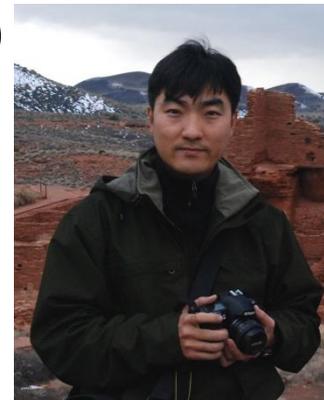


# VOC measurement onboard DC-8

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## PTR-(HR)TOF-MS

[Proton Transfer Reaction-  
(High Resolution) Time of Flight – Mass Spectrometer]

- Detects VOCs higher proton affinity than that of water (PA of H<sub>2</sub>O: 165.2 kcal/mol)
- First deployment (HR-TOF) onboard DC-8
- Aims to measure five groups of VOCs over Korea Peninsula to identify major/minor contributors, oxidation status, and their distributions.

- 1) Major VOC species aloft
- 2) Pure hydrocarbon : C<sub>x</sub>H<sub>y</sub>
- 3) One oxygen: C<sub>x</sub>H<sub>y</sub>O
- 4) Two oxygen: C<sub>x</sub>H<sub>y</sub>O<sub>2</sub>
- 5) Three or more: C<sub>x</sub>H<sub>y</sub>O<sub>3+</sub>

