

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 2 Flight 1 T,C,S:1-4	Run 4	~2241	~2243	No	Data not archived								Through cell on RTB	NI		
June 4 Flight 2 C: 1-3 S: 1-7	Run 1	?	?	?	?	?								NI		
	Run 2	0057	0103	Yes West Lobe	PPI & SUR	PPI & SUR	C	C								
	Run 3	0105	0109				C S:0105	C					0106: Lgt precip S:0108 bumps within virga, lgt precip			
	Run 4	0125	0127	No	PPI Track	Track	S									
	None	013215					S: above clouds									
	Run 5	0136	013725				S:013725						S:013725 lgt precip, wallowy turbulence			
	Run 6	0141	014351			Track & PPI							S: 014315 lgt precip S:014351 lost 200'			
Run 7	0152	0155			PPI											
June 5 Flight 3 T: 1-5 C: 1-5 S: 1-5	Run 1	2030	2035	Yes East Lobe	PPI	PPI	S	T:+0.6g T:-0.5g C								

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)				
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.		
June 5 Flight 3 T: 1-5 C: 1-5 S: 1-5	Run 2	2038	204830	Yes/No	Track	PPI	T C:2041 S:2038 S:2041	T:2040 T:+0.9g T:-0.5g C:2041 S:2038 S:2041										
	Run 3	204830	205300	No			T	T:2053 T:+0.7g T:-0.5g										
	Run 4	205400	210000					T:2058 C S:2059	T:+1.3g T:-0.7g C	C S:2059		C			6	1		
	Run 5	210000	211000										C:2102 bumpy					
June 9 Flight 4 T: 1-5 C: 1-5 S: 1-6	Run 1	234600	235300	No Storms to the North	Track	Radar down from 2338 - 0006	T:2346 outside cloud	T:2348 at entry & in cloud T:+0.6g T:-0.5g C						T: 2349 ice hit plane				
	None	2354					T: CAT						2355 some turb					
	Run 2	235643	000600				C:0000	T:+0.6g T:-0.4g C					T: light ice, bumpy C: CAT					

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)			
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.	
June 9 Flight 4 T: 1-5 C: 1-5 S: 1-6	Run 3	000835	001500	No Storms to the North	Track	PPI	C	T:+0.5g T:-0.4g					T: Turb 0015, Iced 1/4" C: Mod rain				
	None	0020	0022				T: CAT to N of storm	C:CAT									
	Run 4	002330	003200				T:0024	T:0025 T:+0.9g T:-0.8g C:0030		C:002710	T, C	C:0028	C:0025 bouncing T: Good updrafts but smooth	5	1		
	Run 5	003358	004145	Yes West Lobe	PPI			T:+1.1g T:-0.8g			T:0042 between layers at ~13K C:003740 rain						
	Run 6	004700	005900														
June 10 Flight 5 T, C, S: 1	None	2240		Yes West Lobe	PPI	PPI						T: under storm, getting ice	NI				
	Run 1	225200	225800				T:+0.4g T:-0.3g					T: Smooth, no ice Dissipating storm					
June 11 Flight 6 T: 1-4 C:1-5 S: 1-6	Run 1	203300	204049	No East Lobe	PPI	Radar down all day	T:2034 Outside of cloud	T:+0.7g T:-0.5g					T: Rough entry, lgt rime, iced 1/4"	7			
	Run 2	204725	205620				C S:205440	T T:+0.4g T:-0.5g			T, C	T: Smooth initially, ice, lgt rime T:2052 little rougher C:205315 lgt ice S: ice, rain					

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)			
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.	
June 11 Flight 6 T: 1-4 C: 1-5 S: 1-6	Run 3	210717	211744	No East Lobe	PPI	Radar down all day	C C:2112 Lgt chop	T:+0.7g T:-0.5g				T:211015 C		T: Hail S: 211540 Smooth, ice	7		
	Run 4	212041	213237				T:+0.7g T:-0.6g C:212750 moderate chop C:2128					T: Iced 1" C:2126 some turb , rain S:212620 rain					
	Run 5	214206	214813				C:2145 C:2146	C:2145		C:2145	C	C:2145-46 are reports of chop					
	Run 6	214530	215400				S:2154 lgt chop										
June 11 Flight 7 T: 1-3 C: 1-4 S: 1-4	Run 1	235343	000600	No East Lobe	PPI	Radar down all day	T:+0.4g T:-0.3g C	C						T: Smooth S:2359 Lgt icing	1		
	Run 2	001038	002750				T:0011 lgt chop T:001830	T:+0.9g T:-0.8g C	T:002340 C:0024	C:0018	T:0017 T:001830 C:0018	T:002610 soft hail, iced 3/4"		1			
	Run 3	003538	004656					T:+0.4g T:-0.5g				A little bumpy					
	Run 4	010159	010607				C:010130	C:0102 S:0102 S:0104		S:0104	C:010245	C:0102 Icing					
	None	010730										C: Turb , lgt ice					
	None	0113					SUR			C:-1.5g						1	

