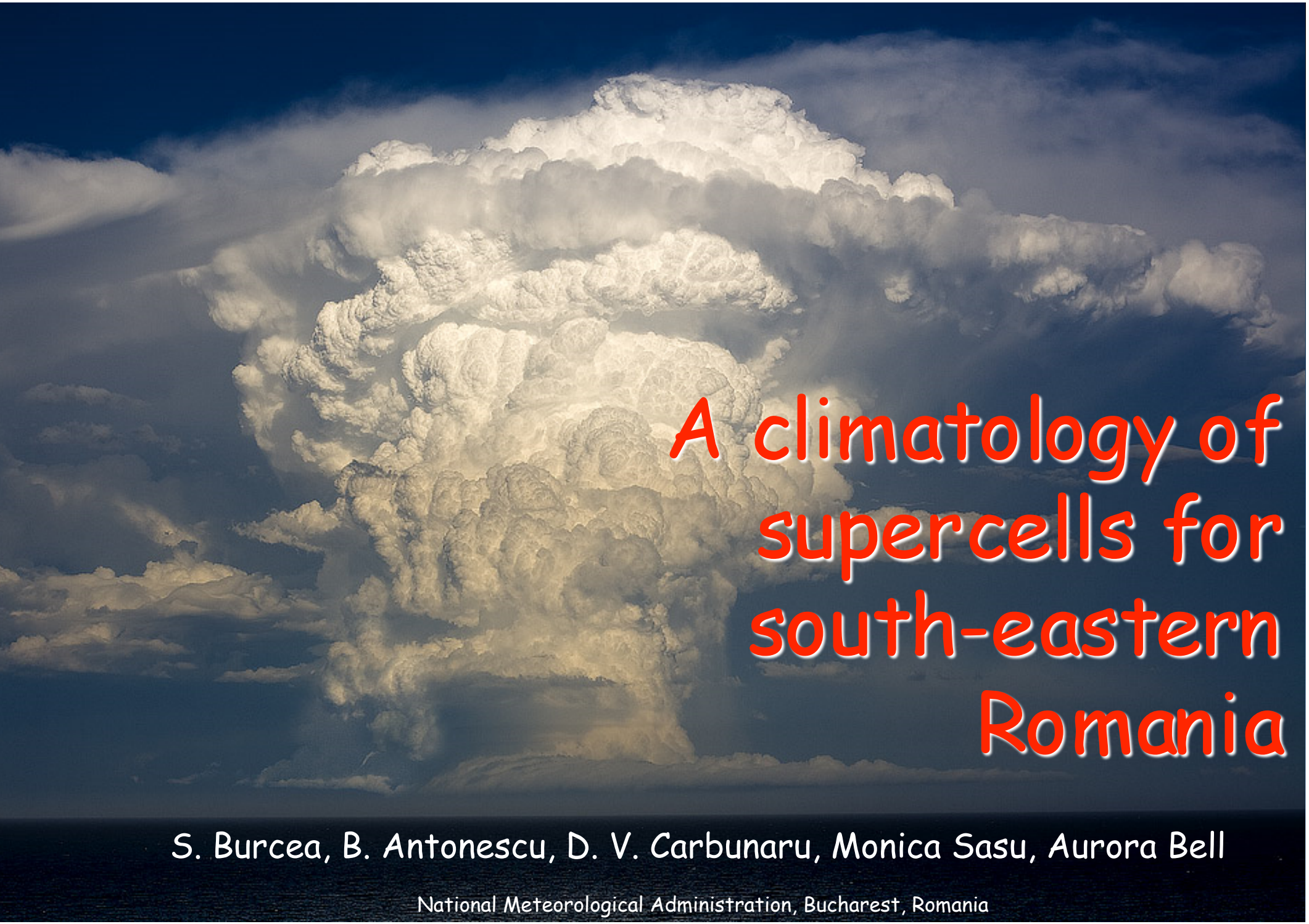


A climatology of supercells for south-eastern Romania

S. Burcea, B. Antonescu, D. V. Carbunaru, Monica