

Annet Eva Zawedde receives the Martin Landrøs Prize for outstanding master's thesis

June 15, 2015



Zawedde has been awarded the prize for her physics thesis "Weak to Moderate Recurrent Storms and their Influence on the Middle Atmosphere Composition in 2008" (Thesis supervisor: Hilde Nesse Tyssøy) Zawedde has worked on a demanding interdisciplinary project between space physics and atmospheric dynamics that required an extensive multidisciplinary approach. The basic theme of the thesis is the extent to which particle precipitation—in the form of energetic electrons from the sun's own weather—affects the composition of our atmosphere. Zawedde's thesis contains several valuable results for the research field. She demonstrates that even weak geomagnetic storms can increase the production of $-OH$ and cause loss of ozone in the mesosphere. In addition, she shows that in order to understand the extent to which this occurs it is necessary to take into account atmospheric waves and winds. These will cause variations in the $-OH$ concentration which can easily be misinterpreted as effects of particle precipitation. Zawedde's thesis is comprehensive, well-written and contains a detailed discussion that puts her work in the context of prevailing theory and previously published results.