DATA SET DESCRIPTION

Content of data set:

Grid point analysis of meteorological parameters and ultra-short-term forecasting.

Data generated by the OMSZ-MEANDER (MEsoscale ANalysis and DEcision Routines) project.

The procedure, which runs at a frequency of 10 minutes, uses the predicted values of the WRF model, the surface measurements, radar and satellite information as input data.

Name of data set files:

MEANDER-<variable>-<YYYYMMDD>_<HHmm>+<TTTtt>.nc.zip, where

<variable>: meteorological variable,
<YYYYMMDD>: date of the forecast run,
<HHmm>: initial time of the forecast in UTC,
<TTTtt>: forecast lead time in hour (TTT) and minute (tt)

DATA SET CHARACTERISTICS

Spatial coverage:

number of grid points in the west-east direction: 220

number of grid points in the north-south direction: 355

geographical coordinates of the northwest point of the grid: lat=48.8^{o}; lon=15.7^{o}

grid spacing in the east-west direction: dx=0.021274^{O,}

grid spacing in the north-south direction: dy=0.014378^{O}

Temporal coverage: 0 – 2 hours

Spatial resolution: 1.6 km

Temporal resolution: 10 minutes

Projection: spherical

Format(s): netcdf compressed into zip file

Parameter(s):

Parameter	Description	Unit
T2	2m temperature	Kelvin
U10	west-east component of the average wind at the height of 10 m	m/s
V10	south-north component of the average wind at the height of 10 m	m/s
PSFC	surface pressure	Pascal
PSEALEVEL	mean sea level pressure	Pascal
cloudines	cloud cover	octa
maxRadSig	radar signal	decibel
sumRadPrec	predicted precipitation by the advection of radar signals (predicted fields)	mm
sumPrec_01hour	fallen precipitation in the last 1 hour from radar and surface measurements	mm
WGUST	wind gust	m/s
Visibility	visibility	m
presWeather*	code of present weather*	-
simpleWeather*	code of actual weather*	-

The codes and the meanings of the parameters marked with * are given below:

presWeather	
Code	**Meaning**
01	cloudless
02	slightly or partly cloudy
03	mostly cloudy or overcast
10	mist or fog
44	fog
18	gale without rain (20-25 m/s)
118	storm without rain (25-30 m/s)
218	violent storm without rain (> 30 m/s)
318	gale with rain, without thunderstorm (20-25 m/s)
418	storm with rain, without thunderstorm (25-30 m/s)
518	violent storm with rain, without thunderstorm (> 30 m/s)
36	level 1 blowing snow – snow cover, wind gust > 12 m/s
37	level 2 blowing snow – snow cover, wind gust > 16 m/s
38	level 3 blowing snow – snow cover, falling snow, wind gust > 20 m/s
39	blowing snow and violent storm – snow cover, falling snow, wind gust > 28 m/s
60	drizzle or light rain
61	moderate rain
63	heavy rain

56	level 1 freezing rain – 3 hour precipitation > 0,1 mm
66	level 2 freezing rain – 3 hour precipitation > 1 mm
67	level 3 freezing rain – 3 hour precipitation > 5 mm
68	light rain and snow
69	rain and snow
70	very light snow
71	light snow
73	moderate snow
74	heavy snow
75	intensive snow and blowing snow
79	frozen rain
81	shower
84	rain and snow shower
86	snow shower
95	thunderstorm
96	level 1 heavy thunderstorm – wind gust = 20-25 m/s with hail, without flash flood
98	level 2 heavy thunderstorm – wind gust > 25 m/s with hail, without flash flood
99	level 3 heavy thunderstorm – wind gust > 25 m/s in large area, without flash flood
196	level 1 thunderstorm with rainstorm – 3 hour precipitation > 25 mm, wind gust = 20-25 m/s
198	level 2 thunderstorm with rainstorm – 3 hour precipitation > 50 mm
199	heavy thunderstorm with flashflood in large area

simpleWeather	
Code	**Meaning**
1	cloudless
2	slightly cloudy
3	cirro-stratus cloudy
4	partly cloudy
5	overcast
7	foggy
8	rimy fog
9	drizzle
10	rain
11	heavy rain
12	shower
13	heavy shower
14	thunderstorm
15	freezing drizzle
16	freezing rain
17	light snow
18	snow

19	heavy snow
20	rain and snow
21	snow shower
22	snow thunderstorm
23	blowing snow
24	windy

Uncertainties:

Noisy radar measurements, damaged or incorrect surface or satellite data, or a temporary deficit of certain data types can cause distortion in the analysis, which also affect the forecast.

CONSIDERATIONS/SUGGESTIONS FOR APPLICATIONS

It is recommended for following the weather processes, extracting local weather data and for weather warning.

ADDITIONAL INFORMATION

https://www.met.hu/idojaras/elorejelzes/modellek/MEANDER**/**

REVISION HISTORY

The MEANDER system has been operating from 2005. Version changes take place about every 1 year.

CONTACT POINT

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