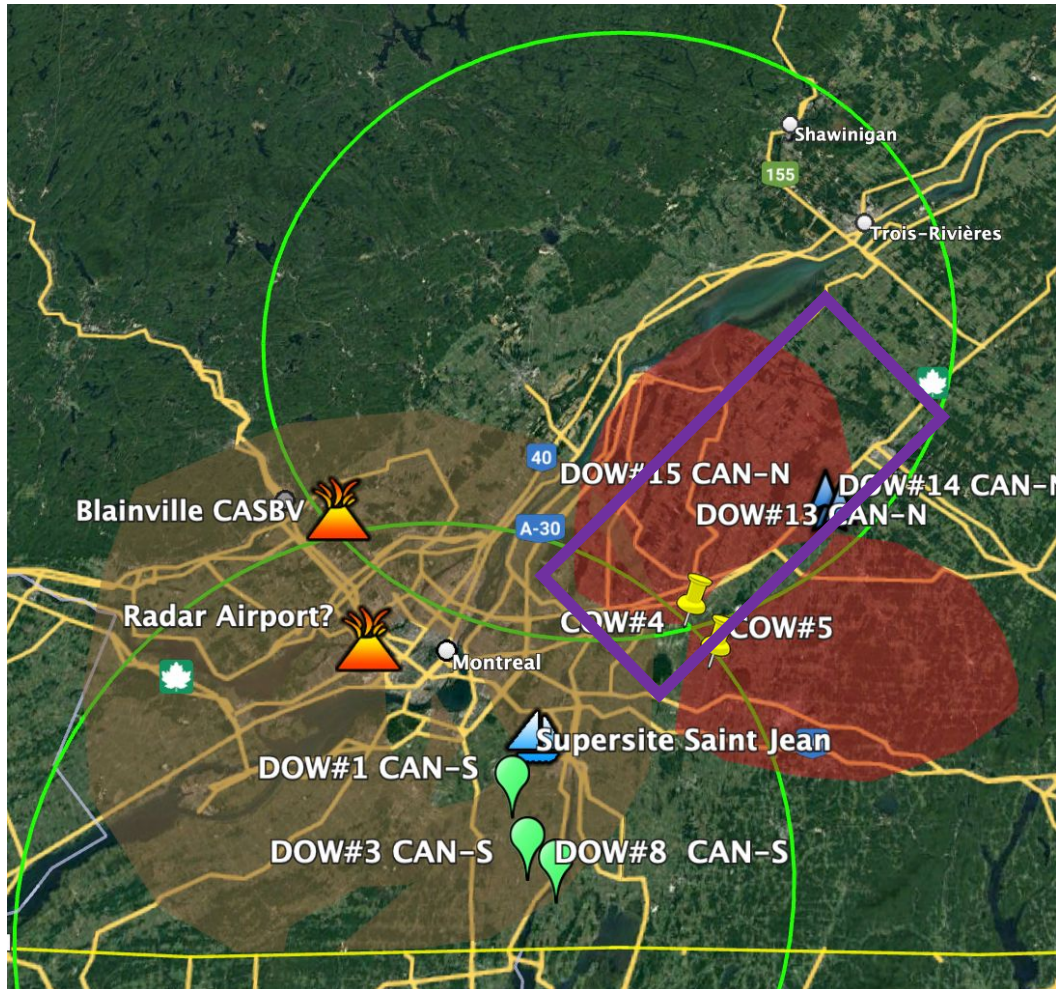




Radar Aircraft operations

Northeast Canada



Dual-Doppler large
area (green rings)

-CASB & COW

Dual-Doppler high
resolution (red filled)