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 12 Flight 8 T: 1-4 C: 1-6 S: 1-7	Run 1	204836	205249	Yes East Lobe	PPI	PPI		T:+0.6 T:-0.5						9		
	Run 2	210130	211137					T:+0.5g T:-0.5g C S:211040					T:210650 smooth ride S:211040 Icing, rain			
	Run 3	211750	212208					T:+0.5g T:-0.5g C					C: At amber/red boundary			
	Run 4	212252	213017					T:+0.5g T:-0.4g					T: Smooth			
	Run 5	214259	214857	PPI & SUR	PPI & SUR	C	C				C: turb occurred in rain					
	Run 6	215007	215602			PPI	S:215120					S:215120 rain				
	Run 7	220439	220639			PPI	S:220439 S:220550					S: Rain, no icing				
June 14 Flight 9 S: 1-8	Run 1	205335	205613	No	PPI	PPI						Cell in Wyoming				
	Run 2	210124	210400					S: little chop					S: Little rain, smooth on exit			
	Run 3	211320	212120	Yes East Lobe				S	S? (notes not clear)			S:±100'	S: Rough on exit lgt-mod rain			
	Run 4	212953	213327										S:213250 +20kt airspeed increase			
	Run 5	213912	214518										S: Turb at 214025,2144; Rain 214025			
	Run 6	215128	215650					S:215442 S:215501 S:215502 S:215536	S:215537 S:215550	S:215548	S:215525		S	S: 300' vert excursion, 20-30kt airspeed excursion	2	1

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)				
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.		
June 14 Flight 9 S: 1-8	Run 7	220305	220918	Yes East Lobe	PPI	PPI	S:220510 S:220740 cross turb						S:210750 Heavier rain					
	Run 8	221018	221353				S:221225				S: ±200'	S	S:221235 turb Rain, little ice	2				
June 14 Flight 10 T: 1-6	Run 1	~2045	205730	Yes East Lobe	PPI & SUR	PPI & SUR			T: -3g at 20kft T:+0.7g T:-1.0g				T: Bumps up to 21kft, pitot iced					
	Run 2	~2100	210950		PPI	PPI		T:+0.7g T:-0.5g			T		T: Smooth initially, rain 210504					
	Run 3	211200	211850					T:+0.4g T:-0.9g										
	Run 4	212000	212700					T:+0.6g T:-0.5g										
	Run 5	213600	214200					T:+0.5g T:-0.4g			T		T: Bump at updraft					
	Run 6	214600	215000					T:+0.3g T:-0.4g					T: No turb, storm dissipating					
June 17 Flight 11 T: 1-4 C: 1-4	None	2237		Depends on aircraft location	PPI	PPI		T:+0.6g T:-0.4g	T		T: Severe		Discrepancy between notes re: what is severe					
	None	224820							T: lgt-mod turbulence just out of cloud T:+0.4g T:-0.6g									
	None	225540												T: Some turb				

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)			
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.	
June 17 Flight 11 T: 1-4 C: 1-4	Run 1	225600	230300	Yes East Lobe	PPI	PPI	T	T		X	T:225715		C:225930 rain heavier				
	Run 2	230806	232200				C:231400	T:+0.7g T:-0.5g C:231400		C	T:230930 -231030		C:231400 lgt ice				
	None	2327					T: in cloud T:+0.3g T:-0.2g										
	None	233230					X							X: Rain			
	Run 3	233400	234300				T:2335 T:2336 T:2338 C:233905	T:2335 T:2338 T:+0.5g T:-0.6g C:233905 C:+0.5g			C:2340		T:2335 ice T:2336 rain C:233905 ice				
	Run 4	234600	235500	Yes/No	PPI, SUR & RHI	X	X T:+0.8g T:-0.5g	C:+1.0g C:-0.7g					T: Rough ride C: Lgt ice, rain	3	1		

