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Nitric acid and particulate matter measurements at Athens, Greece, in connection with corrosion studies

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Abstract. For a long time, scientists have been concerned about the effects of air pollution on materials and especially on the monuments of the cultural heritage. The EU funded a project, entitled MULTI-ASSESS, to determine these effects and to develop dose-response functions appropriate for the new multi-pollutant environment. The University of Athens participated in this effort as a targeted field exposure test site. In the present paper, the measurements of the passive samplers, which were exposed during the same period with the samples for corrosion studies, at the Athens station, are presented. The results have shown that only 16.5% of the deposited mass was water soluble. The vertical distribution of passive particle collectors has led to the conclusion that the height of maximum deposition of each ion is different. In addition, a variation of the water-soluble mass to total deposited mass between 8% and 31% was observed.

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