

## Arctic Science 2019, 4.5 ECTS

### Schedule for the Kiruna meeting, 6<sup>th</sup> – 9<sup>th</sup> February 2019

<p><b>Wednesday 6 Feb.</b> 8:00 8:40 – 9:30 9:30 – 9:45 9:45 – 10:15 10:15 – 11:00 11:00 – 12:00 12:15 – 13:00 13:00 13:30 regular bus to Jukkasjärvi 14:00 15:30 or 16:30</p>	<p><b>Swedish Institute of Space Physics, Aniara</b> Bus departs from Folkhögskolan, arrives Space Campus approx 08:30 (Bus ticket 84 kronor) <i>Course registration, general information and presentation of the course exercises</i>, Carol Norberg &amp; Carina Gunillasson Coffee break <i>Current activities of the Swedish Institute of Space Physics</i>, Hans Nilsson Tour of the Space Campus <i>Magnetospheric &amp; auroral physics</i>, Carol Norberg Lunch break Group photograph in front of the Institute <b>Visit to ICEHOTEL, Jukkasjärvi</b>  Guided tour of the ICEHOTEL 14:00 to 14:30 Regular bus departs Jukkasjärvi Evening: Aurora observations weather permitting</p>
<p><b>Thursday 7 Feb.</b> 10:30 12:00 – 14:00 15:30 – 16:30  18:15 19:00 – 20:00  20:00 – 23:00 23:15</p>	<p><b>Abisko</b> Chartered bus departs from Folkhögskolan for Abisko Visit to Mount Nuolja by chair-lift <i>Avalanche safety</i>, Stefan Hedlund, Room Konten. Free time Walk to the Abisko Research Station <i>The climate's impact on the Arctic environment</i>, Keith Larsson at the Abisko Research Station Aurora observation period Chartered bus back to Kiruna</p>
<p><b>Friday 8 Feb.</b> 8:30 – 10:00 10:30 – 11:30 12:30 – 15:00  16:00 – 17:00</p>	<p><b>Kiruna town centre, Auditorium, Parkskolan</b> <i>Ice particles in the atmosphere</i>, Thomas Kuhn <i>Living in a cold climate</i>, Karna Johanson <i>Tour of the LKAB underground mine starting from Folkets Hus</i> <i>Glacier and climate research</i>, Carol Norberg Evening: Aurora observations weather permitting</p>
<p><b>Saturday 9 Feb.</b> 9:30 – 12:00</p>	<p><b>Parkskolan, Auditorium</b> <i>Snow exercise</i> The exercise comprises an introduction, outdoor snow pack investigation involving digging in the snow and measurements, concluding with a group discussion.</p>

The Swedish Government finances this course for non-fee paying students. It is a distance course with one meeting in Kiruna from 6 to 9 February 2019.

**Participating lecturers**

Dr. Carol Norberg, Reader in Space Physics, Umeå University

Dr. Hans Nilsson, Moa Persson, Daniel Kastinen, Philipp Wittmann, Swedish Institute of Space Physics

Dr. Karna Johanson Senior physician, Kiruna hospital

Dr. Keith Larson, Researcher, Climate Impacts Research Centre

Stefan Hedlund, Abisko tourist station

Dr. Thomas Kuhn, Assistant Professor, Satellite Atmospheric Science Group, Luleå University of Technology

**Cold-weather clothing**

In order to keep warm in the subarctic climate one should dress according to the three-layer principle. In order to regulate the body's temperature it is better to have several thin layers of clothing than one thick layer. The thin layers create several insulating air layers between them.

1. The inner layer should be underwear made of wool, preferably two layers.
2. The intermediate layer should be warming, such as a wool jumper or fleece jacket
3. The outer layer should protect against the weather, a windproof jacket (e.g. down jacket) and thermal trousers.
4. A warm hat and gloves are essential and a scarf is preferred.

A pair of spacious shoes will allow you to fit an extra pair of wool socks and let your toes have room to move. It is advisable to avoid taking a shower or bath before going outside. Avoid using water-based skin creams as these may cause frostbite.

**Course coordinator and examiner**

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We reserve the right to make adjustments in the schedule if necessary. The exact schedule will be somewhat dependent on the weather.