

# Emily Brageot

## Instrument scientist for astronomy

Dual citizenship, American and French, looking for an instrument scientist position to design, maintain or analyze the performance of earth-based or space-based astronomical instruments.

## Contact :

Emily Brageot  
89, bvd Louis Botinelly  
Bât. E 13004 Marseille  
FRANCE  
+33 (0)6 70 19 33 65  
emily\_brageot@yahoo.fr  
French and American

## EDUCATION

- 2009-2012 **Thesis** : "Feasibility study of a mid-infrared spectro-imager based on an uncooled micro-bolometer for missions to small bodies of the inner solar system"  
Laboratoire d'Astrophysique de Marseille, Aix-Marseille University, France.
- 2008-2009 **Master** : "Astronomical and Space-based Systems Engineering"  
University of Paris-Sud 11, France.
- 2006-2009 **Bachelor and Master** : "Fundamental Physics Magistere"  
University of Paris-Sud 11, France.

## PROFESSIONAL EXPERIENCE

- 2012-2013 **Laboratoire d'Astrophysique de Marseille : Instrument scientist**  
"THERMAP a mid-infrared spectro-imager for the ESA Marco Polo R mission"  
System analysis, technical requirements definition, optical design (Zemax).
- 2009-2012 **Laboratoire d'Astrophysique de Marseille : Instrumentation Thesis**  
"Feasibility study of a mid-infrared spectro-imager based on an uncooled micro-bolometer for missions to small bodies of the inner solar system"  
- Uncooled micro-bolometer characterization and performance :  
Detector characterization, imaging and spectroscopic performances, calibration study, IDL programming.  
- Feasibility study and instrument design for the ESA Cosmic Vision mission Marco Polo R :  
Instrument trade-off analysis, optical design (Zemax).
- 2009 (6 months) **ONERA, Châtillon, France : Internship**  
"Study of the vulnerability of satellites to a threat of ballistic type"  
Missile database creation, C++ programming.
- 2008 (4 months) **ONERA, Châtillon, France : Internship**  
"Creation of a simulation tool of the on-orbit measurements of the ESA GOCE mission accelerometers"  
Matlab/Simulink programming, control engineering.
- 2007 (2 months) **LPTA Laboratory, Montpellier II University : Internship**  
"Simulation of results of collisions of particles as seen by the ATLAS detector at the CERN LHC"  
C and Fortran programming.
- 2006 (2 months) **ICG Laboratory, Montpellier II University : Internship**  
"Creation of a graphical user interface to control a Hydrogen battery experiment"  
Programming with a Visual Basic graphical interface, creation of a user manuel.

## PARTICIPATION IN FLIGHT PROJECT

### **Marco Polo R (ESA) :**

Co-investigator of the THERMAP mid-infrared spectro-imager.

## PUBLICATIONS

Brageot et al. 2012, « THERMAP: a mid-infrared spectro-imager based on an uncooled micro-bolometer for space missions to small bodies of the solar system. », SPIE Astronomical Telescopes & Instrumentation

**+ 6 contributions as first author to international conferences.**