

Annex F Evaluation protocol

F1 Protocol with the required properties

This page serves as a template. It can also be accessed at www.vdi.de/vdi_3783-7.

Model evaluation protocol in conformity with VDI 3783 Part 7		
Tests by the model developer (Section 5 of the standard)		

This document certifies the evaluation of a prognostic mesoscale wind field model. It conforms to the provisions of VDI 3783 Part 7, Section 5. Numbers in brackets [] refer to the relevant section of the standard. Please complete, crossing out inapplicable items.		

0. Particulars of mesoscale model, Version:		

publication date:..... Year:.....Month:.....Day:...		
person responsible for the model.....		
person responsible for the evaluation		
address.....		
e-mail, tel.:		

1. General evaluation	[5.1]	

comprehensibility	[5.1.1]	YES / NO
brief description	[5.1.2.1]	YES / NO
detailed description of the model	[5.1.2.2]	YES / NO
manual	[5.1.2.3]	YES / NO
evaluation report	[5.1.2.4]	YES / NO
technical reference (only required when source code is open)	[5.1.2.5]	YES / NO

2. Scientific evaluation	[5.2]	

equations are Reynolds-averaged	[5.2]	YES / NO
all three wind components prognostic	[5.2]	YES / NO
(potential) temperature prognostic	[5.2]	YES / NO
coriolis force taken into account	[5.2]	YES / NO
continuity equation complete or anelastic approximation	[5.2]	YES / NO
buoyancy forces taken into account	[5.2]	YES / NO
turbulence parameterisation stability-dependent	[5.2]	YES / NO
fluxes continuous as a function of location	[5.2]	YES / NO
fluxes continuous as a function of stratification	[5.2]	YES / NO
direct simulation of the near-ground flows or Monin-Obukhov theory	[5.2]	YES / NO
unstable stratification: parameterisation of subgrid-scale boundary layer convection	[5.2]	YES / NO
land use properties (e.g. via roughness) taken into account	[5.2]	YES / NO
surface heat balance at least force-restore method	[5.2]	YES / NO
slopes and shadowing accounted for in the insolation	[5.2]	YES / NO
specific humidity prognostic	[5.2]	YES / NO
surface humidity balance is to be solved	[5.2]	YES / NO

3. Validation	[5.3, Annex E]	

test case E1 - Quasi-2-D bell-shaped ridge - two-dimensionality	[E.1]	YES / NO
test case E2 - Quasi-2-D bell-shaped ridge - wind speed	[E.2]	YES / NO
test case E3 - Gaussian mountain - grid size	[E.3]	YES / NO
test case E4 - Gaussian mountain - shadowing, cold air	[E.4]	YES / NO
test case E5 - Gaussian mountain - inflow direction	[E.5]	YES / NO

test case E6 - Sophienhöhe - flow around a hill	[E.6]	YES / NO
test case E7 - Graz basin - recirculation	[E.7]	YES / NO
test case E8 - Stuttgart basin - flow channelling, cold air flow	[E.8]	YES / NO

4. Model internal controls [5.3.4] YES / NO

EVALUATION RESULT

The mesoscale model (Version) is

***** EVALUATED / NOT EVALUATED *****

in conformity with VDI 3783 Part 7.

The model is deemed evaluated in accordance with VDI 3783 Part 7 if all test points were answered in the affirmative.

I confirm that all the information contained in this certificate was provided to the best of my knowledge and belief. No attempt has been made to modify the model for individual test cases in order to achieve better conformity of the model results with the reference data.

(place and date)

(signature)

F2 Evaluation protocol for the model user

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Model evaluation protocol in conformity with VDI 3783 Part 7
Tests by the model user (Section 6 of the standard)
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This document certifies the evaluation of a prognostic mesoscale wind field model. It conforms to the provisions of VDI 3783 Part 7, Section 5. Numbers in brackets [] refer to the relevant section of the standard. Please complete, crossing out inapplicable items.

0. Particulars of mesoscale model, Version

publication date:.....: Year:.....Month:.....Day:...
person responsible for the model.....:
person responsible for the evaluation:
address.....
e-mail, tel.:.....

1. Validation [6.4, 5.3, Annex E]

test case E3 - Gaussian mountain - grid size [E.3] YES / NO
test case E6 - Sophienhöhe - flow around a hill [E.6] YES / NO
test case E8 - Stuttgart basin - flow channelling, cold air drainage flow [E.8] YES / NO

2. Application rules [6]

requirements related to model domain and simulation grid [6.1] YES / NO
initialisation requirements [6.2] YES / NO
testing the Quasi-stationarity [6.3] YES / NO
quality control of the model results [6.4] YES / NO

EVALUATION RESULT

The user..... of the mesoscale model (Version) has conducted the above test cases in accordance with VDI 3783 Part 7; the model is

***** EVALUATED / NOT EVALUATED *****

for the above user.

The model is deemed evaluated in accordance with VDI 3783 Part 7 if all test points were answered in the affirmative.

I confirm that all the information contained in this certificate was provided to the best of my knowledge and belief. No attempt has been made to modify the model for individual test cases in order to achieve better conformity of the model results with the reference data.

(place and date)

(signature)
