

Weather Systems Observed During Beaufort and Arctic Storms Experiment (BASE)
01 September to 13 October 1994

Date MDT	Intensive Operation Periods (IOP)	BASE Convair 580 Research Flight	Synoptic Comments	Weather (winds xxyy, xx direction nearest 10°, yy speed in knots)
Sep 1			Weak low southwest of Inuvik	smoke from forest fires central/southern Mackenzie at Inuvik some light rain or drizzle Inuvik 0.2 mm Tuktoyaktuk and Aklavik trace
Sep 2				some light rain Inuvik and Aklavik trace Tuktoyaktuk 0.6 mm
Sep 3	IOP 1 <i>Weak lee cyclogenesis</i> <i>Started: 03/1800 UTC</i>		Low pressure centre near Nome Alaska 03/1200 UTC moved northeast to north of Prudhoe Bay by 04/0000 UTC, complete with fronts	SEly winds Inuvik SWly winds Shingle Point as pressure fell & low/trough approached
Sep 4	<i>Ended: 04/1800 UTC</i> IOP 2 <i>Trough and upslope snowfall</i> <i>Started: 04/2100 UTC</i>	B401 - 04/2058 - 05/0130 UTC triangle across Beaufort dropsondes to characterize circulation vicinity trough/ frontal system that moved across Beaufort	Low pressure centre/trough/ frontal system moved eastward across the Canadian Beaufort.. By 05/0000 UTC low and frontal wave vicinity Sachs Harbour	Old Crow - 5.1 mm rain from system Inuvik - pressure started to rise 04/1600 UTC wind shifted to NW by 04/2000 UTC - never got stronger than 10 knots fog arrived 8½ hours after shift to NW winds and rain &/or drizzle 9 hours after shift to NW winds Tuktoyaktuk -pressure started to rise at same time as Inuvik (04/1600 UTC) wind 260° 15 knots 04/1616 UTC winds veered to NW by 05/0000 UTC fog arrived ¾ hour after shift to Wly winds but lifted to stratus by 4 hours after shift to Wly winds
Sep 5	<i>Ended: 06/0000 UTC</i>	B402 05/1523 - 05/2244 UTC constant altitude east west lines at low levels through Inuvik extending west as far as Alaska/Yukon border AND two vertical profiles over Inuvik radar site dropsondes used to characterize structure of system that gave light snow to Richardson Mountains	Surface ridging that started across northern Alaska in wake of low/ trough/ cold frontal passage extended east into northern Alaska.. Precipitation across the Delta.. At 500 hPA, weak short wave trough moved over Delta	Inuvik - rain, snow, ice pellets for total 5 mm (4.4 mm 04/1200 - 05/0000 UTC).. air temperature during day 1 or 2°C Tuktoyaktuk - NW / NNW winds to 14 knots.. 1st observation of day (1300 UTC) showed 1 mm precipitation occurred overnight.. during day, rain and drizzle for 4 mm NO SNOW OR ICE PELLETS.. air temperature 3 or 4°C during day (5th was a holiday so weather observations including precipitation type and amount were not available from Aklavik or Fort McPherson)
Sep 6			Gradient from Arctic Ocean low centre extended far enough south to catch north coastal Alaska, north coastal Yukon, northern-most Delta	across Mackenzie Bay, winds favoured SWly
Sep 7			Weak flow during day.. Trough/cold front began to push across southern Canadian Beaufort during evening	cold front just through Pelly Island 08/0600 UTC
Sep 8	IOP 3 <i>Beaufort Mesoscale System and Cloud Character</i> <i>Started: 08/1200 UTC</i>	B403 08/1729 - 08/2220 UTC Inuvik-Tuktoyaktuk-ice edge outbound at low level to ice edge to characterize circulation vicinity ice edge.. inbound at high level to characterize modifications in the airmass that occurred as cold Arctic air flowed out over the southern Beaufort	Ridge built across northern Alaska northern Yukon into northern Mackenzie as low/frontal system continued eastward giving cool NWly flow to the Delta	cold front through Inuvik 08/1249 UTC and Tuktoyaktuk 08/0900 UTC.. precipitation immediately after trough passage at Inuvik - unlike trough passage of 04 September where it was 9 hours after the cold front passage that precipitation arrived Inuvik - 5.4 mm rain → snowflurries Tuktoyaktuk - only 1.4 mm rain then some light/very light snow pellets Fort McPherson - 5.2 mm and another 3 mm evening/overnight into 9th rain → rain/snow → rain → snow Aklavik - 8.6 mm and another 3 mm overnight into 9th rain → snow

