



# An Example of the use of EC-products in aviation forecasting

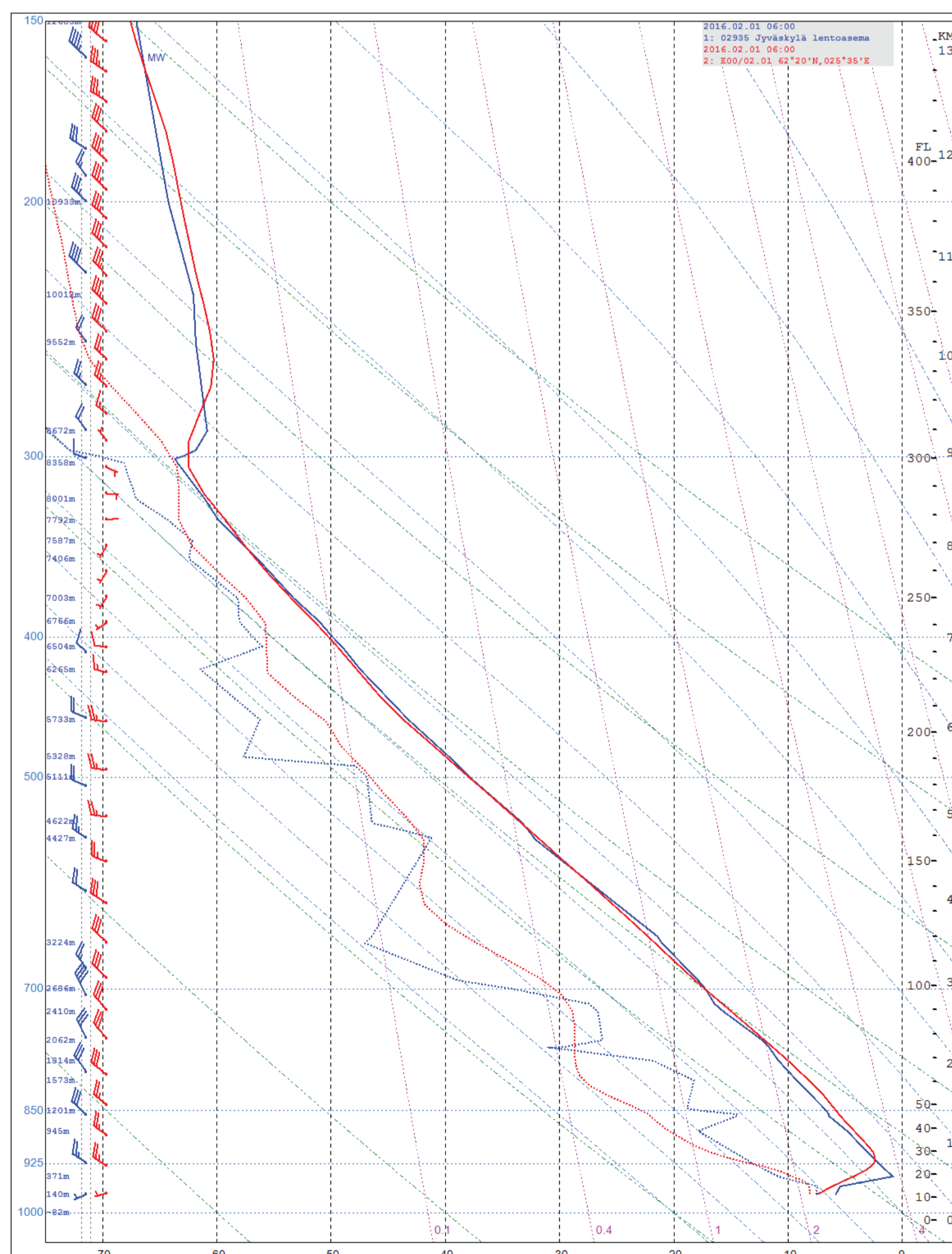
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## Introduction