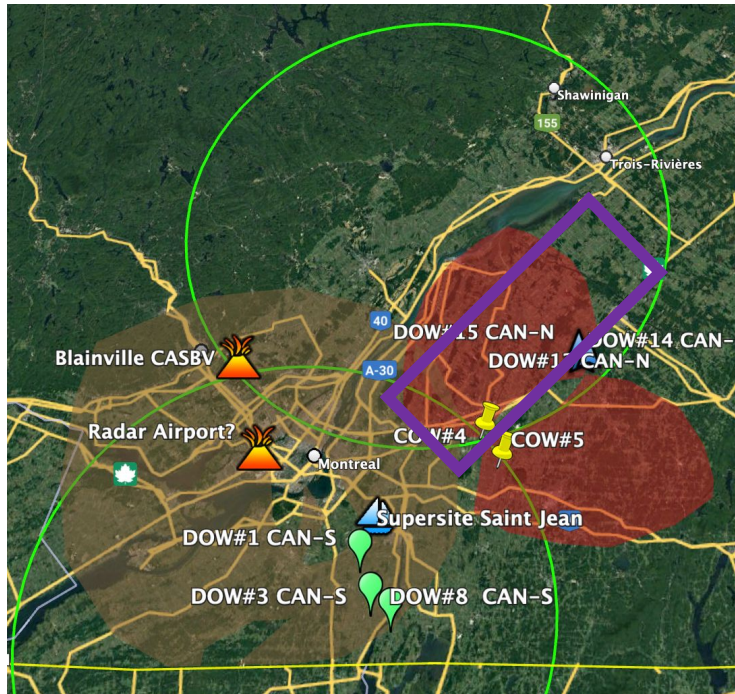
-DOW CAN-N

-COW

Northeast Canada

Question:

- Shall we do RHIs when the aircraft is not in the air?



Dual-Doppler large area (green rings)

- CASB & COW (6 min sync)
- COW same as CASB
 - CAL @ 90deg (12s) + VAD @45 deg (12 s) + 8 PPIs @ 24.4-6.8deg (1-8) + 3 x RHIs flight track north (36

SV PVOL6S configuration at a glance

Order	Tilt (°)	Rotation speed (°/s)	Acquisition time [s]	Azimuth resolution [deg]	Dual PRF	Range Step [km]	# of bins	Max range (km)	Pulse width (µs)	PRFs (Hz) Dual	Nyquist (m/s) (high/dual)	Samples (1°)
17	0.4	11	33	0.5	4:3	0.5	480	240	1.6	600/450	16/48	20/27
16	0.8	11	33	0.5	4:3	0.5	480	240	1.6	600/450	16/48	20/27
15	1.2	11	33	0.5	4:3	0.5	480	240	1.6	600/450	16/48	20/27
14	1.6	11	33	0.5	4:3	0.5	480	240	1.6	600/450	16/48	20/27
13	2.0	11	33	0.5	4:3	0.5	480	240	1.6	600/450	16/48	20/27
12	2.8	11	33	0.5	4:3	0.5	480	240	1.6	600/450	16/48	20/27
11	3.6	32	12	1	None	0.5	480	240	1.6	600	16	18
10	4.4	32	12	1	None	0.5	480	240	1.6	600	16	18
9	5.2	32	12	1	None	0.5	480	240	1.6	600	16	18
8	6.8	32	12	1	None	0.5	320	160	1.2	900	24	28
7	8.4	32	12	1	None	0.5	320	160	1.2	900	24	28
6	10.0	32	12	1	None	0.5	250	125	0.8	1200	32	37
5	11.6	32	12	1	None	0.5	250	125	0.8	1200	32	37
4	14.8	32	12	1	None	0.5	250	125	0.8	1200	32	37
3	18.0	32	12	1	None	0.5	250	125	0.8	1200	32	37
2	21.2	32	12	1	None	0.5	250	125	0.8	1200	32	37
1	24.4	32	12(330)	1	None	0.5	250	125	0.8	1200	32	37

Quantities: TH, DBZH, VRADH, WRADH, ZDR, uPHIDP, PHIDP, RHOHV, KDP, SQIH

Northeast Canada

Question:

- Shall we do RHIs when the aircraft is not in the

air?

SUR-CO

COW	SEQUENCE 1			
SUR-COW	Angle #	Duration	start time (s)	Start time (m)
CAL	2			
89, 89		30	0	
VAD	4	30	30	
45, 45				
WINTRE-1	14	150	60	
24.4, 21.2, 18, 14.8, 11.6, 10., 8.4, 6.8				
WINTRE-2	23	135	210	
5.2, 4.4, 3.6, 2.8, 2.0, 1.6, 1.2, 0.8, 0.4				
WINTRE-3 (field catalogue?)	24	15	345	
2			360	6 min
Time for 360deg PPI (s)	15			
Time for 90deg RHI (s)	8.5			

