114.0	" RM-1378-AEC	Source reference 11 (ITR-933)
		114.0	NYO-4645	
2	110.0	110.0	3.7 Photo. EGG ITR-933 Proj 9.1	Cloud top presumably leveled off at 109,000'.
26 Mar 54		122.0	6.6 "	Data for thunderhead above main cloud.
11 M		110.0	" RM-1378-AEC	Source reference 11 (ITR-933)
		110.0	NYO-4645	
3		53.0	NYO-4645	Cloud top presumably reached slightly higher than the tropopause at 53,000'. No other information recorded due to cloud obstruction.
6 Apr 54				
11 M				
4	94.0	94.0	4.2 Photo. EGG ITR-933 Proj 9.1	Cloud top presumably leveled off at 92,000'.
29 Apr 54		94.0	" RM-1378-AEC	Source reference 11 (ITR-933)
7 M		94.0	NYO-4645	
5	110.0	110.0	4.0 Photo. EGG ITR-933 Proj 9.1	Cloud top presumably leveled at this level.
4 May 54		110.0	" RM-1378-AEC	Source reference 11 (ITR-933)
13 May 54		110.0	NYO-4645	
6	71.5	71.5	4.8 Photo. EGG ITR-933 Proj 9.1	
13 May 54		68.0	9.0 "	Fpo. Cloud leveled off 8 thru 9 mins.
8		72.0	" RM-1378-AEC	Source reference 11 (ITR-933)
1.7 M		72.0	NYO-4645	
<b>UPSHOT</b>				
<b>KNOTHOLE</b>				
1	41.0	41.0	10.1 Unk Unk	Taken from unidentified graphs
17 Mar 53	40.7	40.7	11.0 "	" " " " " . Fpo.
	41.2	41.2	12.5 Theod. Newgarden	Ranger CP smoothed data.
	41.0	41.0	14.5 "	" " " " " , fpo.
	41.3	41.3	15.0 "	Fpo, CP smoothed data.
	41.0	41.0	R-265-AEC	Source references, SG-2850(TR), UKP-50 Proj 6.12, ARDC C-36417
16.2		40.0-	Theod. RM-1378-AEC	Source reference, WT-706
		41.0		
MED/DOE		40.0-		
LANL RG		42.0-		
		41.0	Aircraft Newgarden	
			NYO-4602-AEC	

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2	42.5	42.5	14.0	Unk	Unk
	40.5	..	12.0	Theod.	Newgarden
24 Mar 53		40.3	14.0	"	"
	42.7	42.7	14.0	"	"
		41.0			R-265-AEC
		41.0			Aircraft Newgarden
24.2		40.0-			
		41.0	Theod.	EM-1378-AEC	Source reference, WT-705
		41.0		NYO-4602-AEC	
3	13.6	13.6	8.0	Unk	Unk
		13.2	15.0	"	"
31 Mar 53	12.5	12.5	8.0	Theod.	Newgarden
		12.3	15.0	"	"
	13.9	13.9	7.5	"	"
		13.4	15.0	"	"
		13.5			R-265-AEC
~ 0.2		13.5	Theod.	EM-1378-AEC	Source reference, WT-705
	13.0		Aircraft	Newgarden	
		14.3	"	"	
		14.3			NYO-4602-AEC
4	38.0	..	5.0	Photo.	EG&G
6 Apr 53		39.0	10.0	"	"
	43.4	43.4	11.0	Unk	Unk
		43.3	12.0	"	"
	43.5	43.5	12.0	Theod.	Newgarden
		43.0			R-265-AEC
10.8		42.0-	Theod.	EM-1378-AEC	Source reference, WT-705
		43.0	Aircraft	Newgarden	
		43.0			NYO-4602-AEC
5	12.6	12.6	5.5	Photo.	EG&G
11 Apr 53		11.3	10.0	"	"
	12.8	12.8	6.0	Unk	Unk
	13.0	13.0	6.0	Theod.	Newgarden
		12.7	9.0	"	"
	12.7	12.7	6.0	"	"
		12.7			R-265-AEC
~ 0.3		13.0	Theod.	EM-1378-AEC	Source reference, WT-705
		13.0-	Aircraft	Newgarden	
		14.0			NYO-4602-AEC
		14.0			