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Sep 9	<i>Ended: 09/1200 UTC</i>		High centre built into Delta	trace snow Inuvik, 3 cm Aklavik, rain changed to wet snow Norman Wells (2.6 mm rain then 3.6 cm snow (water equivalent 5.4 mm)), Good Hope (3.2 mm rain then 8 cm snow) biggest precipitation event of month at both Norman Wells and Good Hope)
Sep 10			High centre moved east of Delta overnight and SEly gradient developed across the area during day	midnight/ near midnight winds Herschel Island 1325G31 Pelly Island 1321G28 Tuktoyaktuk 1310G15 Inuvik 1408
Sep 11			SEly gradient across western Mackenzie Bay per 11/1200 UTC analysis.. Gradient eased to light during evening at Herschel as weak low centre which developed just off coast between Prudhoe Bay and Barter Island moved to vicinity Herschel Island by 12/0600 UTC	winds SE 20-25G25-30 reported through most of the day at both Pelly Island and Herschel Island winds eased during evening: between 12/0000 UTC and 12/0300 winds at Herschel went from 1217G23 to 1302
Sep 12			Weak low centre Mackenzie Bay moved eastward then northeastward.. Broad associated trough from Arctic Ocean also moved slowly east across Beaufort	
Sep 13			Light NWly flow with weak ridge from Arctic Ocean to northern Yukon/ western NWT.. Pressure falls and increasing cyclonic gradient across Alaska.. able to follow band cloud, in hindcast, from Barrow 12/1439 UTC to Barter by 12/2251 UTC to Komakuk 13/0302 UTC to Inuvik et al by 13/1427 UTC.. flurries came from cloud with little vertical extent.. Inuvik sounding 13/1200 UTC showed tops about 3000 feet and pirep 13/1325 UTC showed tops 2800 feet	shift to NWlies Inuvik 13/1508 UTC Inuvik fog 1100 -1200 UTC some flurries after the shift to NW winds giving visibility as low as 1 nm Tuktoyaktuk 0.6 mm water equivalent of flurries
Sep 14	IOP 4 <i>Persistent rain and ice pellets</i> <i>Started: 14/1800 UTC</i>		Gradient spread from Alaska into the Mackenzie	easterly winds across Delta
Sep 15	<i>IOP 4 continued</i>		Cyclogenesis over the Mackenzie Valley.. Low developed vicinity Norman Wells as a trough developed in the gradient northward from the new low and a ridge developed in the gradient southeastward from northwestern Yukon to northwestern Mackenzie Valley	Fort McPherson and Aklavik got precipitation overnight and by noon rain/snow was reported at Inuvik with snow at Tuktoyaktuk, Fort McPherson and Aklavik winds backed during the day as the trough/ridge developed in the gradient winds got stronger once pressure started to rise across the Delta / Mackenzie Bay, Pelly Island winds peaked at 0125G32 16/0500 UTC

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Sep 16	<i>Ended: 16/1200 UTC</i>		Low centre that developed day before moved to north of Coppermine by 16/1200 UTC.. Low centre continued northeast during the day taking gradient with it	Inuvik 2.8 cm snow + 1 mm rain midnight to 6 AM Tuktoyaktuk 3.5 cm from 11 PM night before to 7 AM Aklavik 2 cm (mm) precipitation from 5 PM previous day to 7 AM and another 1 cm during day Fort McPherson 4 cm during day winds moderate to strong gusty Nly until about mid morning Inuvik peak wind 3413G20 Tuktoyaktuk peak wind 0116G23 Herschel Island 0218 at 07 UTC but down to less than 10 knots by 12 UTC Pelly Island 3623G28 08 UTC dropped to 3519 by 1300 UTC and 0410 by 2300 UTC