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 17 Flight 12 S: 1-5	Run 1	224910	225300	Yes East Lobe	PPI	PPI	S	S:225035					S:2252 steep gradient, hail signature S:225220 lgt icing, 3/8"			
	Run 2	225720	230930				S	S:230630 moderate chop & bumps			S:230210 updraft		S:225930 turb in cloud forma- tion, iced 1/4", hail sig., steep gradient W. side			
	Run 3	231743	232159				S:231940	S:231940			S:231910 S:231940		S: icing, rain			
	Run 4	232437	233016					S:232935					S:232550 lgt icing S:232720 lgt- mod rain S:232935 lgt clear ice S: Lots of shear across beams during Run			
	Run 5	233705	234300				S	S			S		S:2341 increasing excursions			

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 18 Flight 13 T: 1-7 C: 1-7 S: 1-7	Run 1	211613	211927	Yes East Lobe	PPI	PPI	T:+0.2g T:-0.2g						Smooth flights, 40 dBZ	NI		
	Run 2	212255	212729		PPI & SUR		T:212340 T:+0.1g T:-0.1g C:212536						T:212340 rime ice C:212536 little ice S: Smooth			
	Run 3	213338	214044		PPI		T:213730 T:+0.2g T:-0.4g C:213810 C:213950 S:213950	C:+0.7g					T:213730 lgt updraft; 213740 lgt rime C:213920 rain C: Turb exiting clouds			
	Run 4	214735	215410				T:214910-CAT T:+0.4g T:-0.4g C:214930-in cloud S:215335-in cloud						C:215100 wisp of turb in clear C:215230 very lgt rolling turb S:215130 rain			

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 18 Flight 13 T: 1-7 C: 1-7 S: 1-7	Run 5	215750	221015	Yes East Lobe	PPI	PPI	T:215745 T:215820 T:2203 T:220725 T:+0.4g T:-0.4g C S:220030 S:220050 S:220445 S:220855						T:215820 lgt rain, lgt icing C: Turb exiting clouds S:220435 some updraft S:220855 precip S: 220950 mixed rime 1/4"-3/8"	NI		
	Run 6	221050	221504				S:221330 bumps S:221415-vert chop					Mod. precip S: Rain, wet mixed ice 1/2"				
	Run 7	221829	222851				C:222045 S:222045 S:222100 S:222340 light chop S:2228					C:22215-30 rain S: Rough ice 1/2" S:2228 bumps at entry and exit				

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 19 Flight 14 T: 1-5 C: 1-8 S: 1-8	Run 1	210909	211836	Yes West Lobe	PPI	PPI	T	T:+0.5g T:-0.7g					T: Smooth, little ice	NI		
	Run 2	212036	212533				T:212210 T:+0.4g T:-0.3g C:212300					T:212210 little precip S:212300 light sashay S: No precip/ice				
	Run 3	213403	214148	No Storms N of dual lobes	Track	T:2134 T:213630 C:214010 S:213730 S:213930	T:2134 T:213650 T:+0.4g T:-0.7g C:213820 C:214010 C:+0.7g S:214010			T: (2 vigorous updrafts)	T:2134 rime ice T:2135 smooth T:2136 snow, lgt rain T:213710 icing S:213920 lgt rain					
	Run 4	214755	215710			T: 2155-CAT T:+0.4g T:-0.2g C:215500 little bumpy S:215200 S:215500	C			T:214850 C	T:214850 mod precipitation T:215120 smooth S: Lgt to mod precipitation Lgt-mod turb near updraft					
	None	215720								C		C:1200' upward excursion				