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LAWL RG

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			32.7		NYO-4602-AEC	
6	35.0	35.0	35.0	7.0 Photo. EG&G	Two cameras in fair agreement.	
18 Apr 53	35.0	35.0	35.0	10.0 " "	Fpo. Cloud top remaining level.	
	37.0	37.0	37.0	11.0 Unk Unk	Taken from unidentified graphs.	
	36.5	36.5		12.0 " "	Fpo.	
	34.2	34.2		7.0 Theod. Newgarden	Ranger CP smoothed data.	
	32.8	32.8		15.0 " "	Fpo. Cloud top sinking gradually.	
	37.3	37.3	36.0	11.0 " "	Fpo. Cloud top still rising.	
			32.0-	R-265-AEC	CP smoothed data.	
			36.0		Source references, UKP-50 Proj 6.12,	
25			32.0-		ARDC C-36417	
			36.0	Theod. EM-1378-AEC	Source reference, WT-705	
			37.2	Airoft. Newgarden	Source, Col. Packler's airoft rpts.	
7	45.0	45.0	45.0	6.0 Photo. EG&G	Based on only one camera.	
25 Apr 53	44.0	45.0	44.0	10.0 " "	Fpo. Cloud top level 6 thru 10 min	
	44.0	44.0	44.0	10.0 Unk Unk	Taken from unidentified graphs --	
	45.5	45.5		14.0 Theod. Newgarden	Fpo. Cloud top still rising.	
			45.0	-- R-265-AEC	Fpo. Smoothed data. Cloud top	
			42.0-		still rising.	
			45.0	Theod. EM-1378-AEC	Source references, UKP-50 proj 6.12,	
51.5		43.0	43.0	Airoft Newgarden	ARDC C-36417	
			45.0	" "	Source reference, WT-705	
			43.2	NYO-4602-AEC		
8	42.0	42.0	42.0	8.0 Photo. EG&G	Based on only one camera.	
8 May 53	42.5	42.5	42.5	10.0 " "	Fpo. Cloud top leveled off.	
	42.0	42.0	42.5	12.0 Unk Unk	Taken from unidentified graphs.	
	43.0	43.0	43.0	13.0 " "	Fpo. " " "	
	40.5	40.5		13.0 Theod. Newgarden	Fpo. Smoothed data from inter-	
			42.0		section of Mercury and #93 Highway.	
			38.0-	R-265-AEC	Cloud top leveling off.	
26.5			42.0	Theod. EM-1378-AEC	Fpo. Smoothed data from base camp.	
			40.5	Airoft Newgarden	Cloud top leveling off.	
			40.5	NYO-4602-AEC	Source references, UKP-50 Proj 6.12,	
9	42.5	42.5	42.5	11.0 Unk Unk	ARDC C-36417	
19 May 53	41.8	42.4	41.8	12.0 " "	Taken from unidentified graphs.	
			9.0 Theod. Newgarden	Fpo. Cloud top leveling off.		
		40.8		11.0 " "	Smoothed data.	
			42.0	R-265-AEC	Fpo. " " Cloud top sinking	
					steadily.	
			41.0-	Theod. EM-1378-AEC	Source references, UKP-50 Proj 6.12,	
			42.5	Airoft Newgarden	ARDC C-36417	
		35.0			Source reference, WT-705	
			44.0			
			44.2	NYO-4602-AEC		