Sep 17	<i>IOP 5 Cyclogenesis near Norman Wells Started: 18/0000 UTC</i>		Another low developed west of Norman Wells by 1200 UTC and moved northeastward.. 'Partner' low centre developed west of Fort Simpson and both lows/ trough between low centres moved east- northeast.. Ridge 'freshened' as lows/trough moved off	more snow Inuvik 3.2 cm (2.2 mm water equiv.) Tuktoyaktuk 0.6 cm overnight to 7AM Aklavik 4 cm snow from 5 PM previous day to 10 AM and another 2 cm during day Fort McPherson 3 cm snow from 5 PM previous day to 7 AM and another 2 cm during day
Sep 18	<i>IOP 5 continued</i>		Yet another low developed Mackenzie Valley vicinity Norman Wells	winds and gradient Ely across southern Beaufort Pelly Island 19/0400 UTC wind 0725G35
Sep 19	<i>Ended: 19/1200 UTC</i>		19/1200 UTC surface analysis has low centre southeast of Norman Wells.. By 20/0000 UTC centre moved east-southeast to north of Yellowknife.. Pressure rises across Mackenzie Valley ease gradient across Beaufort	Tuktoyaktuk - trace snow Inuvik - trace snow Aklavik - trace snow Fort McPherson 4 cm rain changed to snow at Norman Wells at 20/0431 UTC but changed back to rain just after midnight MDT (20/0613 UTC)
Sep 20	<i>IOP 6 Unexpected snowfall Started: 21/0000 UTC</i>		SWly flow aloft pushes northeast across Yukon.. Pressure falls and easterly gradient into Mackenzie.. Surface low centre develops vicinity Inuvik by midnight	Inuvik - trace snow
Sep 21	<i>Ended: 22/0000 UTC</i>		Inuvik low moves eastward but ridge/high that followed was weak so, Except for a few hours of moderate winds at Herschel Island (WJN), circulation in lows wake was light	rain with low centre and its departure Inuvik 2.8 mm Aklavik trace
Sep 22			Gradient flat over Beaufort but still lots of weather across Delta.. Action over southern Yukon.. Low pressure centre extreme southwest corner Yukon midnight moved rapidly east.. 22/1200 UTC low centre northwest of Fort Simpson.. By 23/0000 UTC low centre east of Yellowknife	Inuvik - periods drizzle, periods snow, some flurries Tuktoyaktuk - fog, light snow, light winds but report of S+ at 22/2044 UTC, days snowfall 1 cm

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Sep 23			Arctic Ocean upper low centre moved south far enough to get its circulation back in power across Beaufort and northern-most Alaska, Yukon and Northwest Territories.. Surface trough swings east across Beaufort	fog developed at Inuvik about 1630 UTC.. none at Aklavik or Fort McPherson.. precipitation previous day and cloud cleared just after sunrise.. fog lifted by 1900 UTC SWly winds shift to WNWly with trough passage and pressure started to rise more vigorously Pelly Island 23/1953 UTC 2507 tendency 2015 23/2053 UTC 2818 tendency 2027
Sep 24	IOP 7 <i>Deep stable clouds</i> <i>Started: 24/0600 UTC</i>	B404 and B405 B404: 24/1855 - 24/2355 UTC Inuvik-extreme southwestern Yukon-Fort Nelson B405: 25/0059 - 25/0404 UTC Fort Nelson-Inuvik mainly dropsonde mission flown to gather information as to water vapour flux across continental divide while a vigorous system moved rapidly inland from Gulf of Alaska across Yukon into NWT	Back to SWly flow aloft and lee cyclogenesis Mackenzie Valley as vigorous Gulf of Alaska system moved rapidly inland across Yukon into NWT.. 25/1200 UTC surface analysis depicts weak low centre south of Inuvik but by 25/0000 UTC it is apparent that low centre is northwest of Norman Wells.. 'Classic' surface synoptic pattern becoming visible - trough developing north from low centre and surface ridge evolving from northern Alaska into northern Yukon	winds strengthen and gradually back from NEly to NNEly as trough/ridge develop as low centre moves northeastward warming aloft as system approached and then cooling once system passed was dramatic per upper air soundings at, for example, Whitehorse