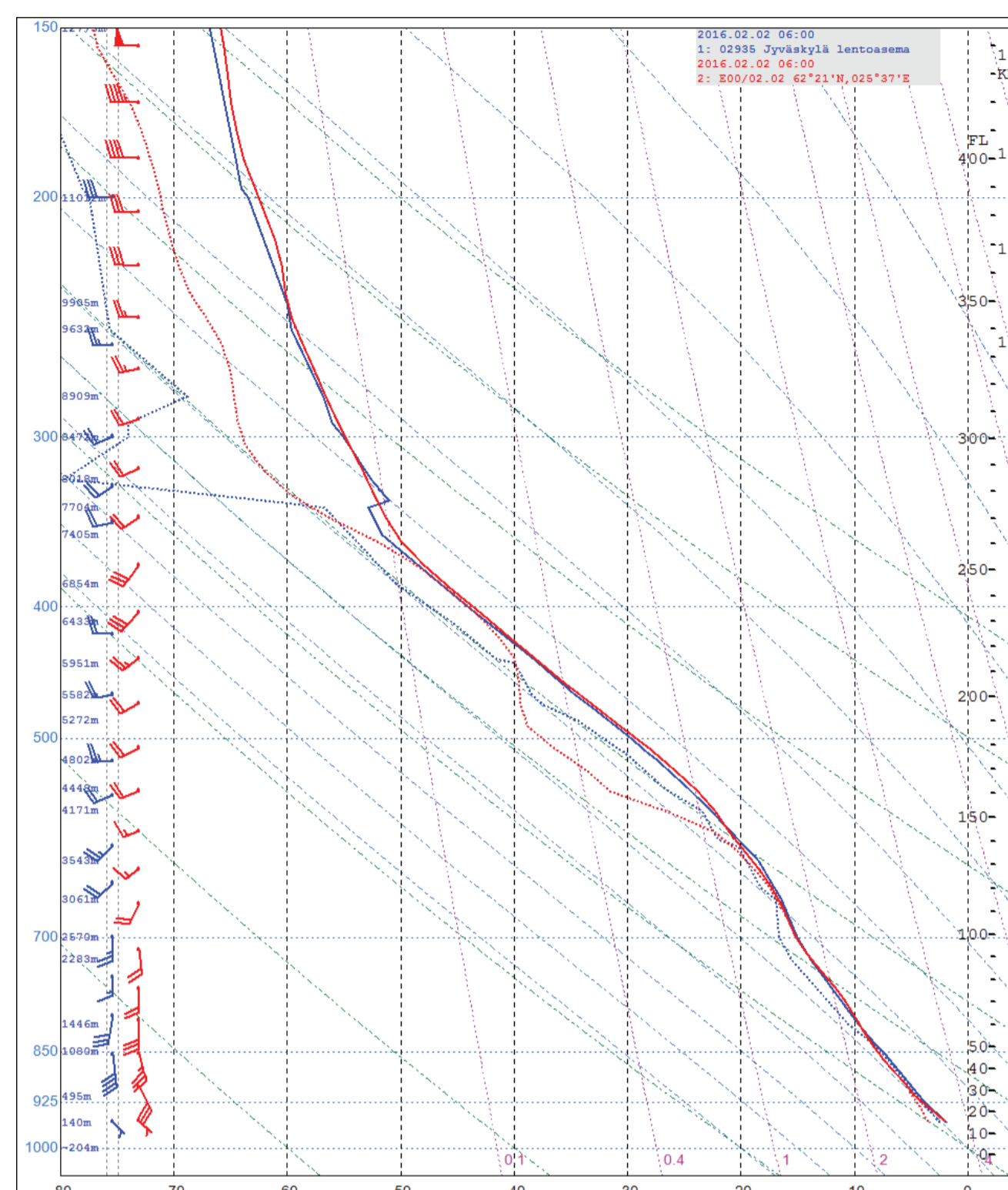
I'm working at Tampere airport as a military and aviation forecaster and ECMWF NWP-products are used as base tools among other NWP-forecasts and observations. In aviation forecasts the main focus is in short timescale and partly smaller scale phenomenon than the horizontal resolution of EC model. This poster introduces some examples of the use of EC-products.

