Canadian Activities - I

- OC/BC measurements
  - daily measurements in Toronto and Vancouver since Feb. 2000 for health studies and receptor modelling
  - method used is an extended-time NIOSH/IMPROVE combination
  - urban to sub-regional scale spatial-temporal analysis in Toronto, WQC and LFV
  - urban to remote (Alert) BC using filters, PSAP and aethelometer
  - forest measurements to assess potential of biogenic source
  - hygroscopic growth factors vs. composition
  - source and ambient measurement of $^{12}C/^{13}C$ on OC, OC4 and BC

Canadian Activities - II

- Sampling and measurement methods
  - assessment of artifact problem associated with quartz filters
  - IOGAPS sampling for OC, SVOC
  - final filter MOUDI
  - OC/BC size distribution using MOUDI
  - Laser-induced incandescence (LII) for EC/BC
  - OC vs. WSOC comparisons
  - set-up of Canadian speciation monitoring in urban-rural pairs (R&P sampler with Chemcomb), 1 in 3 sampling

Canadian Activities - III

- OC specation
  - multiple-groups involved focusing on a range of compounds (up to ~30% of OC explained)
  - organic marker CMB
  - identification of biogenic emission aerosol products (field and lab)
  - LMW water-soluble OC by IC/CE
  - size-distributed PAH and gas-to-particle partitioning by size
  - application of the Aerodyne AMS for identification of OC species (e.g., organic nitrates) and source tracers

Canadian Activities - IV

- Climate
  - CCN activation vs. composition
  - remote area nucleation “bursts”
  - biogenic emissions of precursors and in-situ formation
  - hygroscopic growth factors vs. source/location/composition

Canadian Activities - V

- Modelling
  - development of improved mechanism for SOA formation for inclusion in CMAQ
  - Model evaluation in LFV
  - Improved VOC ‘lumping’ for emissions

Main Groups

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- EC, U of Toronto, York U., McMaster U.,
- Dalhousie U