Sep 25	<i>IOP 7 continued</i>	B406 25/2043 - 26/0100 UTC lines north, east, and west of Tuktoyaktuk dropsonde releases, vertical profiles, and constant altitude segments to provide validation information for University of Hokkaido doppler radar polarization measurements. During observation period, snow was dominated by plate-like particles which should produce distinct signatures in the polarization information.	Norman Wells low centre of evening before moved northeastward overnight.. 26/1200 UTC surface analysis has low north of Great Bear Lake.. Through day, low centre continued northeastward.. As low departed, it brought Nly winds and snow to Inuvik and for example Old Crow.. For Inuvik, this **snow** would be the snow that stayed thereby marking the transition from fall to winter at Inuvik.	snow Inuvik - 6.6 cm (water equiv. 5.8 mm) Aklavik - 4.4 cm Fort McPherson - 1 cm Tuktoyaktuk - 2.0 cm wind During the morning, winds across the Canadian Beaufort backed and diminished as low centre headed off northeast/ north Alaska ridge broadened across the Delta. However, during afternoon and through evening, winds across American Beaufort and then western Canadian Beaufort increased (coastal convergence) as Arctic Ocean low centre dropped southeast. Pelly Island (WND) 25/1200 UTC 0323 25/1800 UTC 3314 26/0000 UTC 2909 but by 26/0300 UTC 3124 snow and blowing snow Old Crow for example 25/1515 UTC visibility 3/4 in snow and blowing snow with wind 0316G32
Sep 26	<i>Ended: 26/1800 UTC</i> IOP 8 <i>Precipitation bands along coastline</i> <i>Started: 26/1800 UTC</i> <i>Ended: 26/2200 UTC</i>	B407 26/1757 - 26/2206 UTC Tuktoyaktuk and west and north of Tuktoyaktuk into/vicinity organized banded-structure located just to west of University of Hokkaido radar in Tuktoyaktuk. Vortex structures were especially pronounced along sides of band. Wide variety of precipitation forms - single crystals and accreted particles, and liquid water regions - should allow for good polarization measurements.	Strong WNWly flow aloft across Arctic Ocean north of Siberia and across American and Canadian Beauforts.. Embedded disturbances show up on satellite photos as areas of cloud. At surface approach of the disturbances brings pressure falls and strong southwesterly winds.. Passage brings pressure rises and strong northwesterly winds.. Surface weather maps for 26th show first of what will be 3 disturbances moving across the Beaufort.. Sachs Harbour experienced the most 'weather' - snow and blowing snow - from the disturbances.	26th - Disturbance 1 approaching Tuktoyaktuk - strong gusty westerly winds and flurries, visibility as low as 1/4S+ and 1/8SBS, 5 cm of snow on the 26th, most during morning Sachs Harbour - strong gusty westerly winds and flurries, visibility as low as 0S-BS, 3 cm of snow during day, additional 4.6 cm of snow evening/ overnight to morning of 27th

