



## **First Results of the Gravity Wave Life-Cycle (GW-LCYCLE) Campaign 2013**

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The GW-LCYCLE mission is embedded in the BMBF research project Role of the middle Atmosphere in Climate (ROMIC) and took place in Kiruna, Sweden, from 30th November to 14th December, 2013. During the campaign a unique combination of airborne in-situ and remote-sensing observations of atmospheric wind, temperature, water vapor and other trace gases (e.g. carbon monoxide, sulfur dioxide and nitrous oxide) was employed. The campaign focused especially on weather situations when mountain-wave induced internal gravity waves propagated from the ground up into the mesosphere. Besides the airborne measurements, radiosondes were launched simultaneously from Andoya, Esrange and Sodankyla every three hours during these periods of deep mountain wave propagation. In addition some radiosondes were launched in Kiruna as often as it was possible. This led to a dataset containing at least 75 ascents distributed on 3 IOPs (03.12-04.12, 11.12-12.12, 13.12-14.12). For the last case, high temporal resolution soundings are available from 4:00 UTC to 15:00 UTC every one and a half hours. On EGU we want to present first evaluations of the collected data with a focus on gravity wave parameters from radiosonde measurements.