



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Research Laboratories
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Dr. David Epner
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David -

I am writing for two reasons, the first to let you know how impressive your work has been, and second to request more of the same.

We had sent some aluminum reaction vessels to you in May to be gold plated. Although the work was done on a rush basis, the finished product was excellent; purely on aesthetics, it caught the attention of the director of the NOAA Aeronomy Laboratory and the head of the Atmospheric Chemistry Division at the National Center for Atmospheric Research. The plating job was head and shoulders above what has been done for aircraft instruments here in the past.

More importantly, and aesthetics aside, the performance of the vessels gave us nearly double the sensitivity, due in part to the extremely high reflectivity of your finish, of earlier instruments. The reaction vessels are the heart of a custom-built instrument for measuring reactive nitrogen compounds at ultra-trace levels in the atmosphere. This instrument, complete with your beautiful gold plating, has been installed on the NOAA WP3-D research aircraft and has flown on several field missions to study ozone pollution in different areas of the continental U.S. and Canada. Over two years of use has not changed the apparant reflectivity of your coatings at all, where other vessels' coatings have been significantly degraded over the course of a single field mission.

So far your coatings have graced reaction vessels installed in the NOAA WP-3D, the British Met Office C-130, and more aircraft installations of these vessels are planned in the future. Although the quantities are small, the benefit to our measurements is certainly out of proportion to the size of the jobs we send you every year.

Thanks again for the excellent work, and brace yourself for another round. Four more vessels will be on the way next month.

Sincerely,

Dr. Thomas B. Ryerson
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