

Accepted Manuscript

Investigation of the geographical origins of PM₁₀ based on long, medium and short-range air mass back-trajectories impacting Northern France during the period 2009–2013

Antoine Waked, Aude Bourin, Vincent Michoud, Esperanza Perdrix, Laurent Y. Alleman, Stéphane Sauvage, Tiphaine Delaunay, Sandra Vermeech, Jean-Eudes Petit, Véronique Riffault

PII: S1352-2310(18)30530-2

DOI: [10.1016/j.atmosenv.2018.08.015](https://doi.org/10.1016/j.atmosenv.2018.08.015)

Reference: AEA 16183

To appear in: *Atmospheric Environment*

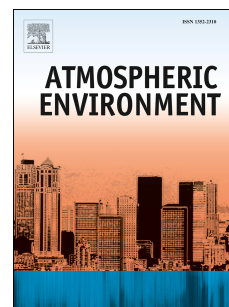
Received Date: 20 April 2018

Revised Date: 31 July 2018

Accepted Date: 6 August 2018

Please cite this article as: Waked, A., Bourin, A., Michoud, V., Perdrix, E., Alleman, L.Y., Sauvage, Sté., Delaunay, T., Vermeech, S., Petit, J.-E., Riffault, Vé., Investigation of the geographical origins of PM₁₀ based on long, medium and short-range air mass back-trajectories impacting Northern France during the period 2009–2013, *Atmospheric Environment* (2018), doi: 10.1016/j.atmosenv.2018.08.015.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Investigation of the geographical origins of PM₁₀ based on long, medium and short-range air mass back-trajectories impacting Northern France during the period 2009-2013.

Antoine Waked¹, Aude Bourin¹, Vincent Michoud^{1*}, Esperanza Perdrix^{1‡}, Laurent Y. Alleman¹, Stéphane Sauvage¹, Tiphaine Delaunay², Sandra Vermeech², Jean-Eudes Petit^{3**}, and Véronique Riffault¹

1. IMT Lille Douai, Univ. Lille, SAGE - Département Sciences de l'Atmosphère et Génie de l'Environnement, 59000 Lille, France

2. Atmo Hauts-de-France, 55 Place Rihour, 59044 Lille Cedex, France

3. Atmo Grand-Est, 5 rue de Madrid, 67300 Schiltigheim, France

*Now at Laboratoire Interuniversitaire des Systèmes Atmosphériques (LISA), UMR CNRS 7583, Université Paris-Est Créteil and Université Paris-Diderot, Institut Pierre-Simon Laplace (IPSL), Créteil, France

**Now at Laboratoire des Sciences du Climat et de l'Environnement, UMR CNRS 8212, CEA/Orme des Merisiers, 91191 Gif-sur-Yvette, France.

‡Corresponding author:

E. Perdrix: esperanza.perdrix@imt-lille-douai.fr

Download English Version:

<https://daneshyari.com/en/article/10149609>

Download Persian Version:

<https://daneshyari.com/article/10149609>

[Daneshyari.com](https://daneshyari.com)