

Rare noctilucent clouds seen over Armagh

June 24 2014



An image of the noctilucent clouds observed on the night of 19th/20th June over the Mall in Armagh, recorded by Astronomer John Butler

Rare noctilucent or "night shining" clouds were observed over Armagh on the night of 19th/20th June. These silvery, highly structured clouds take many forms, ranging from delicate feather structures to streamers, ripples and waves, and are only seen occasionally, always after dark, during the summer months May to August. Scientists believe that they are caused by sunlight reflecting off tiny ice crystals in the mesosphere, a region of the Earth's atmosphere lying high above the stratosphere, at a height of around 80 kilometres.

Noctilucent [clouds](#) are a relatively recent atmospheric phenomenon. They were first reported in 1885, though there is an earlier mention of a similar phenomenon in a report by the Armagh Observatory's third

director, The Revd Thomas Romney Robinson, in early May 1850. His handwritten note in the Observatory's meteorological archives for that month records his observation of "strange luminous clouds in the NW, not auroral".

There is also a suggestion that the frequency of [noctilucent clouds](#) has increased in recent years and may be linked to [global climate change](#) and possibly also to the incidence of meteoroids in the Earth's upper atmosphere. Meteoroids can deposit dust particles and associated meteoric "smoke" in the mesosphere, which can act as condensation nuclei for the observed tiny noctilucent cloud ice crystals.



Credit: Paul Evans

1850	Evening 10			Wind		Therm.			
May	E	A	Bar	Hg	Dir	Force	Max	Min	
1	25.	49.	30.066	27.5	NW	1	56	41.2	o.g. many luminous clouds in NW.
2	22.5	49.5	30.110	28.25	NW	0	56	38	o.g. aurora
3	26.	50.5	29.936	28.5	W	5	57	41.5	o.g. some faint patches
4	37.	47.	29.625	28.64	NW	1	49.2	33	o.g. but some luminous patches
5	38.	46.5	29.637	28.78	NE	5	48	32.9	o.g.

Extract of Romney Robinson's report of a similar phenomenon in the Observatory's meteorological records for 1st and 4th May 1850.

More information: "Possible Observations of Noctilucent Clouds" by Thomas Romney Robinson is available online:
climate.arm.ac.uk/publications/noct-paper-rev.pdf

Provided by Armagh Observatory

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