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10	37.5	37.5	8.0 Photo. EG&G		Two cameras in fair agreement.
25 May 53	36.0	37.5	10.0 " "		Ppr. Cloud top leveled off.
	35.4	36.0	9.5 Unk Unk		Taken from unidentified graphs.
	36.0	36.0	11.0 " "		Ppo. Cloud top sinking gradually.
	35.6	36.0	8.0 Theod. Newgarden		Smoothed CP data.
		36.0	11.0 " "		Ppo. Cloud top sinking slightly.
			R-265-AEC		Source references, Sc-2850(TR), UKP-50 Proj 6.12, ARDC C-36417
		33.0-			
		36.0	Theod. EM-1378-AEC		Source reference, WT 705
		34.8	Aircraft Newgarden		
		34.8	NYO-4602-AEC		
11		41.7	NYO-4602-AEC		
		42.7	R-265-AEC		Source reference, ARDC C-36417
4 Jun 53		43.0	Theod. EM-1378-AEC		" " , WT-705
		42.7	Aircraft Newgarden		Corrected for aircraft height.
			" "		Source, Col. Packler's aircraft rptm.
		42.5			
		172.0	11.0 Sextnt Orig.WB Comp.		Based on USS Curtiss data.
IVY		136.0	4.0 " " " "		" USS Estes "
1		128.0	80.0-		" USS Bendova "
			134.0		
			R-265-AEC		Source references, Sc-2850(TR), JTP-132 WT-614
31 Oct 52			98.0		Source reference, ITR-933 proj 9.1, Report #1080 program 3.2
		120.0-			
		130.0			
		135.0	8.5 Sextnt Orig.WB Comp.		Represents a reliable estimate. Top of plumb. DR.Urry's flight data
2		76.0	Photo. EM-1378-AEC		Source references, ITR-933 Proj 9.1, Report # 1080 program 3.2
16 Nov 52		75.0			
		79.	NYO-4555-AEC		Estimated height
			R-265-AEC		Source reference, JTP-132 WT-614
TUMBLER					
SNAPPER					
1	16.1	16.1	6.0 Theod. WT-552		
		15.3	10.0 " "		Ppo. Cloud top sinking and leveling off.
1 Apr 52					
		15.0	Aircraft WT-568		
		15.6	R-265-AEC		Source references, AFSWP-501, WT-514
		16.0	Theod. EM-1378-AEC		Source reference, WT-552
2	15.5	15.5	6.0 Theod. WT-552		
		15.0	9.0 " "		Ppo. Cloud top sinking and leveling off.
15 Apr 52					
		16.0	Aircraft WT-568		Maximum height of aircraft 15,500'.
		15.2	R-265-AEC		Source references, AFSWP-501, WT-514
		14.0	Photo. EM-1378-AEC		Source references, R-265-AEC, WT-552
		15.0	15.0		R-265-AEC EGG (Graph p.20) Ppo. Top leveled off.

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3	41.9	41.9	7.0	Airoft WT-552	
		39.0	"	WT-568	
22 Apr 52		40.0	"	Newgarden	
		42.0	"	Grossman	
		42.5	R-265-AEC		
		42.0	Photo. RM-1378-AEC		
31			7.0	" R-265-AEC EGG	(Graph p.21) Fpo. Top leveled off.
	43.0	43.0	9.5	Theod. WT-552	
			15.0	" "	
1 May 52		42.0	Airoft WT-568		Fpo. Cloud top sinking and leveling off.
		42.5	R-265-AEC		
20		39.0	Photo. RM-1378-AEC		
		40.0	7.0	" R-265-AEC EGG	(Graph p.20) Fpo. Top leveling off.
	41.0	41.0	8.0	Theod. WT-552	
5	33.2		15.0	" "	
7 May 52		34.0	Airoft WT-568		
		34.0	R-265-AEC		
		32.0	Theod. RM-1378-AEC		
		31.4			
		26.0			
13					Initial rapid rise was slowed down temporarily at 26-28,000'. Fpo. Cloud top leveled off.
6	41.2	41.2	7.5	Theod. WT-552	
25 May 52		40.0	10.0	" "	
			Airoft WT-568		
		39.5	R-265-AEC		
		39.5	Theod. RM-1378-AEC		
		41.0			
7	36.9	36.9	6.0	Theod. WT-552	
1 Jun 52		35.8	10.0	" "	
		40.0	Airoft WT-568		
		41.5	R-265-AEC		
		36.0	Theod. RM-1378-AEC		
17					
8	40.0	40.0	10.0	Theod. WT-552	
5 Jun 52					
		41.0	Airoft WT-568		
		37.0	R-265-AEC		
12	COPIED/DOE LANL RG	35.0-			
		40.0	Theod. RM-1378-AEC		



