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The Hessdalen Phenomena



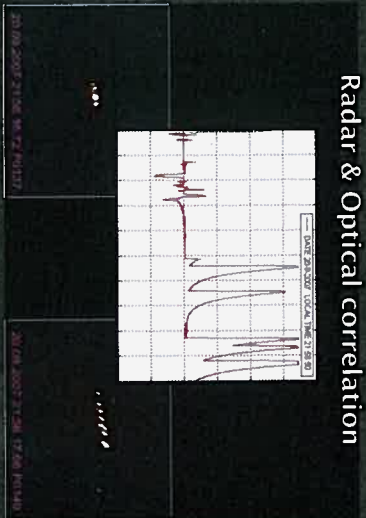
XY481 Optical spectroscopy and radar analysis of transient luminous phenomena in the low atmosphere over Hessdalen valley NORWAY

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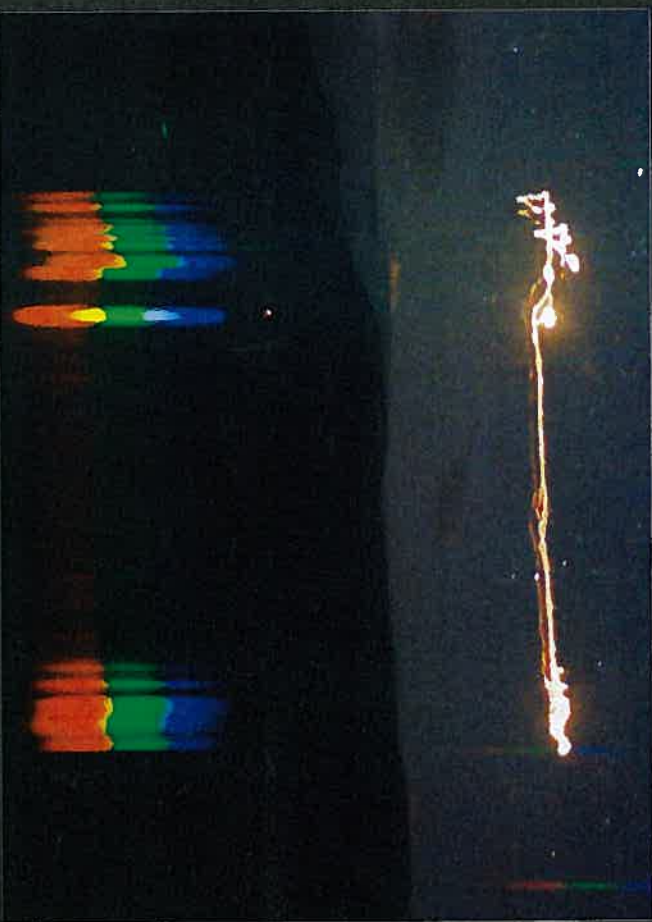
The Hessdalen phenomena is a transient luminous phenomena observed in the low atmosphere over the Hessdalen valley, Norway. First written observation in 1811 by the Norwegian priest Jakob T. Krogh. Combined Italian & Norwegian scientific campaign since 1995, joined by French researchers in 2007. During the Science Camp program in September 2007, a big outbreak of the Hessdalen phenomena was observed from the 3 mountain research bases. Simultaneous observations was done on RADAR while the phenomena was filmed and photographed. No sound was heard and no electromagnetic radiation was detected on different VLF receivers. Radioactive levels over normal were not observed. The optical spectrum analysis showed continuous spectrum as from plasma in stars/sun, but no heat

was observed. A comparison with the star Vega spectrum showed interesting similarities. This indicating that most of the energy from the Hessdalen phenomenon is radiated in the UV spectrum. This hypothesis was further strengthened when the light went out after 30 minutes, but the RADAR continued to get echoes for over 2 hours. This pointing towards a local plasma ball, ionized to a high energy level where it is only radiating in the UV band, not down in the visible optical band. The RADAR echoes were very large, indicating a huge reflecting area, which was unchanged when the phenomena got invisible. The phenomena seems to move like a standing wave with "bubbles" coming out of thin air at the maximum field strength points. This could be done by a static electric field, but this field & energy build up has never been detected.

Radar & Optical correlation

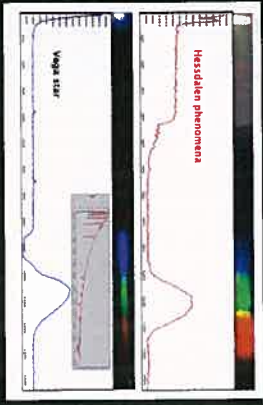


The light was observed optically from three different positions, as well as on radar. Continuous Radar recordings lasted for 3.5 hr from 20:20 until 23:35. The phenomenon was only optical visible in 30 min from 21:50 to 22:00.

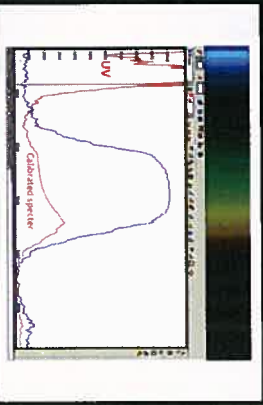


Hessdalen 20. September 2007, 20:58. Photo shot from the Rogne mountain toward west. Camera Nikon D80 ISO1600, lens 50mm f.1.8, exposure time 30 sec. Lens equipped with transmission grating.

Optical spectrum & Intensity plot of HP & Vega



Intensity plot of HP calibrated



The system has low sensitivity in the UV blue light area. The correct intensity of the HP spectrum is found after calibration against the Vega star. This means that most of the radiation is in the UV band.