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Sep 27	IOP 9 Cold Core of Arctic Air <i>Started: 27/1700 UTC</i> <i>Ended 27/2200 UTC</i>	B408 27/1701 - 27/2123 UTC Inuvik to extreme southwestern Melville Island and return Flight to investigate upper cold low centre which moved into North American sector of Arctic Ocean 05 September and had persisted to this date, 27 September. Evening prior to flight, upper low centre analyzed vicinity Mould Bay. This upper low centre would get no closer to Inuvik during BASE and it 'disappeared' a few days later northeast of Ellesmere Island. Please note that as this upper low was disappearing a new, smaller, upper low centre evolved North American sector of Arctic Ocean. New low centre moved rapidly southeastward into, and then eastward across, Beaufort. See B412 , 01 October.	Disturbance 1 - which showed on surface weather maps of 26th - reached Canadian Beaufort overnight and moved across during day.. 'Next' disturbance, Disturbance 2, showed up on map 28/0000 UTC over Chukchi Sea..	passage of Disturbance 1's trough/ cold front, as indicated by shift to NW winds: Herschel Island 27/1200 UTC Pelly Island 27/1500 UTC Tuktoyaktuk 27/1555 UTC Sachs Harbour 27/2045 UTC For above coastal stations, passage came as a bundle with pressure rising and winds shifting. At Inuvik, indication of passage came first as pressure rising, then as wind, and finally as some flurries. thick layer of clear ice on the wings of the aircraft that brought BASE scientists back from Tuktoyaktuk to Inuvik
Sep 28			Disturbance 2, depicted as a surface low centre with frontal system vicinity Point Barrow at 28/1200 UTC, moved eastward.. By 29/0000 UTC, low centre and frontal wave about 90 north Herschel Island.. Same map, 29/0000 UTC, showed 'final' disturbance, Disturbance 3, approaching Wrangel Island.. Disturbance 2 reaches the Canadian Beaufort during the evening.. By mid morning of next day it had completed its passage across Canadian Beaufort.	passage of Disturbance 2's trough/ cold front, as indicated by shift to NW winds: Herschel Island 29/0500 UTC Pelly Island 29/0600 UTC (shift came just after midnight MDT, 29/0700 UTC, at Tuktoyaktuk and at 3 PM MDT, 29/2100 UTC, at Sachs Harbour.)
Sep 29	IOP 10 Series of mesoscale vortices <i>Started: 29/1730 UTC</i>	B409 29/1757 - 292216 UTC Inuvik - Tuktoyaktuk - northwestward about 110 nm and return to Tuktoyaktuk then Inuvik Boundary layer flight (ladder pattern at low level outbound) to document variability in surface fluxes across ice edge. Inbound Tuktoyaktuk at high level for dropsonde deployments. B410 29/2343 - 30/0310 UTC Inuvik north to 73N and return Flight made to characterize underlying baroclinic zone. Zone was 'active' late September with a 'family' of disturbances and or small lows moving across.	Disturbance 2 completed its passage across the Canadian Beaufort.. Disturbance 3, vicinity Wrangel Island at 29/1200 UTC, reached vicinity Point Barrow by 30/0000 UTC	peak reported winds and time Herschel 3040 29/0715 UTC Pelly Island 2932 29/1100 UTC vessel Johnny Hope (CZ3694) (Tuktoyaktuk Hbr) 2730 29/1200 UTC vessel Arctic Ivik (VY8884) (just north of Tuktoyaktuk in Kugmallit Bay) 2933 29/1200 UTC snow Inuvik 2.6 cm Aklavik 2 cm Tuktoyaktuk 1 cm Fort McPherson trace

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Sep 30	IOP 10 continued	B411 30/1800 - 30/2241 UTC Inuvik - Tuktoyaktuk - near Sachs Harbour - Inuvik Flight made into warm front that preceded passage of a mesoscale low across Beaufort. Dropsondes deployed on outbound high level leg. Multiple low level legs made to characterize structure of surface front.	Disturbance 3 - the final one of this series - made its way across Beaufort.. Frontal system moves through well ahead of upper centre.. Swirl of cloud indicating an upper centre north-northwest of Prudhoe Bay 30/1200 UTC moved to north of Barter Island by 01/0000 UTC.. Gradient around surface low reflection of upper centre appears light except south of low	winds Barter Island Wly 30-32 gusting at times to 36 from 29/1800 through 01/0200 UTC