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## BUSTER

1	8.0	10.0	6.0 Theod. WT-308 "	Details uncertain Cloud height variable presumably due to orographic effects.
22 Oct 51			80.0 Aircraft WT-422 R-265-AEC	Aircraft operating at 7,500'. Source references, AFSWP-501, WT-412, WT-308
	~15.0			
28 Oct 51	23.0	23.0	8.0 Photo. EGG WT-417	Fpo. Cloud top still rising slowly. Single camera and cloud drift correction used.
	29.0	31.7	15.0 Theod. WT-308 7.0 Photo. R-265-AEC EGG	(Graph, p. 18) Fpo. Cloud top still rising slowly. (Graph, p. 18) Source references, AFSWP-501, WT-412, WT-308
	29.0	31.7	R-265-AEC	
	25.0	50.0	50.0 Aircraft WT-422	Aircraft at 24,500'.
3. 4/8	20.0-	25.0	Photo. EM-1378-AEC	Source reference, R-265-AEC. Different interpretation of one and the same source.
10 Oct 51	40.0	40.0	9.0 Photo. EGG WT-417	Fpo. Cloud top still rising slowly. Single camera & drift cor- rections used.
	41.0	12.0	*	* Best estimate based on theodolite and aircraft observation
14. 1/1	43.0	43.0	7.0 Photo. R-265-AEC EGG	(Graph, p. 18) Fpo. Cloud top leveling off slowly.
	32.0	Aircraft WT-422	Maximum of aircraft 29,000'.	
	41.0	R-265-AEC	Source references, AFSWP-501, WT-412, WT-308	
	40.0	Photo. EM-1378-AEC	Source reference, R-265-AEC	
1 Nov 51	37.0	37.0	7.5 Photo. R-265-AEC EGG	(Graph, p. 19) Fpo. Cloud top still rising.
	40.0	40.0	8.0 Photo. EGG WT-417	Fpo. Cloud top still rising. Single camera and cloud drift corrections used.
20. 1/1	48.0	Theod. WT-308		
	41.0	110.0 Aircraft WT-422	Aircraft at 41,000'.	
	46.0	R-265-AEC	Source references, AFSWP-501, WT-412, WT-308	
	32.0	Photo. EM-1378-AEC	Source reference, R-265-AEC. Different interpretation of one and the same source.	
5 Nov 51	49.5	49.5	8.0 Photo. R-265-AEC EGG	(Graph p. 19) Fpo. Cloud top still rising slowly.
	49.5	49.5	9.0 Photo. EGG WT-417	Fpo. Cloud top leveled off. Lower limit of probable height of top 46,000'.
	50.0	50.0	12.0 Theod. WT-308	Nellis AFB Data.

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LANL RG

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Continued on next page----

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5 (cont'd)	42.0	130.0 Aircraft WT-422	Aircraft at 40,000'.
	50.0	R-265-AEC	Source references, AFSWP-501, WT-412, WT-308.
	45.0	Photo. RM-1378-AEC	Source reference, R-265-AEC Apparently a special interpretation of the same source.
<hr/>			
JANGLE			
1-S	16.0	16.0	5.0 Photo. EGG WT-417
19 Nov 51	12.0		9.0 " " "
	15.0	15.0	5.0 Theod. WT-308
		15.0	R-265-AEC
1.2.2		15.0	RM-1378-AEC
			Fpo. Cloud top sinking slowly.
			Source references, WT-308, AFSWP final draft of report on Operation Jangle - Aug 1, 1952.
			Source references, R-265-AEC, WT-308
<hr/>			
2-U	11.5		5.0 Photo. EGG WT-417
29 Nov 51	10.3	13.0	9.0 " " "
		10.3	4.5 Theod. WT-308
		10.3	R-265-AEC
1.1.9			Source references, WT-308, AFSWP final draft of report on Operation Jangle - Aug 1, 1952.
<hr/>			
GREENHOUSE			
1		56.0	R-265-AEC
7 Apr 51		52.0-	Source reference, AFSWP-501
	82	55.0	Photo. RM-1378-AEC
		56.0	" " , Greenhouse Annex 4.1, Part II-1951
Theod. AFSWP-501			
<hr/>			
2		40.0	R-265-AEC
20 Apr 51	42.0		Source reference, AFSWP-501 (Graphs, p. 17) Cloud top apparently leveling off.
		43.5	Fpo. Data doubtful.
		40.0	RM-1378-AEC
47.2			Source references, R-265-AEC, Greenhouse Annex 4.1, Part II-1951
<hr/>			
3		57.0	R-265-AEC
8 May 51	56.0		Source reference, AFSWP-501 (Graphs, p. 17) { Source ref., 6.0 Photo. R-265-AEC } Greenhouse 8.0 " " Annex 4.1, Part II-1951
		60.0	Fpo. Data doubtful.
		57.0	RM-1378-AEC
257.2			Source references, R-265-AEC, Greenhouse Annex 4.1, Part II-1951
<hr/>			
4		40.0	R-265-AEC
24 May 51	COPIED/DOE LANL RC	35.0- 40.0	Source reference, AFSWP-501
			Theod. RM-1378-AEC
			Source reference, Greenhouse Annex 4.1, Part II-1951

