



*The Norwegian Meteorological Institute has unmanned stations at Sola, Ørland and Bodø, operating a Vaisala DigiCORA® Unmanned Sounding Station AUTOSONDE. The picture shows the system at Sola and Ørland.*

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## Vaisala DigiCORA® Unmanned Sounding Station AUTOSONDE Supporting Synoptic Observations in Norway

The Norwegian Meteorological Institute (Meteorologisk institutt, NMI) has operated three Vaisala DigiCORA® Unmanned Sounding Station AUTOSONDE systems for several years. The AUTOSONDE systems supply continuous and reliable upper-air data to the synoptic observation network. One system is located at Sola in the western part of Norway, one unit is located at Ørland in central Norway and the last one in Bodø in northern Norway.

The Norwegian Meteorological Institute is the main provider of meteorological services to the public in Norway and also engages in related research activities. To meet synoptic upper-air observation needs, the Meteorological Institute uses Vaisala DigiCORA® Unmanned Sounding Station AUTOSONDE systems at three sites, which supply continuous and reliable upper-air data to the synoptic observation network. One system is located at Sola in the western part of Norway, one

unit is located at Ørland in central Norway and the last is in Bodø in northern Norway. In order to measure surface weather data, the sites are equipped with Vaisala MILOS Data Collection Systems from which the AUTOSONDE automatically retrieves surface weather observations.

“Each of these AUTOSONDE systems operates automatically and performs two synoptic soundings daily, using Vaisala RS80 Radiosondes. All of the systems are remotely controlled from Blindern in Oslo,” says Mr.

Jon Halvard Berntsen. As a Section Engineer, Jon Berntsen is responsible for programming and maintenance activities related to the AUTOSONDE systems, including the software, radio systems and data communications. He also takes care of issues related to the system’s mechanics or pneumatics, while local staff at the sites handle the periodic loading of the system with radiosondes, balloons and gas.

According to Berntsen, remote control is very useful. Smaller technical problems can

usually be handled by giving instructions to the local maintenance staff by phone. Thanks to the high quality of Vaisala’s products, there is seldom a need to travel to the site, he says. Since changing to CISCO routers (the ISDN dial-up modem connection proved to be a bit unreliable at the beginning), data communications have worked without problems. Regular maintenance visits are made once a year to the AUTOSONDE sites to check that everything is fine. As the installation sites are very windy, the systems at Bodø and Ørland are fitted with auxiliary covers in the balloon launcher vessel. These systems operate reliably even in harsh conditions and high winds, which is crucial, since the sites are difficult to access.

Berntsen says that if you don’t count the need to change the wind sensor bearings regularly, the system can be considered almost maintenance-free. He laughs that the birds, bees and butterflies that tend to get into the system cause the most faults, and spiders may jam the balloon detection sensor every now and then, since that’s their favorite spot. Whenever technical issues come up that require consultation with Vaisala, it is always easy to contact the Vaisala help desk. It’s important that help is easily accessible. ●