

Ralph Baumgardner, Environmental Scientist, in EPA's National Exposure Research Laboratory

Exposure Methods and Measurements Division

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Area of Expertise: I am currently providing research in the areas of monitoring for atmospheric ammonia and other reactive nitrogen compounds. The Ammonia CASTNET CSN Study, ACCS, is providing ambient measurements of gaseous NH₃ for one year at five existing CASTNET sites with concurrent standard nitrogen measurements. The Beaufort Ammonia Measurement/Methodology/Modeling study complements the ACCS as well as answer important measurement methodology questions. The Beaufort NO_y Study complements the Beaufort Ammonia Study and the ACC Study. The Beaufort NO_y Study will measure NO_y (reactive nitrogen oxides), which is defined as NO_x (NO+NO₂) plus NO_z (HNO₃, HONO, PAN other organic nitrates, and particulate nitrate) continuously for one year.

Select Publications:

Baumgardner, R., C. Rogers, M. Puchalski, T. Lavery, K. Mishoe, G. Price, AND N. Hall. Measurements of Atmospheric NH₃, NO_y/NO_x, and NO₂ and Deposition of Total Nitrogen at the Beaufort, NC CASTNET Site (BFT142). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-14/182, 2014.

Rogers, C. M., T. F. Lavery, K. P. Mishoe, AND R. E. BAUMGARDNER. Evaluation of Data Replacement Strategies for CASTNET Dry Deposition Modeling. ENVIRONMENTAL SCIENCE AND TECHNOLOGY. John Wiley & Sons, Ltd., Indianapolis, IN, B(1):789-799, (2012).

Lavery, T., C. Rogers, R. E. BAUMGARDNER, AND K. Mishoe. Intercomparison of Clean Air Status and Trends Network (CASTNET) NO₃ - and HNO₃ Measurements with Data from Other Monitoring Programs. JOURNAL OF AIR AND WASTE MANAGEMENT. Air & Waste Management Association, Pittsburgh, PA, 59:214-226, (2008).

View more research publications by [Ralph Baumgardner](#).

Education:

- B.S. in Chemistry, Biology, 1968, 69, Western Carolina University

Professional Experience:

- 2000 - Present, Senior Environmental Scientist, Landscape Characterization Branch, NERL, ORD, EPA
- 1993 - 2000, Project Manager of Mountain Acid Deposition Program, NERL, EPA
- 1993 - 1998, Program Manager of the Clean Air Status and Trends Network, NERL, EPA
- 1991 - 1993, Co-Chair of the Aquatics and Terrestrial Effects Workgroup – CASTNet, NERL, EPA
- 1987 - 1991, Project Officer for the Mountain Cloud Chemistry Project, NAPAP, EMSL EPA
- 1982 - 1987, Research Scientist – Inorganic Pollutant Analysis Branch/ ASRL, EPA
- 1977 - 1982, Research Scientist – Performance Evaluation Branch/ EMSL, EPA