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<del>SECRET</del>			
RANGER			
1	16.0	4.0 Theod. Kent & Holzman Fpo. Cloud top leveled off.	
	17.0	R-265-AEC Source references, AFSWP-501, WT-202	
27 Jan 51		Theod. EM-1378-AEC Source references, WT-202, WB report on Operation Ranger.	
1.27	17.0	Aircraft WT-202 Aircraft 1000' above cloud.	
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2	35.0	5.0 Theod. Kent & Holzman Fpo.	
	35.0	R-265-AEC Source references, AFSWP-501, WT-202	
28 Jan 51		Theod. EM-1378-AEC Source references, WT-202, USWB report on Operation Ranger.	
7.48	34.0- 35.0	Aircraft WT-202 Aircraft at 18-20,000'.	
-----	-----	-----	-----
3	12.5	Theod. Kent & Holzman No details available.	
	12.0	R-265-AEC Source references, AFSWP-501, WT-202	
1 Feb 51		Theod. EM-1378-AEC Source references, WT-202, USWB report on Operation Ranger.	
1.3	12.0	-----	-----
-----	-----	-----	-----
4	28.0	Theod. Kent & Holzman No details available.	
2 Feb 51	36.0	R-265-AEC Source references, AFSWP-501, WT-202	
7.5	36.0	Theod. EM-1378-AEC Source references, WT-202, USWB report on Operation Ranger.	
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5	42.0	Theod. Kent & Holzman No details available	
6 Feb 51	42.0	R-265-AEC Source references, AFSWP-501, WT-202	
7.2	42.0	Theod. EM-1378-AEC Source references, WT-202, USWB report on Operation Ranger.	
	43.0	Aircraft WT-202 Aircraft at 18-20,000'.	
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\*\* Note - The USWB report on Operation Ranger, referred to by EM-1378-AEC, specifically states that cloud heights were determined by aircraft and not by theodolite as implied by EM-1378-AEC.

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SANDSTONE

1	56.0	56.0
	45.0-	45.0-
18 Apr 48		56.0
		45.0
	36.6	

12.5 Theod. Humphrey Rpt Fpo. Cloud top still rising.

R-265-AEC

Source references, Annex 1, OS-10,  
Annex 10, OS-35, AFSWP-501  
Theod. EM-1378-AEC Source reference Humphrey Rpt,  
data doubtful.

2 56.0

12.0 Theod. Humphrey Rpt Fpo. Cloud top still rising.

R-265-AEC

Source references, Annex 1, OS-10,  
Annex 10, OS-35, AFSWP-501  
Theod. EM-1378-AEC Source reference, Humphrey Rpt,  
data doubtful.

30 Apr 48

47.1	56.0
	43.0-
	56.0
	43.0

12.0 Theod. Humphrey Rpt Fpo. Cloud top still rising.

R-265-AEC

Source references, Annex 1, OS-10,  
Annex 10, OS-35, AFSWP-501  
Theod. EM-1378-AEC Source reference, Humphrey Rpt,  
data doubtful.

3 28.5

8.0 Theod. Humphrey Rpt Main cloud leveled off.

12.0 " " Fpo. Only part of cloud rose  
to this level.

14 May 48

28.0-	33.0
	33.0
[?]	28.0

R-265-AEC

Source references, Annex 1, OS-10,  
Annex 10, OS-35, AFSWP-501  
Theod. EM-1378-AEC Source references, Humphrey Rpt,  
data doubtful.

\*\* Note - EM-1378-AEC doubts the value of data beyond the 6th or 7th minute after  
burst hence the lower height values from this source.

CROSSROADS

1	30.0
30 Jun 46	
	30.0
	25

R-265-AEC

Source references, Shurcliff's  
"Bombs at Bikini", & private  
communication from Gwynn.  
EM-1378-AEC Source reference, Shurcliff's  
"Bombs at Bikini".

2

8.0
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R-265-AEC

Source references, Shurcliff's  
"Bombs at Bikini", & private  
communication from Gwynn.

24 Jul 46

25.5

NAGASAKI

9 Aug 45

HIROSHIMA

5 Aug 45

SECRET

-12-

26

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~~SECRET~~

TRINITY  
1

16 Jul 45

40.0

35.0

R-265-AEC

Source references, SC-2850(TR),  
Reines' private communication,  
E.D. Smyth.

Search-~~EM~~-1378-AEC  
light

Source reference, LA-531

~~SECRET~~