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 19 Flight 14 T: 1-5 C: 1-8 S: 1-8	Run 5	215810	220603	No Storms N of dual lobes	Track	PPI	T T:+0.4g T:-0.3g C	C, S			C S: 600'/min updraft		T: Rough on RTB	NI		
	Run 6	220840	221508				C:221030 C:211210 S:221300	C:221030 C:211210 S:221300 C:+0.6g C:-0.7g	X:Severe in back of aircraft but not in cockpit	C X:221340	C:221130 1500'/min rate of climb S:221210 dwndraft 1000'/min	S:221210, good bumps, precip C/S:221500 smooth in cloud				
	Run 7	221837	222443				C:222224	C:222224 C:+0.7g C:-0.7g		C:222224	C/S: 222220 C:222224 800-900' up/down	C:222223 lgt hail, rain				
	Run 8	222715	223139				C:222745 C:222845 S:222925 X: Lgt turb coming out cld	C:222745 C:222845 C:+0.5g C:-0.5g S:222925		C:222725 S:223015 S:223100	C S:223025 500'-1000' up/down	C:222725 smooth S:223015 hail S:223130 lgt rain				
	None	2231	2242				Maybe (depends on aircraft location)	SUR, RHI, SUR (dual pol)	PPI & SUR		C:-0.9g					

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 20 Flight 15 S: 1-13	Run 1	222833	223319	No Storms to N of dual lobes	Track with a few RHI scans	PPI	S:223046 light chop						S:223046 snow S:233100 hail at 25kft, smooth ride	4		
	Run 2	223757	224542				S:223920 S:224410	S:223920					S:223920 lgt precip S: 224150 few bumps, good shear			
	Run 3	224813	225512				S	S		S:225310			S:225300 mod rain S:5kt excursion, hail			
	Run 4	230012	230800				S:230150 S:230700				S:230345		S:230100 drafts S:230150 lgt precip, 230700 lgt precip, 230740 smooth			
	Run 5	231136	231648				S:231530	S:231530			S:231616 down		S:231530 lgt precip, 231540 mod precip			
	Run 6	231925	232317				S	S:232150					S:232150 mod updrafts, soft hail			
	Run 7	232415	232903				S:232800 w/ mod bump						S:232730 lgt precip, 232735 mod precip, 232800 lgt-mod precip			

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)			
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.	
June 20 Flight 15 S: 1-13	Run 8	233132	233526	No Storms N of the dual lobes	Track with a few RHI scans	PPI	S:233300	S		S:233420	±500'/min				4		
	Run 9	234719	235302				S:235140	S:235140		S:235205			S:235205 bumps w/ ±0.5 g				
	Run 10	235412	235505										S: over new growth, no turb				
	Run 11	235812	000427				S:000229						S:000150 lgt precip, smooth S:000200 mod precip S:000229 precip				
	Run 12	000508	000902				S:000750 w/ mod bump				S:000640 dndraft, S:000715 1500'/min		S:000655 light precip				
	Run 13	001119	001840				S:001240	S:001240			S:001300 ±500' S:001345 ±1500'	nothing shown	S:001240 hail S:001710 light rolling around				

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 20 Flight 16 T: 1-5 C: 1-8	Run 1	224116	225052	No Storms N of dual lobes	Track with a few RHI scans	PPI	T:224415 T:+0.3g T:-0.4g C	T:224415		C:224630			T:224140 snow T:224415 icing T:224510 smooth, lgt rain	4		
	Run 2	225413	230157				T	T T:+0.5g T:-0.4g C:+0.7g C:-0.7g				T: Snow, graupel C:230040 light icing C: Turb on entry				
	Run 3	230715	231440				T C:231130 C:231340	T T:+0.5g T:-0.3g C:231130 C:231340 C:+0.7g C:-0.7g			T:230900	T: Icing C: Turb on exit from storm				
	Run 4	231812	232704				T T:+0.4g T:-0.6g C:+0.7g C:-0.7g			T:232110 2500'/ min updft C	T:232110 marble hail					
	Run 5	233231	234145				T:+0.4g T:-0.4g	T:233605 C:+0.7g C:-0.7g			C:233700 2000'/ min updft	T:233231 smooth, in cloud, no precip				
	Run 6	234344	234745				C:234630	C:+0.5g C:-0.5g				precip				
	Run 7	235252	235623				C	C	C:+0.5g C:-1.0g			C: Mod turb in middle of Run	1			
	Run 8	235847	000306					C:+0.7g C:-0.7g			C:000120 strong up/ down	C:000120 light rain				