Sasu, Aurora Bell

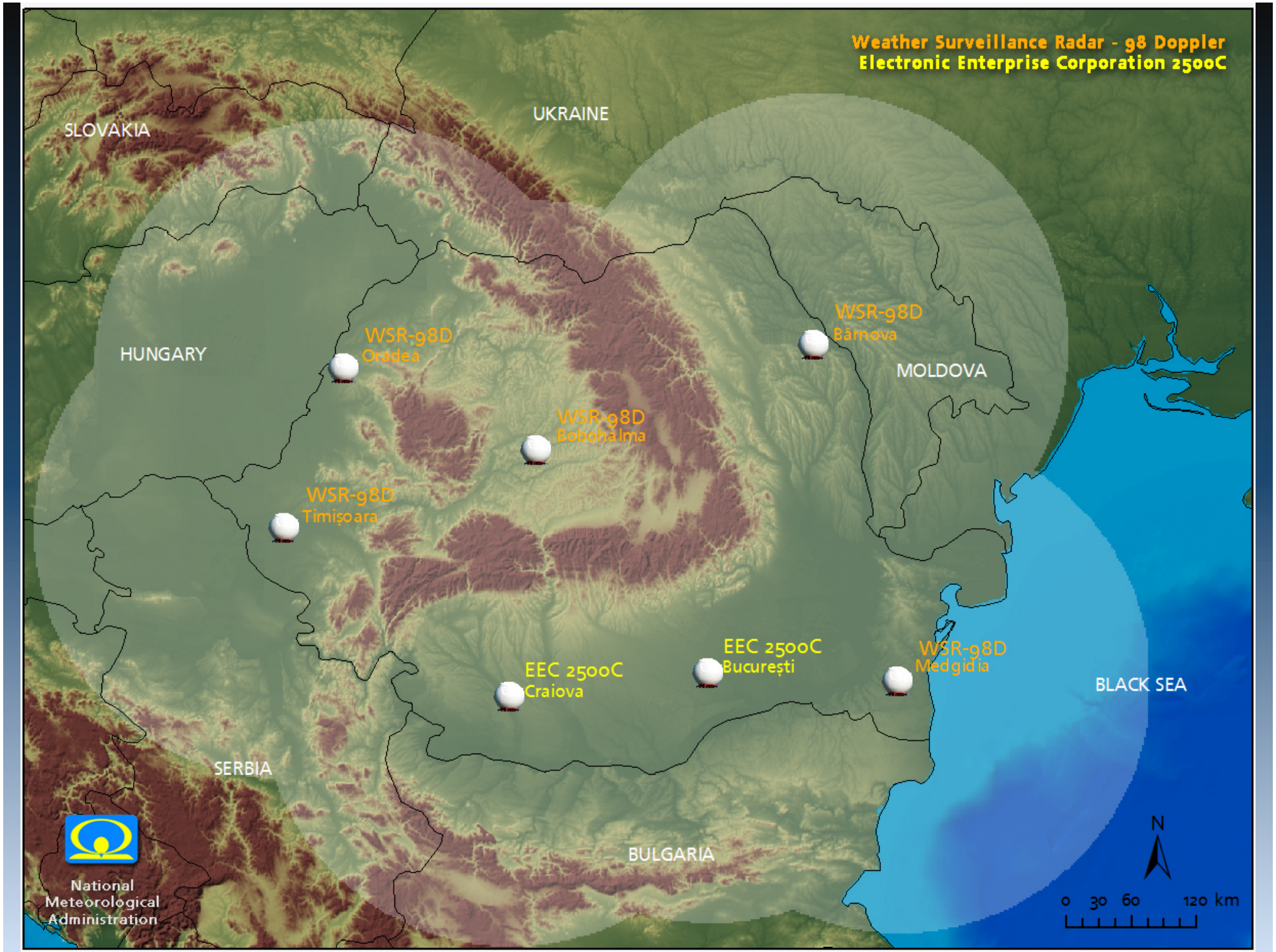
National Meteorological Administration, Bucharest, Romania