SUR-AIR-CAN-COW

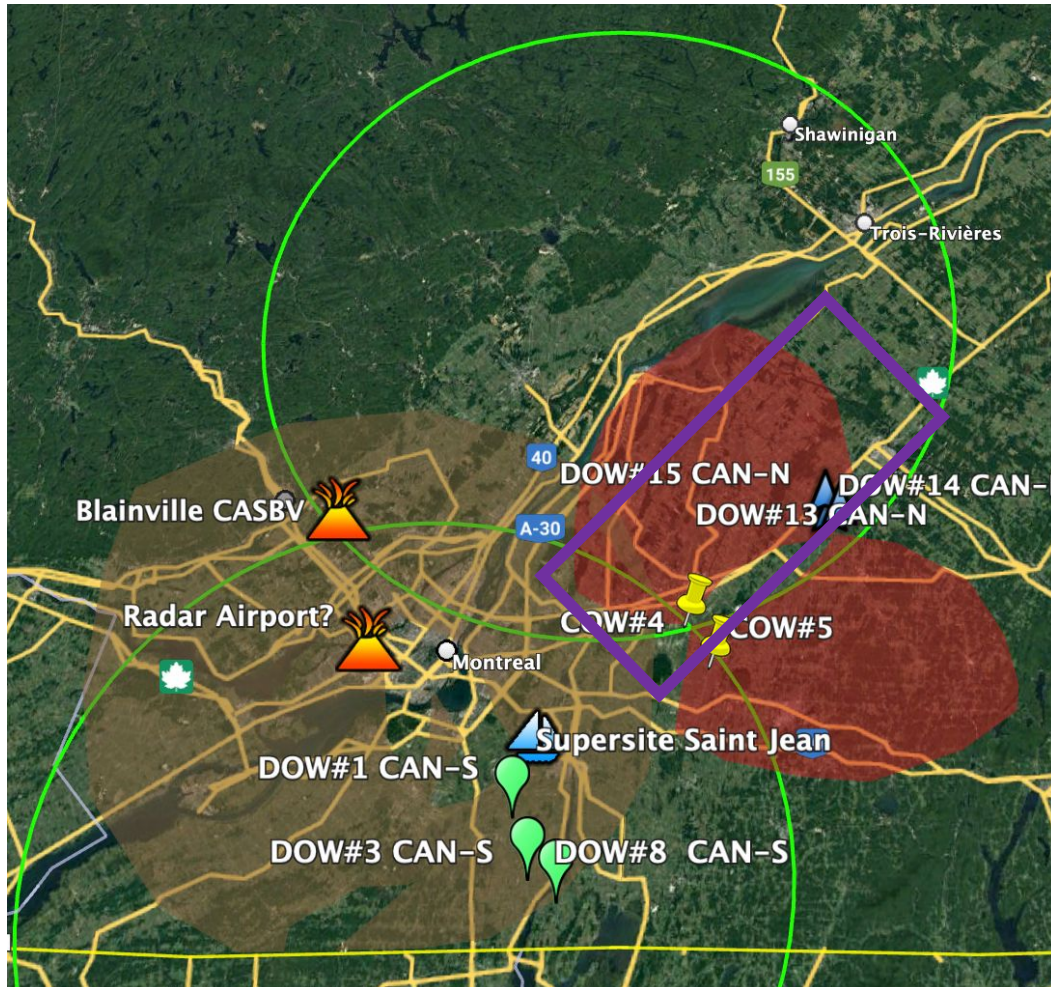
- (RH)

COW	SEQUENCE 1			
SUR-AIR-CAN-COW	Angle #	Duration	start time (s)	Start time (m)
CAL	2			
89, 89		30	0	
VAD	4	30	30	
45, 45				
WINTRE-1	14	150	60	
24.4, 21.2, 18, 14.8, 11.6, 10., 8.4, 6.8				
RHI-alongV (north)	17	25.5	210	
x-5, x, x+5				
WINTRE-2	26	135	235.5	
5.2, 4.4, 3.6, 2.8, 2.0, 1.6, 1.2, 0.8, 0.4				
WINTRE-3 (field catalogue?)	27	15	370.5	
2			385.5	6.4 min
Time for 360deg PPI (s)	15			
Time for 90deg RHI (s)	8.5			

Northeast Canada

Question:

- Shall we do RHIs when the aircraft is not in the air?
- Shall we do RHIs both towards the north and south?