## Sounding vs. Model

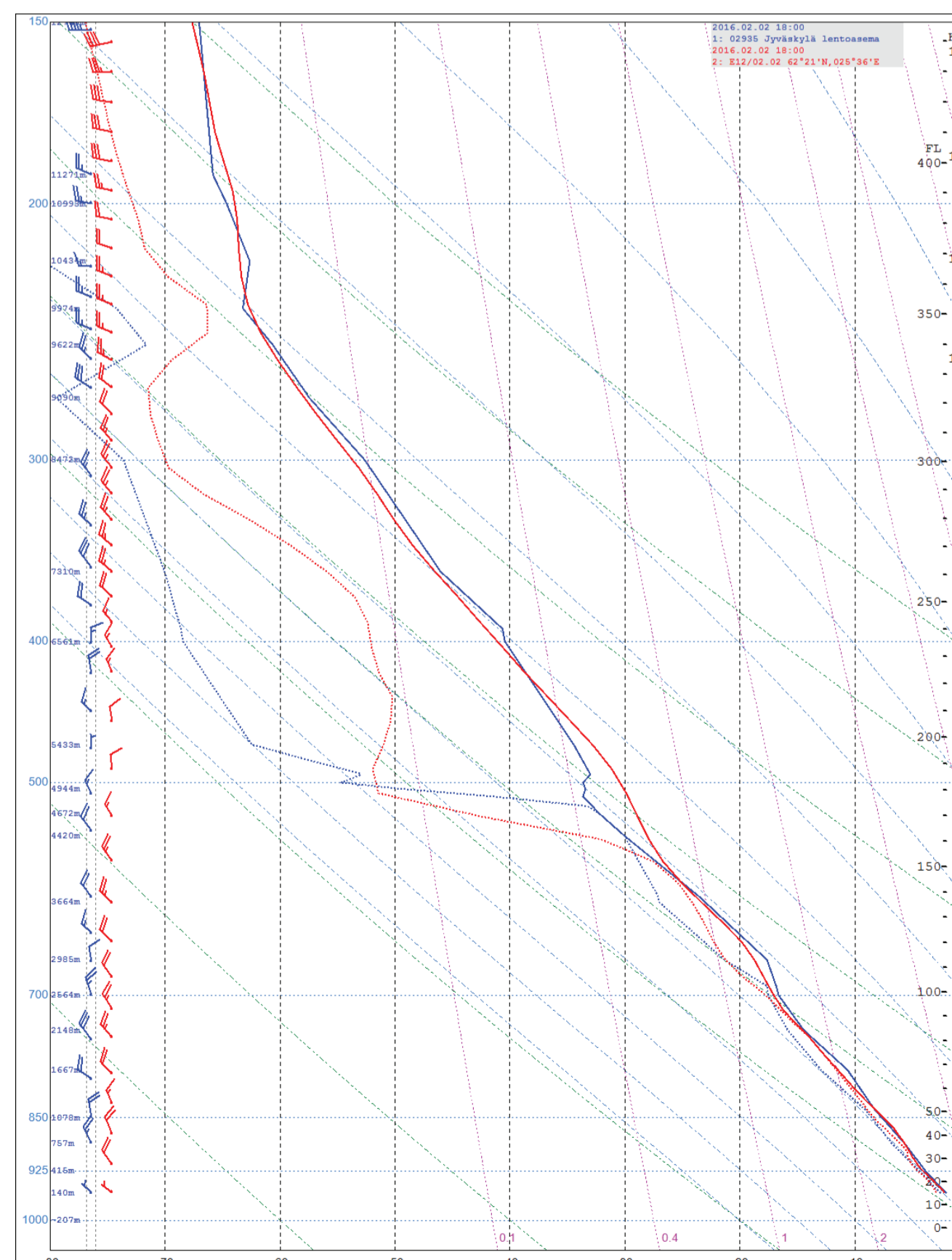
Sounding data is useful when trying to "nowcast" height of clouds. If numeric models could forecast the vertical profile of temperature and moisture, it would be perfect tool. Following examples of soundings and nwp-model profiles are taken "randomly" on 2 days when I was on duty. The place is Jyväskylä in Central Finland.



First example is 1.2.16 06UTC and on a clear morning the EC-model was very good.



