**MET OFFICE / ENVIRONMENT AGENCY FORECASTER FEEDBACK FORM**

# Radar services feedback form

**This section to be completed by Environment Agency**

| | |
|---|---|
| **Name: Estelle Pircher** | **Date: 09/09/09** |
| **Position: Flood Forecasting team member** | **Region: North West** |

**Date & Time of period of interest:**

**Type of Product:**

*Tick as appropriate*

| | | | |
|---|---|---|---|
| Nimrod Actual 1/2/5km H7 | x | UKPP Fcst Rainrate 2km 5min H12 | ☐ |
| Nimrod UK Only Actual 1 km H17 | | | |
| Single Site Radar Actuals H2,4,6 | | UKPP Fcst Rainrate 2km 15 min H16 | x |
| 5km Data Quality indicator H18 | ☐ | UKPP Fcst Accumulation 2km H13 | x |
| NWP UKPP Temp 4km N3 | ☐ | UKPP Fcst Precipitation Type 2km H15 | ☐ |
| NWP UKPP Rainrate 4km N1 | | | |
| NWP UKPP Accum. 4km N2 | | UKPP Actual Rate 2km 15min | x |
| | | Moses (all products) | ☐ |

**Description of issue:** *(include name of single site radar if appropriate)*

Radar products underestimated total rainfall amounts during a recent orographic rainfall event (08/09/09).

Seathwaite Farm rain gauge (NJR: NY 235 121):

- 15 hour period (0600-2100): measured rain total: 49.4mm
- Radar from Hyrad (UKPP actual and Nimrod 1/2/5) rain total: 5.9mm

Ennerdale rain gauge (NJR: NY 084 154):

- 15 hour period: measured rain total: 33.8mm
- Radar from Hyrad (UKPP actual) rain total: 4.08mm
- 6 hour period (1045-1645): measured rain total: 25.2mm
- Radar from Hyrad (UKPP forecast rainrate) rain total: 2.48mm
- Radar from Hyrad (UKPP forecast accumulation) rain total: 5.72mm

Radar figures were taken at the location of the rain gauges.

**Comments:**

This is a feedback for the R&D project which assesses problems with RADAR data encountered during orographic rainfall events

**Impact on Agency activities:**

As these radar products feed into rainfall runoff models there are significant implications for forecasts of flooding.

**Now email this form to:**

**This section to be completed by Met Office**

**Response to Environment Agency comment:**

We acknowledge that the radar has underperformed in this particular case and would like to take the opportunity to look at its performance in more depth. This case is of significant interest to a project we are currently working on in conjunction with the Environment Agency (EZ5934) regarding orographic enhancements in upland catchment areas. The eventual aim of the project is to implement an improved version of the Alpert and Shafir model used to derive orographic enhancements in upland regions. Please find attached a copy of the final report from some previous work carried out on the subject.

**Name: Selena Georgiou** **Date: 28/9/09**

**Position: Radar Research Scientist**

**Now email this form to:**

**For Service Managers' Use Only**

**Comments, Actions & Recommendations:**

***Please note that these recommendations will be discussed at the Weather Services Review Team and the Weather Services Group before any decision is taken to progress. For further information, please contact your regional WSRT rep.***

**This section to be completed by EA National Flood Risk Systems Forecasting and Detection Team**

**Response to MO comment:**

**Name:** **Date:**

**Position:**

**Now email this form to:**