ȘTIRILE
PRO

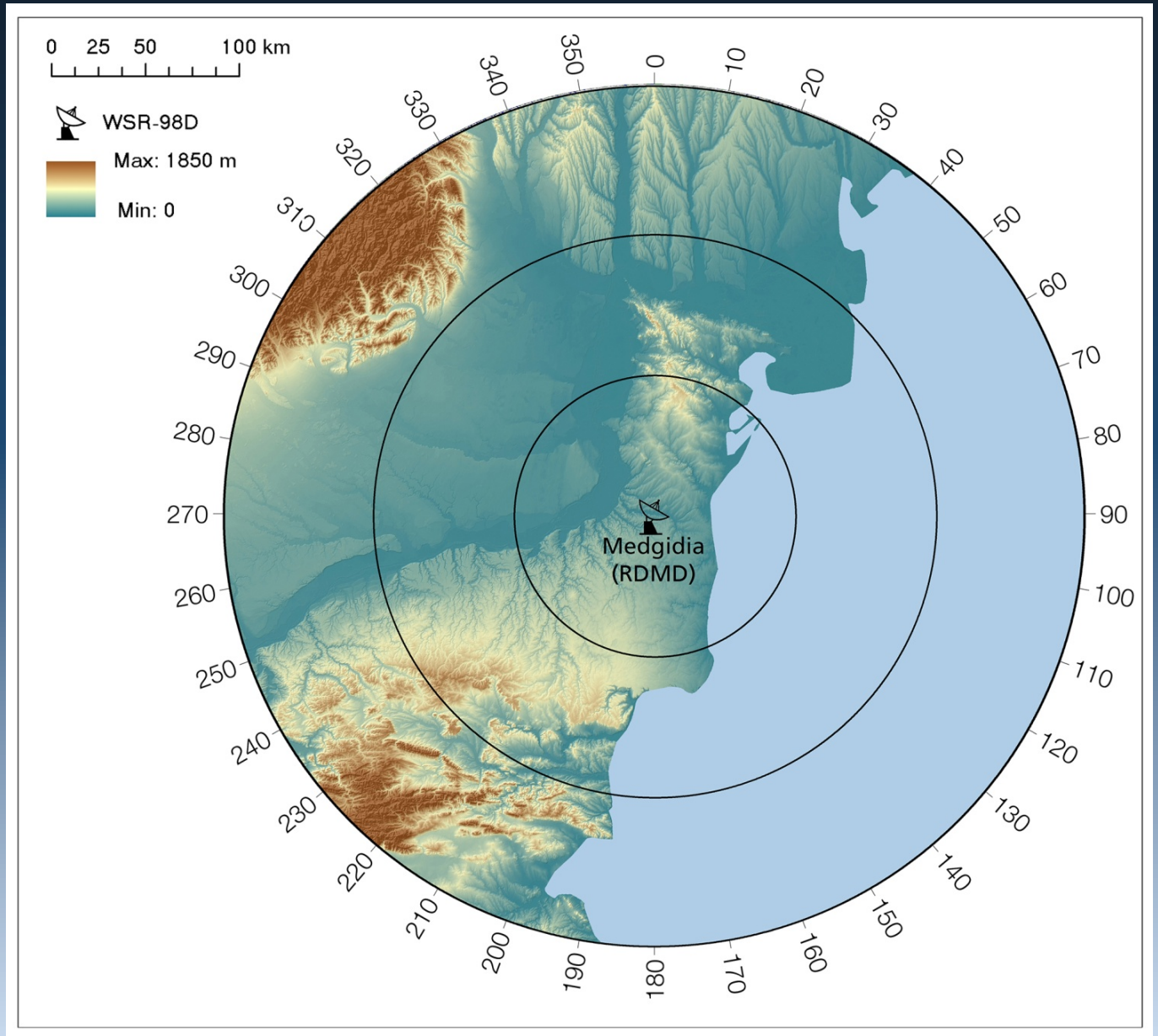
Quantification of the spatial and temporal characteristics of supercells in SE Romania, from 2003 to 2006.

Radar data

GIS technologies


Weather Surveillance Radar - 98 Doppler
Electronic Enterprise Corporation 2500C
SLOVAKIA
UKRAINE
HUNGARY
WSR-98D
Oradea
WSR-98D
Bârnova
MOLDOVA
WSR-98D
Bobohalma
WSR-98D
Timișoara
EEC 2500C
București
WSR-98D
Medgidia
EEC 2500C
Craiova
BLACK SEA
SERBIA
BULGARIA
National
Meteorological
Administration
N
0 30 60 120 km

Medgidia WSR-98D



KPBZ WSR-88D

RDBB WSR-98D

Hocker, J.E., and J.B. Basara, 2008: A Geographic Information System-Based Analysis of Supercells across Oklahoma from 1994 to 2003. **J. Appl. Meteor.**, **47**, 1518–1538.