- Dual-Doppler high resolution (red filled)
- DOW CAN-N:
 - CAL @ 90deg (12s) + VAD @ 45 deg (12 s) + 8 PPIs @ 24.4-6.8deg (1-8) + 3 x RHIs flight track north (36 seconds) + 9 PPIs (9-17) @ 5.2-0.4deg + CAT
 - COW
 - CAL @ 90deg (12s) + VAD @ 45 deg (12 s) + 8 PPIs @ 24.4-6.8deg (1-8) + 3 x RHIs flight track north (36 seconds) + 9 PPIs (9-17) @ 5.2-0.4deg
 - DOW US-N

Northeast Canada

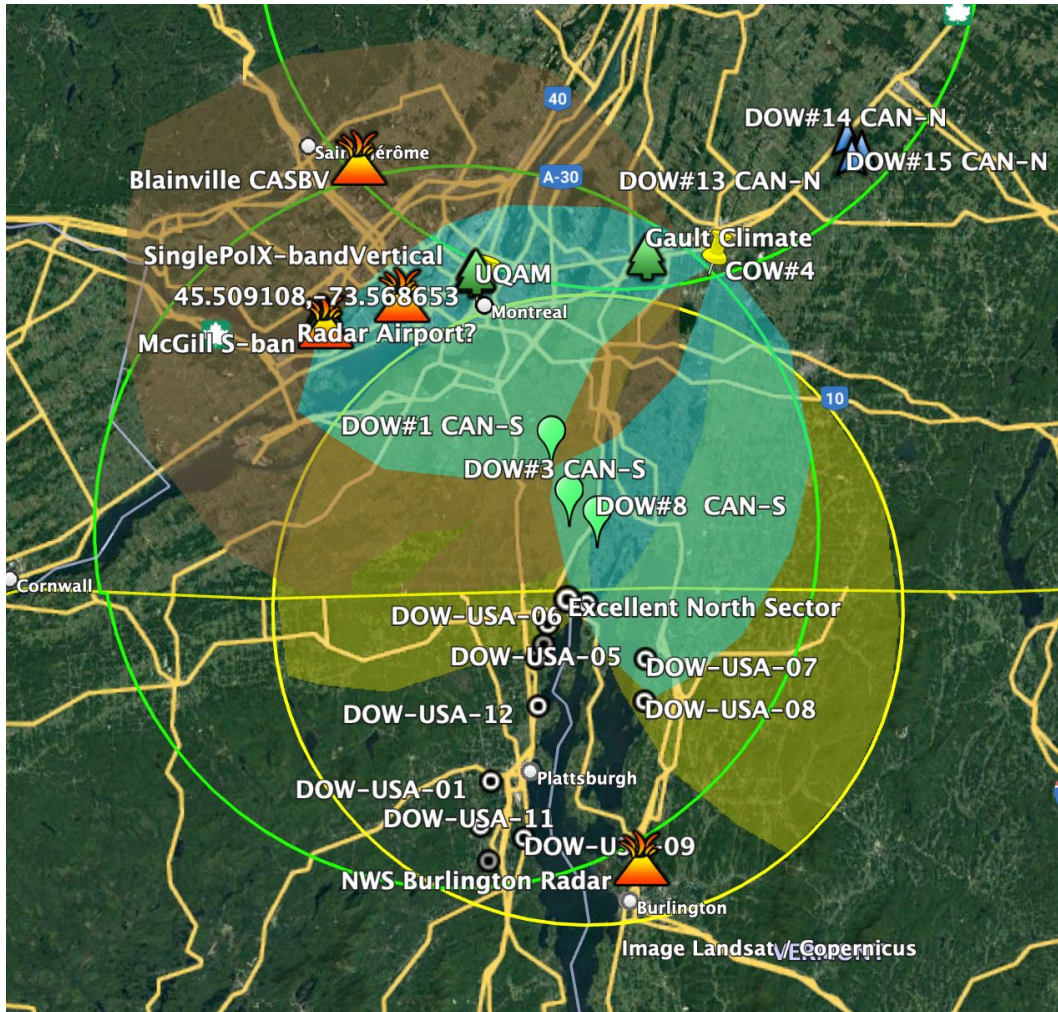
Question:

- Shall we do RHIs when the aircraft is not in the air?

SUR-AIR-CAN-N-DOW
 Shall we do both along and across valley RHIs?
 (along & across valley RHIs; one scan strategy surv & aircraft?)

