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## Research expertise

Weather (Meteorology), Climate, Climate Change, Astronomy (Site Selection, Site Testing).  
More specifically: Clouds, Water Vapour, Climate Reanalyses, Meteorological Observation and Systems, Astronomical Site Testing and Site Characterisation.

## Research expertise

I have worked on the following research projects:

Astronomical and Atmospheric Site Testing, Institute of Astrophysics of the Canary Islands, Santa Cruz de Tenerife, 38205, Spain (2017)

NASA Global Precipitation Mission (GPM) Stornoway ground station (2015-)... [read more](#)

SEPA Volcanic Ash Emissions in Scotland; Stornoway ground station (2016-)... [read more](#)

SASKYA ("Search for an Astronomical Site in Kenya") - Principal Investigator (2011- ), using climate model reanalysis data

Link between Weather, Climate and Health in the Outer Hebrides

SuLA and SECRE EU Northern Periphery Programme projects (2012-2014)

OCTES ("Opportunities for Community groups Through Energy Storage"), which is a new European Union Framework 7 Northern Periphery Project, involving partners from Scotland, Northern Ireland, Finland and Iceland (2011-2013)

The Greenspace Green Building Research Program (2009-2011) - weather, climate, buildings and reducing emissions

STARTWAVE (Studies in Atmospheric Radiative Transfer and Water Vapour Effects) and Alpine Thunderstorms, University of Bern, Switzerland (2005-2008) - researching clouds and water vapour

FriOWL (European Southern Observatory), Switzerland (2002-2008): Searching for a site for the OWL and E-ELT telescopes (PhD thesis)

The Large Synoptic Survey Telescope (LSST), site testing and climate variability study (2005)

Canadian pressure observations and circulation variability: links to air temperature (2000-2005)

The Canadian Cryosphere Information Network and State of the Canadian Cryosphere projects: Plotting real-time Canadian snow and ice information live on the web.

The micro-meteorology of a bog site in the Netherlands (Masters' dissertation)

The urban heat island of Dublin city during the summer months (Undergraduate dissertation)

## Qualifications

Doctor of Philosophy, University of Bern  
Award Date: 1 Jan 2008

Master of Science, University of Reading  
Award Date: 1 Jan 1995

Bachelor of Science  
Award Date: 1 Jan 1993

... → 1996 Fellow of the Royal Meteorological Society, FRMetS

## Research output

### **Understanding the Atmosphere: Constraints on Astronomical Observation**

Graham, E., 1 Aug 2017, In : *Canarian Observatories Updates (CUpS)* . 2017, 01, p. 1-4 4 p., 01-2017.

### **A note on the extreme low pressure of 24 December 2013**

Graham, E., 1 Nov 2015, In : *Weather*. 70, 11, p. 316-317 2 p.

### **Search for an Astronomical Site in Kenya (SASKYA) using Climate Data**

Graham, E., Buckley, D., Tirima, K. & Vaughan, R., 19 Mar 2015, In : *Theoretical and Applied Climatology*. 124, 1-2, p. 425-449 25 p.

### **'Blended' Learning at the University of the Highlands and Islands: A Case Study in Self-Awareness and Policy Making**

Graham, E., Panciroli, E., Panciroli, E. & Clarke, S., 1 Mar 2015, In : *Journal of Perspectives in Applied Academic Practice*. 3, 1, p. 39-48 10 p.

### **Search for an Astronomical Site in Kenya (SASKYA) update: Installation of on-site automatic meteorological stations**

Graham, E., 1 Nov 2014, *Journal of Physics: Conference Series*. 1 ed. IOPScience, Vol. 595. p. 1-6 6 p.

### **The water vapour flux above Switzerland and its role in the August 2005 extreme precipitation and flooding**

Koffi, E. N., Graham, E. & Mätzler, C., 1 Jul 2013, In : *Meteorologische Zeitschrift*. 22, 3, p. 328-341 13 p.