Oct 01	Ended: 01/2300 UTC	B412 01/1819 - 01/2302 UTC Inuvik - north of Tuktoyaktuk - mesoscale low over the eastern Beaufort - return Inuvik to determine circulation of one of the mesoscale lows. Warm front associated with this low was flown day before.	Disturbance 3 completed its run across Beaufort and barged inland Banks Island.. Per satellite imagery and winds/ pressure reported at Sachs Harbour, the upper centre/ surface centre went just north of Sachs Harbour.. Evening 01 October/ overnight into 02 October, the flow aloft changed to SW so that the feed for weather systems for the remainder of BASE would be from the S or SW.	snow Inuvik 2.6 cm (2.2 mm water equiv) midnight to noon Tuktoyaktuk trace Aklavik and Fort McPherson 2 cm from overnight
Oct 02			Aloft, newly established SWly flow quickly fed cloud and warm air across Alaska and Yukon into Delta.. At surface, all encompassing cyclonic gradient across Alaska and Yukon pushed into Beaufort during day.. Gradient packed across Beaufort east of Mackenzie Bay.. Cyclogenesis between Barter Island and Komakuk.. 02/1200 UTC surface map showed 1017 hPA centre which deepened to 1006 hPA by 03/0000 UTC..	no precipitation reported on land but report of snowflurries offshore northern Tuktoyaktuk Peninsula from the Canadian Coast Guard icebreaker John Franklin (CGDT) 02/1200 UTC observation from vessel Johnny Hope (CZ3694) in east arm of Mackenzie to southwest of Tuktoyaktuk, winds 1325
Oct 03	IOP 11 Trough and Vertical Cloud Profiles Started: 03/0600 UTC		Surface low which developed 02 October shown over Mackenzie Bay at 1003 hPA at 03/1200 UTC.. Low moved east-northeast during day.. By 04/0000 UTC was vicinity Holman Island.. Gradient in lows wake was weaker than gradient ahead of the low. NW winds in lows wake peaked at 15 to 20 knots and were short lived	no precipitation reported at Delta sites Inuvik, Tuktoyaktuk, Fort McPherson, and Aklavik but to east rain at Paulatuk 3.1 mm and rain, snow and freezing rain (air temp +1) at Holman Island
Oct 04	Ended: 05/0130 UTC	B413 04/2047 - 05/0115 UTC Inuvik - Fort Norman - Inuvik Investigated vertical structure of cloud system southeast of Inuvik with particular emphasis on regions in which snow and rain fell into sub-saturated region below cloud base. Vertical profiles from surface to above cloud top made at Fort Norman, Norman Wells, and a point south of Fort Good Hope.	Aloft, flow over 'homeBASE' area became light but strong flow off Gulf of Alaska into southern Yukon and then into southern Mackenzie.. Disturbances embedded in the flow aloft.. At surface, activity southern Mackenzie Valley as cyclogenesis vicinity Fort Wrigley evident on 04/1200 UTC analysis.. By 05/0000 UTC low had moved to east of Fort Wrigley and deepened to 986 hPA.. Light snow 'homeBASE' area but more precipitation central Mackenzie Valley	rain at Fort Franklin, Fort Norman, and Norman Wells but not at Fort Good Hope

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Oct 05			<p>Main action over southwestern Alaska with upper/ surface low moving northeast.. Weak upper short wave trough moves across Delta while at surface weak low centre develops southwestern Mackenzie Bay</p> <p>Focus shifts to northwest Alaska.. At 500 hPa, open trough from Arctic Ocean into Chukchi Sea on 06/1200 UTC analysis becomes low centre on 07/0000 UTC analysis.. On corresponding surface chart a low centre 'appears' vicinity Point Barrow. Not obvious if one could/ should have drawn in surface low on 06/1200 UTC analysis</p>	<p>some light snow over the Delta snow/winds with Point Barrow system.. Point Barrow: visibility, weather, pressure, wind: 06/2050 UTC 1½S-F 045 3412 06/2154 UTC 1½S-F 037 0210 06/2250 UTC 1S-F 032 0717 06/2310 UTC ¾S-FBS 0722G26 06/2334 UTC 1S-FBS 0824 06/2348 UTC ¾S-FBS 0824 06/2355 UTC ¾S-FBS 033 0824</p>