DOW-CAN-N		SEQUENCE 1		
SUR-AIR-CAN-N-DOW	Angle #	Duration	start time (s)	Start time (min)
CAL	2			
89, 89		30	0	
VAD	4	30	30	
45, 45				
WINTRE-1	14	150	60	
24.4, 21.2, 18,14.8, 11.6, 10., 8.4, 6.8				
RHI-alongV (south)	17	25.5	210	
x-5, x, x+5				
WINTRE-2	26	135	235.5	
5.2, 4.4, 3.6, 2.8, 2.0, 1.6, 1.2, 0.8, 0.4				
RHI-acrossV (west)	29	25.5	370.5	
x-5, x, x+5				
WINTRE-3 (field catalogue?)	30	15	396	
2			411	6.8 min
Time for 360deg PPI (s)	15			
Time for 90deg RHI (s)	8.5			

Champlain Valley #1



Dual-Doppler large area
(green rings)

-CASB & COW (stays
the same as NW
Canada)

Dual-Doppler maybe
(green filled)

-DOW CAN-N site #1

Champlain Valley - COW

SUR-CO

COW		SEQUENCE 1		
SUR-COW	Angle #	Duration	start time (s)	Start time (m)
CAL	2			
89, 89		30	0	
VAD	4	30	30	
45, 45				
WINTRE-1	14	150	60	
24.4, 21.2, 18,14.8, 11.6, 10., 8.4, 6.8				
WINTRE-2	23	135	210	
5.2, 4.4, 3.6, 2.8, 2.0, 1.6, 1.2, 0.8, 0.4				
WINTRE-3 (field catalogue?)	24	15	345	
2			360	6 min
Time for 360deg PPI (s)	15			
Time for 90deg RHI (s)	8.5			

SUR-AIR-CAN-COW

COW		SEQUENCE 1		
SUR-AIR-cham-COW	Angle #	Duration	start time (s)	Start time (m)
CAL	2			
89, 89		30	0	
VAD	4	30	30	
45, 45				
WINTRE-1	14	150	60	
24.4, 21.2, 18,14.8, 11.6, 10., 8.4, 6.8				
RHI-alongV (csouth)	17	25.5	210	
x-5, x, x+5				
WINTRE-2	26	135	235.5	
5.2, 4.4, 3.6, 2.8, 2.0, 1.6, 1.2, 0.8, 0.4				
WINTRE-3 (field catalogue?)	27	15	370.5	
2			385.5	6.4 min
Time for 360deg PPI (s)	15			
Time for 90deg RHI (s)	8.5			

Champlain Valley - DOWs

Dual-Doppler high resolution (red filled)

- DOW CAN-N:
 - CAL @ 90deg (12s) + VAD @45 deg (12 s) + 8 PPIs @ 24.4-6.8deg (1-8) + **3 x RHIs along flight track north (36 seconds)** + 9 PPIs (9-17) @ 5.2-0.4deg + **3 x RHIs across flight track north (36 seconds)** + CAT
- DOW US-N
 - CAL @ 90deg (12s) + VAD @45 deg (12 s) + 8 PPIs @ 24.4-6.8deg (1-8) + **3 x RHIs along flight track north (36 seconds)** + 9 PPIs (9-17) @ 5.2-0.4deg + **3 x RHIs along flight track north (36 seconds)** + CAT