Criteria to select supercell storms

Initiation **>= 30 minutes** **Termination**

Mesocyclone
> 7 m s-1 at base level

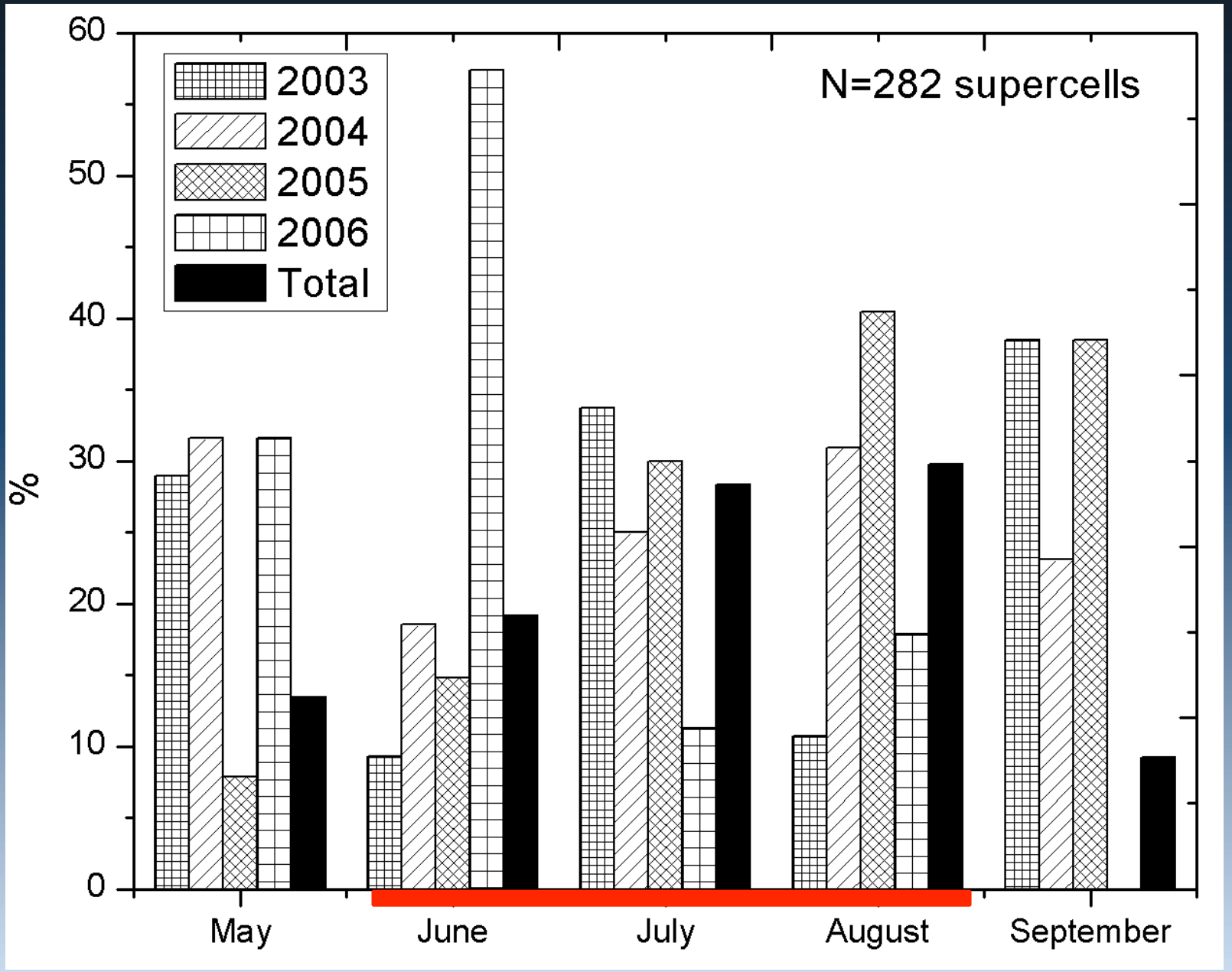
