Exciting leap forward

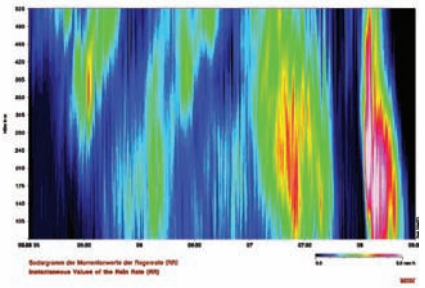
in precipitation measurements

Biral are proud to be able to offer the very latest in precipitation detection and monitoring using remote sensing technology. The new Micro Rain Radar (MRR) provides an incredibly detailed precipitation profile at several heights (to a maximum of 6 km) and will become the operational standard for precipitation measurements.
There are no comparable instruments providing such levels of detail and in the future the MRR will replace existing mechanical systems.

The MRR has been tested and validated by the scientific community worldwide and is now starting to make its presence felt in the commercial market. Its impact will change the way forecasting is done in the future and provide substantial savings in cost and resources compared to previous technologies. It can provide valuable information such as changes in precipitation state or intensity as it falls to the ground, the melting point of the precipitation and can even be used to calibrate larger systems.

This technology will become the next generation of operational rain instrumentation for use in organisations such as national weather services, environmental agencies, air traffic control / weather radars, road weather warning systems, road maintenance control centres, telecommunications and power stations.

For example by using the MRR at strategic highway sites, road maintenance control centres could eliminate the need for costly in-road precipitation sensors and expensive forecasting subscriptions allowing authorities to take precautions (i.e sanding roads, changing power levels) quickly, efficiently and with minimum resources.



Above: In this precipitation plot provided by the software. The so called 'bright band' (bright red area showing the sinking level of frozen precipitation) shows a decreasing freezing level during the day.

Left: MRR unit

The MRR is maintenance free, does not require any down time and can run unattended for as long as the data can be collected and power is available (it operates on very little power and can be battery or mains operated). The only requirements are a short mounting mast and a PC with which to collect, archive and visualise the data. The MRR has optional heating for more extreme locations in which snow might collect on the dish surface.

The MRR uses a 24 GHz continuous wave radar signal transmitted and received from a single compact dish. It has 60 range gates with a user-scalable vertical resolution from 30 m up to 200 m, while providing drop size distributions from around 1 mm up to several centimetre diameters.

The very compact size of the MRR (80 x 40 x 80 cm) and lightweight (10 kg) means the unit can be mounted on a vehicle and / or transported between sites.

We have a demonstration unit available, so please contact us to arrange a suitable time to see the unit performance for yourself.

Alternatively if you would like an information pack or to discuss your application please contact Richard McKay or the Biral Met Team.

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