### **An observational study of air and water vapour convergence over the western Alps during summer and the development of isolated thunderstorms**

Graham, E., 1 Dec 2012, In : *Meteorologische Zeitschrift*. 21, 6, p. 561-574 13 p.

### **A Hebridean frost hollow made visible**

Graham, E., 25 Jan 2012, In : *Weather*. 67, 2, p. 45-47 3 p.

### **Using re-analysis model data ("FriOWL") to analyse climate trends related to astroclimatology of Paranal and La Silla**

Graham, E., Nov 2011, In : *Revista Mexicana de Astronomía y Astrofísica*. 41, p. 12-15 4 p.

### **Development of regional and Pan-European guidelines for more efficient integration of renewable energy into future infrastructure**

Graham, E., Oct 2010, European Commission. 100 p.

### **The water vapour mass balance (flux) of Switzerland**

Graham, E., Mar 2010, Institut für angewandte Physik, Universität Bern. 37 p. (2010-01-MW)

### **An observational study of air and water vapour convergence over the western Alps during summer and the development of isolated thunderstorms**

Graham, E., Feb 2009, Institut für angewandte Physik, Universität Bern. 75 p.

### **The FriOWL Guide: A site selection tool for extremely large telescopes using climate data**

Graham, E., Sep 2008, 3188 ed. Institut für angewandte Physik, Universität Bern. 257 p.

### **Site selection for Extremely Large Telescopes using the FriOWL software and global re-analysis climate data**

Graham, E., 27 Aug 2008. 12 p.

### **Applications of FriOWL: The Paranal and La Silla Astroclimate Report**

Graham, E., Aug 2008, 3187 ed. Institut für angewandte Physik, Universität Bern. 85 p.

**A site selection tool for large telescopes using climate data**

Graham, E., Apr 2008, 3149: Institut für angewandte Physik, Universität Bern. 217 p.

**The Mistral as seen by satellite**

Graham, E., 29 Dec 2006, In : Weather. 61, 9

**FriOWL: A Site Selection Tool for the European Extremely Large Telescope (E-ELT) Project**

Graham, E., Sep 2006, In : The Messenger. 125, 9, p. 44-47 4 p.

**200mm falls in Ireland**

Graham, E., Jun 2006, In : Weather. 61, 5, 2 p.

**Canadian pressure observations and circulation variability: links to air temperature**

Graham, E., 22 Jul 2005, In : International Journal of Climatology. 25, 11, p. 1473-1492 20 p.

**Climate-based site selection for a Very Large Telescope using GIS techniques**

Graham, E., Mar 2005, In : Meteorological Applications. 12, 1, p. 77-81 5 p.

**Integrated water-vapour dynamics over Switzerland during severe precipitation in August 2005**

Graham, E., 2005. 2 p.

**Homogenisation of a Canadian surface pressure database**

Graham, E., Sep 2004, *Proceedings of Fourth Seminar for Homogenisation and Quality Control in Climatological databases*. Budapest: Hungarian Met Service, p. 63-79 16 p.

**Site Selection for OWL using past, present and future climate information**

Graham, E., 21 Jun 2004, *Proceedings of the SPIE*. USA: SPIE, Vol. 5489. 10 p.

**The Emerald Isle turns white: Snow and very low surface temperatures over Ireland during Christmas 2000**

Graham, E., Jan 2004, In : Weather. 59, 1, p. 15-19 5 p.

**Nacreous clouds in November 1999 and record low ozone**

Graham, E., Mar 2002, In : Weather. 57, 3, p. 107-108 2 p.

**The Urban Heat Island of Dublin City during the Summer Months**

Graham, E., Feb 1993, In : Irish Geography. 26, 1, p. 45-57 13 p.

**Awards**

**UAEREP: UAE Rain Enhancement Programme**

Graham, E. (. & Abshaev, A.

£4,145,130.00