

Marie Curie project: **CLOUD ITN**

An atmospheric physicist measures the formation of the biggest particle ever made at CERN

CV



Dr. Duplissy Jonathan

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Education

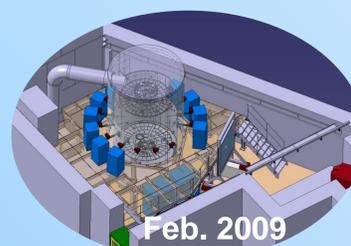
- 2004 - 2008** Doctor ès sciences: "Hygroscopic properties of secondary organic aerosol" *PSI & ETHZ, Switzerland.*
- 2002 - 2004** Master physic, Atmospheric physics & chemistry *Blaise-Pascal & J. Fourier Universities, France & CSIRO, Australia.*
- 1999 - 2002** Bachelor physic , *Blaise-Pascal University, France.*
University Diploma, astrophysics, *Orsay, Univ., France .*

Research experiences

- 2009-2010:** Post doctoral (ITN Marie-Curie), CERN
*Coordination of CLOUD detectors and data analysis.
Supervise and advice 8 CLOUD-ITN PhD student.
Management of CLOUD safety (electricity, gas, chemical, radiation...)*
- 2004-2008 :** PhD candidate, PSI & ETHZ, Switzerland.
*Physical properties characterization of secondary organic aerosols.
Instrumentation development.
Measurement at CLOUD pilot at CERN & CL ACE 4 at Jungfraujoch.*
- 2004 Jul.-Oct.:** Research assistant, CSIRO, Australia.
Development of a NO₂ sensor and a size resolved nephelometer.
- 2004 Jan.-Jun.:** Master 2 student project, CSIRO, Australia.
Construction of a HTDMA and measurement in Cap Grim, Tasmania.
- 2003 Jul.-Aug.:** Research assistant, CNRS ,France.
Data analysis of Interreg III campaign.
- 2003 Jan.-Jun.:** Master 1 student project, CNRS, France.
Development and operation of a VTDMA for Interreg III.

Achievement

CLOUD coordination and operation



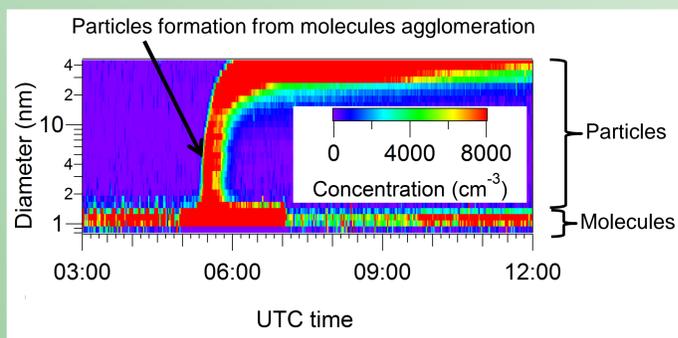
- Design of the gas system and humidifier.
- Safety management of the experiment.
- Coordination and implementation of the atmospheric detectors.
- Coordination of the data acquisition and analysis.
- Data publication in peer review journals.
(Duplissy et al. ACP, 2010; Sihto et al. ACPD, 2010).



Results

Nucleation mystery...not anymore!

In December 2009 and in June 2010, two successful measurement campaigns were performed. Particles have been created in CLOUD and measured with top-of-the-art instrumentations. From these beautiful data set, an article has been submitted to Nature (Kirkby et al.). The mystery of nucleation is on a good way to be solved...



Beautiful example of a nucleation event: *In CLOUD empty of particles (before 5:30), we have created particles from molecules (at 5:30) under very well control conditions. By varying the atmospheric conditions and measuring the particles formation, the nucleation mechanism can be well studied and understood.*

Marie Curie fellowship

- Excellent networking (collaboration with 19 institutes).
- Consortium of the best specialists into one project.
- Weekly Skype meeting between all CLOUD-ITN.
- Exchange with Helsinki university.
- Regular workshop (Switzerland, Austria, Finland).
- Summer and winter school yearly organized.
- International conferences attended.
- Future career discussion (ESOF, Torino).
- Books, laptop and memberships purchased.



Training for Europe
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