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Technical Note: The air quality modeling system Polyphemus

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Abstract. Polyphemus is an air quality modeling platform which aims at covering the scope and the abilities of modern air quality systems. It deals with applications from local scale to continental scale, using two Gaussian models and two Eulerian models. It manages passive tracers, radioactive decay, photochemistry and aerosol dynamics. The structure of the system includes four independent levels with data management, physical parameterizations, numerical solvers and high-level methods such as data assimilation. This enables sensitivity and uncertainty analysis, primarily through multimodel approaches. On top of the models, drivers implement advanced methods such as model coupling or data assimilation.

◘ Final Revised Paper (PDF, 577 KB)   ◘ Supplement (1890 KB)   ◘ Discussion Paper (ACPD)

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