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The Editor
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(by email)

Expensive for whom?

From Peter Borrell

Your otherwise excellent article on measuring concentrations of tropospheric trace gases and pollutants from space was sullied by the final remark that "the data is beginning to be delivered, albeit at considerable expense". Expensive for whom and in relation to what?

Clearly satellite measurements are expensive in comparison say to measurements made at a ground site – or to a sparse network of ground stations, scattered over the globe, such as those in the GAW network.

But surely the real comparison and competition is with other satellite missions. Those favoured by the space agencies appear to be elegant physical studies of global properties – or extra-terrestrial missions to explore the atmospheres of other planets – or contributions to the construction and maintenance of a space station.

As the recent IGACO report [1] on the future of the atmosphere indicated: in order to monitor the deteriorating state of the atmosphere, it is essential to establish a research and monitoring system for the chemistry of the atmosphere, consisting of satellites (both low earth orbit and geostationary), ground stations and regular aircraft-based measurements, linked to a comprehensive modelling system.

Although it should not be necessary to choose, given the choice between, on the one hand, a combination of esoteric physics, popular astrophysics or the fabrication of what appears to be largely a status symbol, and, on the other, with the understanding and monitoring of the chemical health of the atmosphere, I know where I would like my money put please.

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[1] L. A. Barrie, P. Borrell & J. Langen (Editors) *The Integrated Global Atmospheric Chemistry Observations Theme (IGACO) Report on Monitoring of our Environment from Space and from Earth*, European Space Agency (ESA) SP1235; Global Atmospheric Watch (GAW) 159, World Meteorological Organisation (WMO) TD 1235, 2004, pp 54.

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P. Borrell, *Satellite Costs*, Chemistry World, 2, 7(July) 29 (2005)

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