Champlain Valley - DOWs

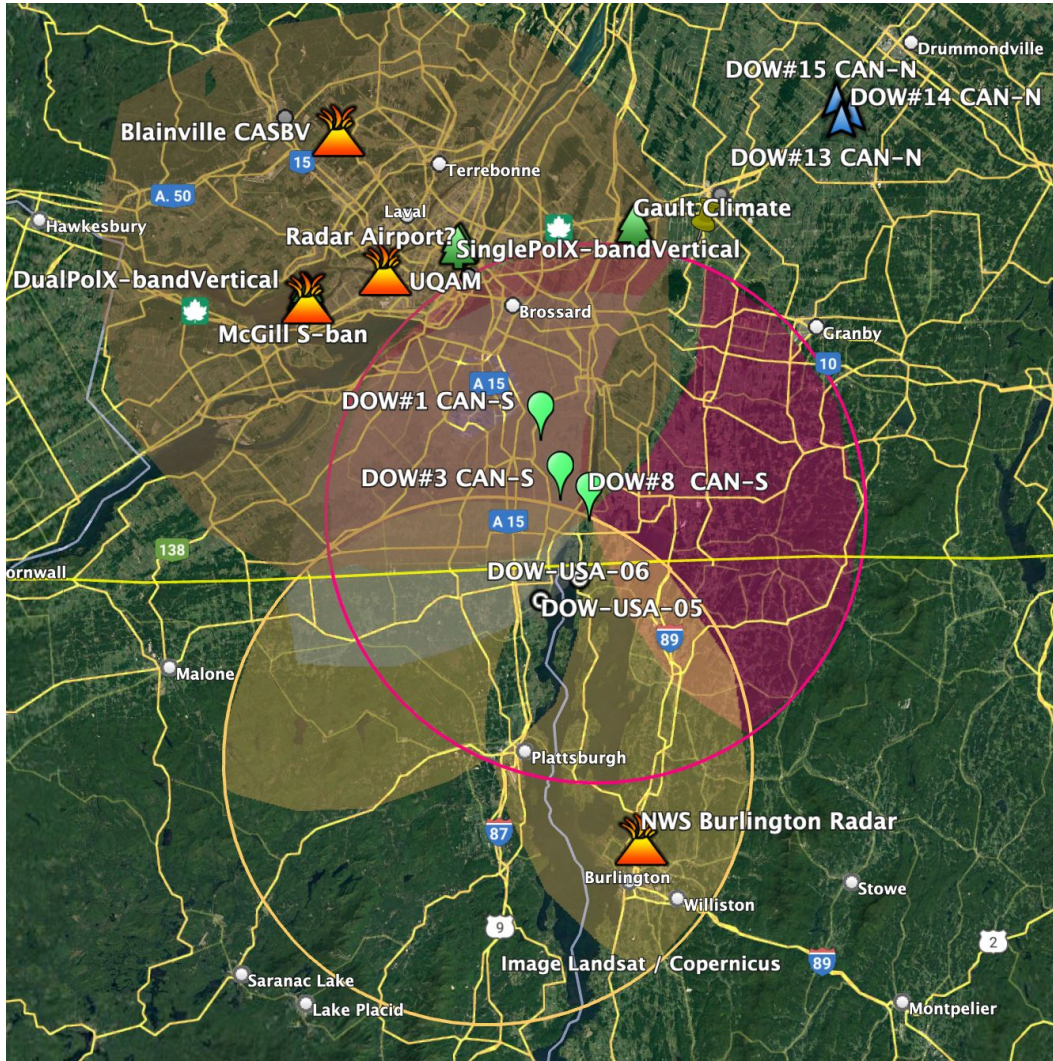
SUR-AIR-CAN-S-D

DOW-CAN-S	SEQUENCE 1			
SUR-AIR-CAN-S-DOW	Angle #	Duration	start time (s)	Start time (n)
CAL	2			
89, 89		30	0	
VAD	4	30	30	
45, 45				
WINTRE-1	14	150	60	
24.4, 21.2, 18, 14.8, 11.6, 10., 8.4, 6.8				
RHI-alongV (north)	17	42.5	210	
x-5, x, x+5				
WINTRE-2	29	180	252.5	
5.2, 4.4, 3.6, 2.8, 2.0, 1.6, 1.2, 0.8, 0.4				
RHI-acrossV (west)	32	25.5	432.5	
x-5, x, x+5				
WINTRE-3 (field catalogue?)	33	15	458	
2			473	7.6 min
Time for 360deg PPI (s)	15			
Time for 90deg RHI (s)	8.5			

SUR-AIR-US-N-DOW (RHI to N-DOE)

DOW-CAN-S	SEQUENCE 1			
SUR-AIR-CAN-S-DOW	Angle #	Duration	start time (s)	Start time (n)
CAL	2			
89, 89		30	0	
VAD	4	30	30	
45, 45				
WINTRE-1	14	150	60	
24.4, 21.2, 18, 14.8, 11.6, 10., 8.4, 6.8				
RHI-alongV (north)	17	42.5	210	
x-5, x, x+5				
WINTRE-2	29	180	252.5	
5.2, 4.4, 3.6, 2.8, 2.0, 1.6, 1.2, 0.8, 0.4				
RHI-acrossV (west)	32	25.5	432.5	
x-5, x, x+5				
WINTRE-3 (field catalogue?)	33	15	458	
2			473	7.6 min
Time for 360deg PPI (s)	15			
Time for 90deg RHI (s)	8.5			

Champlain Valley #2



Dual-Doppler large area
(green rings)

-CASB & COW (stays
the same as NW
Canada)

Dual-Doppler maybe
(green filled)

-DOW CAN-N site #8