Climate sentinels and Wintre-Mix sites

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All sites along the Saint Lawrence River Valley

**Sentinels**
- Gault Sentinel (132 m ASL)
- Arboretum (49 m ASL)
- UQAM (70 m ASL)
- Forêt Montmorency (667 m ASL)

**Wintre-Mix Sites**
- Sorel – ECCC/UQAM/CU (16 m ASL)
- Trois-Rivières – UQTR/UQAM (47 m ASL)
Meteorological variables measured

• Standard meteorological variables:
  • Temp, RH, Wind speed and direction (no wind direction at Trois-Rivières)

• Precipitation amount:
  • Rainfall and snowfall in liquid water equivalent
  • Snow depth
  • Icing amount (not in Sorel)

• Precipitation characteristics:
  • Full diameter and fall speed spectrum

• Precipitation aloft and clouds:
  • Micro Rain Radar (MRR) and ceilometer

• Other: Visibility, net radiation, ...
Climate sentinels
McGill and UQAM
All Canadian sites
McGill, UQAM and ECCC
Gault Sentinel

- Lat: 45.53  Long: -73.15 and Z: 132 m ASL
- Soundings and manual observations/macrophotography;
Arboretum Sentinel

• Lat: 45.43  Long: -73.94 and Z: 49 m ASL
Forêt Montmorency Sentinel

- Lat: 47.43  Long: -71.51 and Z: 667 m ASL
- Collaboration with Université Laval
UQAM Sentinel
Downtown
Montreal

- Instruments are being installed now. Everything should be ready next week
- Lat: 45.5  Long: -73.57 and Z: 70 m ASL
- Lidar and ceilometer may also be installed and working on time for the project
Wintre-Mix
Trois-Rivières site

• Installed on 8 December 2021 at the Université du Québec à Trois-Rivières (UQTR) by UQAM
• Lat: 46.34 Long: -72.58 and Z: 47 m ASL
• Bring the trailer next week
• Soundings and manual observations/macrophotography; Probably alternate with Sorel
Wintre-Mix
Sorel site

- Installed on 7 December 2021 at the Sorel by the ECCC and UQAM
- Lat: 46.03  Long: -73.11 and Z: 16 m ASL
- CU Radiometer will be installed in January 2022
- Soundings and manual observations/macrophotography; Probably alternate with Trois-Rivières
Summary

• 4 Climate sentinels and 2 Wintre-Mix sites
• All sites measure standard meteorological variables at the surface, precipitation amounts and characteristics at the surface and precipitation aloft
• 6 sites measure icing amounts
• Soundings and manual observations (plan for now):
  • All IOPs at Gault
  • At Sorel or Trois-Rivières depending on the conditions