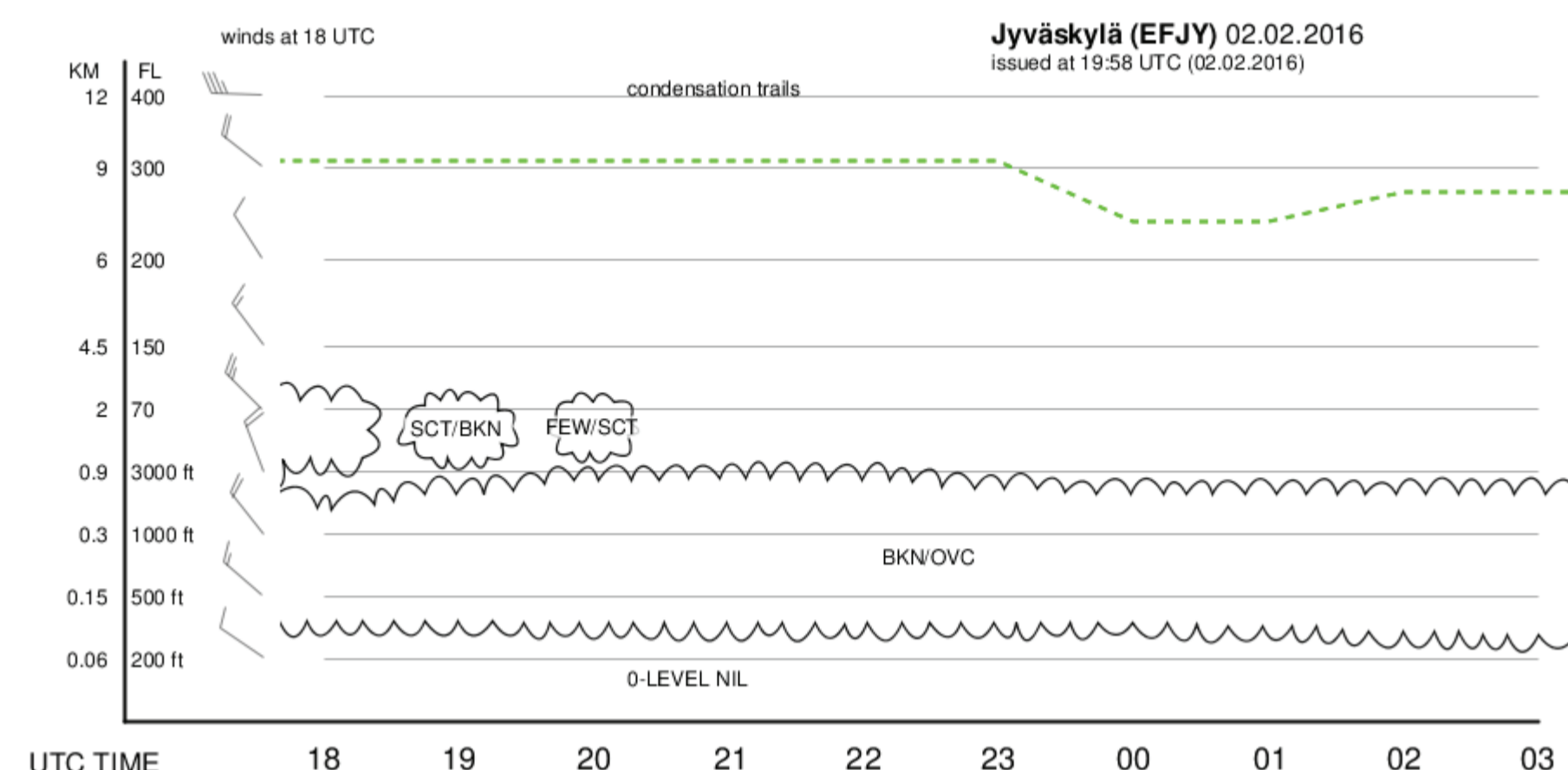
Second example is 2.2.16 06UTC when center of low pressure was at Western Finland and there was large area of snowfall over Finland. This time EC model was slightly too dry near ground and too moist between 1500 and 3000m and between 6 and 7km.



Third example is 2.2.16 18UTC when center of low pressure was over Eastern Finland and the model was again better.

## Vertical time cross section

This is an example of a product where the first guess of clouds is taken from EC model.



METAR-observations from the same time and place.

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EFJY 021750Z AUTO 30008KT 9999 -SN BKN007 BKN035 M02/M02 Q0973=
EFJY 021805Z AUTO 30008KT 9999 -SN BKN008 M02/M02 Q0974=
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Model forecasted 300-400ft cloud base all time, but there was in the beginning 700ft and over 3000ft at end.

## Conclusions

NWP-Models have challenges when forecasting small scale phenomenon, especially with moisture.

At Finland the winter-time is more challenging than summer.

Model data gives useful first guess, but needs processing.