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 21 Flight 17 S: 1-4	Run 1	222529	223117	Yes West Lobe	PPI	PPI & SUR	S:222630						S: Lgt precip	NI		
	Run 2	224405	224917				S:222756						S: Turb due to shifting winds, lgt precip			
	Run 3	225509	230010				PPI & RHI						S:225635 very lgt precip, ~2259 rolling around, smooth at cloud top			
	Run 4	231402	232629		PPI (dual pol.)	SUR		S				S:8200' msl, below cloud base, hail				
June 21 Flight 18 T: 1-3 C: 1-3	Run 1	222307	223238	Yes West Lobe	PPI	PPI & SUR	T:222450 T:+0.4g T:-0.3g C:222650 light chop	T C:+0.6g C:-0.3g			T		T:222450 no ice, 222710 10-20kt airspeed increase, 222810 lgt rime C:222810 no ice, 222930 lgt icing	NI		
	Run 2	224456	225822		PPI, SUR & RHI		T, C	T:+0.5g T:-0.3g C					mod precip			
	Run 3	225948	230626		PPI & SUR		T:230050 light chop	T:+0.5g T:-0.4g C:+0.6g C:-0.4g					Light ice			

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)			
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.	
June 22 Flight 19 S: 1-9	Run 1	212100	212634	Yes East Lobe	PPI with a few SUR and RHI scans, maybe some dual pol. scans	PPI	S:212415 at 28kft						S: Lgt-moderate precip	8			
	Run 2	212936	213547				S:213510					S:213040 bumps before cloud, no precip					
	Run 3	214303	215136				PPI, then radar down 2150-2204	S:214545			S:214800		S:214750 lgt precip, 214850 mod precip				
	Run 4	?	220006	No							S:215900 1/4"-1/2" ice						
	Run 5	220130	220210	Yes East Lobe		SUR & PPI					S		S:220650 lgt-mod updrafts				
	Run 6	220430	220815				Precip										
	Run 7	221030	221454				S:222205					S			S:222225 lgt precip, 222300 little draft		
	Run 8	221954	222647										S:222500 up/downdrafts				
	Run 9	222840	223235					SUR & PPI	S	S: Mod bump on exit		S	S:223045 -not in cloud				

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)			
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.	
June 22 Flight 20 T: 1-4 C: 1-6	Run 1	211529	212330	Yes East Lobe	PPI with a few SUR and RHI scans, maybe some dual pol. scans	PPI	T:211600 T:211700 T:+0.4g T:-0.4g C:212000 C:212140	T C:212140 C:-0.9g			C		T:211700 lgt ice T: Mod turb in shear Turb in updraft	8			
	Run 2	213000	213610				SUR & PPI	T:213020 on entry C:213015	T:+0.6g T:-0.3g C:213015 C:+0.6g		C		C:213400 heavy icing X: Mod precip				
	Run 3	214303	215412	Yes & No		PPI then radar down 2150-2204	T:214330 2 mi out of cloud	T T:+0.6g T:-0.3g					T:214900 turb , 214915 +20kts, 215250 smooth				
	None	215810										T					
	Run 4	215926	220445				T	T:+0.9g T:-0.5g					T: light ice				
	Run 5	221324	221600	Yes			PPI		C:-0.7g		C	C:221415					
	Run 6	222810	223300				PPI & SUR	C							C:223040 lgt precip, icing		

Summary of Storm Cases

Date (1999) & Flight Number, Aircraft	Run No.	Start Time (UTC) (hhmmss)	Stop Time (UTC) (hhmmss)	Ground-based Radars			Pilot Reports (T=T-28, C=Convair; S=Sabreliner, X=Unknown) (baseline for g-forces = 0)							Priority (1=high, NI=no interest)		
				Dual Doppler	CHILL Scan Type	Pawnee Scan Type	Light Turb	Mod. Turb	Severe Turb	Heavy Rain	Strong Up/Dn Draft	Spectral Width	Other	N C A R	A. S.	R. W. C.
June 25 Flight 21 C: 1-8	Run 1	215420	215645	Yes West Lobe	PPI with a few SUR scans	PPI with a few SUR scans		C:-0.6g				C	C: Light rain	NI		
	Run 2	215750	215926				C:215915	C:+0.5g				C				
	Run 3	220700	221140										C:221030 rain			
	Run 4	221220	221530													
	Run 5	221915	222335									C	C: Bumpy, little rain			
	Run 6	222402	222556										C:222430 real smooth C:22252 some rough, clear, rain			
	Run 7	222812	223312				C:223050	C:+0.5g					C:223205 light icing			
	Run 8	223601	224028				C:223820						C: Light icing C:223715 turb , 223945 smooth ride, 224010 “pretty bouncing” C: Turb on exit from clouds			
	None	2240	2242							C: CAT						