Oct 06	<p>IOP 12 Banded Snow</p> <p>Started: 06/0600 UTC Ended: 07/0000 UTC</p>	<p>B414 - last BASE flight 06/1911 - 06/2251 UTC Inuvik - Tuktoyaktuk area - return Inuvik. Investigated bands of cloud that had given snow to Inuvik and Aklavik during morning as these bands headed north toward Tuktoyaktuk. Series of horizontal and vertical legs flown into cloud/ precipitation.</p>	<p>Aleutian upper low and its surface reflection push into southwestern Alaska while a vigorous trough spins off low centre and heads across Yukon.. By 07/0000 UTC trough along Yukon/ NWT border and surface cyclogenesis has occurred vicinity Norman Wells.. Weak Mackenzie Bay low centre gets lost in the broader circulation regime</p>	
Oct 07			<p>Aloft, flow over 'homeBASE' remains light but can be traced back to Gulf of Alaska.. At surface Norman Wells low has moved east but circulation around not as all encompassing.. Light flow / weak surface low over Mackenzie Bay..</p> <p>Surface and upper low that went by Point Barrow 06 October moved southwest to favour Cape Lisburne area - NOTE - This upper low and its surface reflection were present on BASE analyses right to end as they journeyed across Chukchi Sea to near Wrangel Island and back.</p>	<p>Point Barrow winds 07/1250 UTC still 0825 but dropped off quickly.. next available observation 07/1417 UTC shows winds 1710</p>
Oct 08	<p>IOP 13 - last BASE IOP Prolonged snow in low centre</p> <p>Started: 09/0300 UTC</p>		<p>Vertical low northern Gulf of Alaska provided feed of moist air into eastern Alaska and Yukon.. Upper low moved northeastward and was depicted as open trough central Yukon on CMC 09/0000 UTC 500 hPa analysis.. At surface, weak low north of Dawson and weak low over Mackenzie Bay</p>	<p>snow on the Demster highway from the system during the day.. snow showed up across the Delta area during afternoon.. by 08/2300 UTC Aklavik had collected 2.6 cm and Fort McPherson 2 cm.. to midnight Inuvik only collected trace of snow</p>
Oct 09	<p>IOP 12 continued</p>		<p>Weak upper centre just southwest of Inuvik by 10/0000 UTC and weak surface low depicted west of Inuvik.. Both upper and surface lows without much circulation</p>	<p>precipitation Inuvik snow (most fell between 0900 and 1300 UTC) then some ice pellets, snow grains, and drizzle 2.7 cm snow (2.0 mm water equiv.) Aklavik 5 cm Fort McPherson 1 cm Tuktoyaktuk trace</p>
Oct 10	<p>Ended: 11/0000 UTC</p>		<p>Inuvik upper centre moved northward overnight into Mackenzie Bay giving Inuvik a westerly flow aloft.. At surface light to moderate westerly flow develops</p>	<p>Tuktoyaktuk finally got measurable snow from the system, 2 cm during the day Inuvik added 4.9 cm snow (3.2 mm water equivalent) Fort McPherson and Aklavik amounts are unknown - statutory holiday</p>

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Oct 11			Light generally westerly flow across Delta during morning.. During afternoon, pressure falls and cyclonic gradient into southeastern Alaska and southwestern Yukon as a fresh disturbance moves inland.. Overnight, Ely/ SEly winds develop across Delta and Beaufort	no precipitation
Oct 12			Surface, SEly gradient across Delta and Beaufort.. Cyclogenesis occurs over Mackenzie Valley vicinity Wrigley	
Oct 13			Aloft, trough rotating southward from upper low centre western Victoria Island swings across Delta supporting cloud and snow activity	some snow overnight into 14th across Delta