Contribution ID: **58** Type: **Poster Presentation**

Analysis of the contribution of the main emission sources from the chemical composition of PM2.5 in Abidjan and Korhogo (Cote d'Ivoire)

As part of the project Pollution de l'Air et Santé dans les milieus Urbains (PASMU), several equipment's have been installed in order to study atmospheric chemistry (rain, gases and aerosols).
At the installed sites, PM2.5 aerosol samples (aerodynamic diameter less than 2.5 µm) were collected on quartz filters and Teflon filters, weekly at one site in Abidjan and another in Korhogo. Analysis of the samples on us allowed us to determine the chemical composition (mass concentrations, BC, OC and soluble ions) of PM2.5. These data allowed us to study the evolution of the contribution of the sources from the chemical composition. This database will allow us to analyze the chemical closure of the PM2.5 aerosol. In addition, using the EPA PMF 5.0 software, from the United States Environmental Protection Agency, the different sources that contribute to the PM2.5 aerosols collected at the study sites have been studied.
The results show that the concentrations observed during the 2 dry seasons are significant compared to the wet seasons. The analysis of the contribution of the sources, allows to identify 5 sources as well in Abidjan as in Korhogo. The contributions of these sources are very disproportionate, with 40% for traffic and domestic fires in Abidjan, while in Korhogo domestic fires and biomass burning contribute 70% and traffic 16%.

Author: Dr GNAMIEN, Sylvain (University Felix Houphouet-Boigny (Cote d'Ivoire) / University Paul Sabatier Toulouse III (France))

Co-authors: Dr LIOUSSE, Cathy (Laboratoire d'Aérologie, Université Paul Sabatier Toulouse III CNRS, France); Prof. YOBOUÉ, Véronique (Laboratoire des Sciences de la Matière, de l'Environnement et de l'énergie Solaire, Université Félix Houphouët-Boigny); Dr KEITA, Sékou (Université Péléforo Gon Coulibaly de Korhogo, Unité de Formation et de Recherche des Sciences Biologiques); Dr BAHINO, Julien (Laboratoire des Sciences de la Matière, de l'Environnement et de l'énergie Solaire, Université Félix Houphouët-Boigny); Dr SILUÉ, Siélé (Université Péléforo Gon Coulibaly de Korhogo, Unité de Formation et de Recherche des Sciences Biologiques); Mr GARDRAT, Eric (Laboratoire d'Aérologie, Université Paul Sabatier Toulouse III CNRS, France); Mr DIABY, Kassamba Mohamed Lamine (Laboratoire des Sciences de la Matière, de l'Environnement et de l'énergie Solaire, Université Félix Houphouët-Boigny)

Presenter: Dr GNAMIEN, Sylvain (University Felix Houphouet-Boigny (Cote d'Ivoire) / University Paul Sabatier Toulouse III (France))

Session Classification: Poster Session

Track Classification: Ambient air pollution