40 dBZ echo

Criteria no longer met

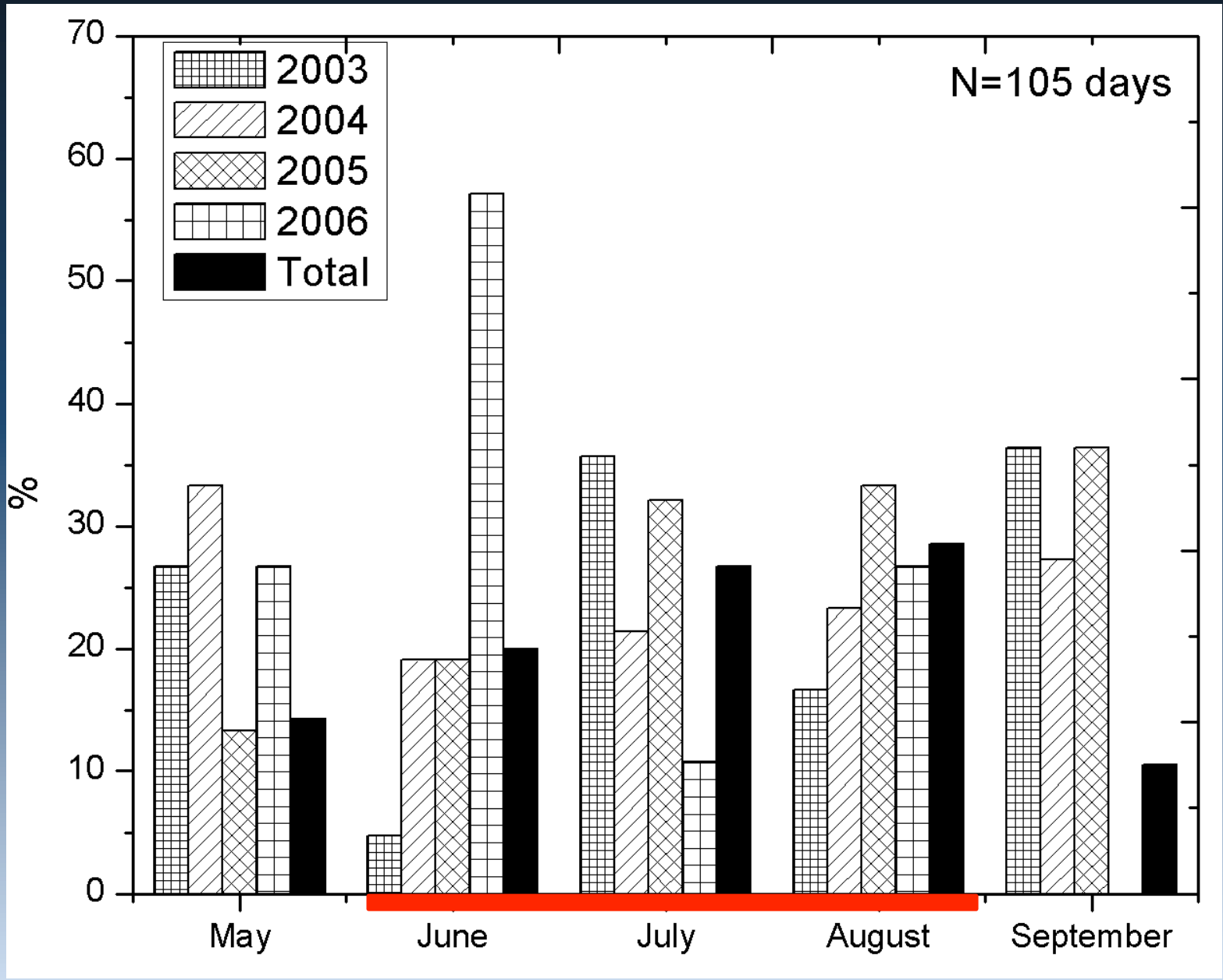
Hocker, J.E., and J.B. Basara, 2008: *A Geographic Information System-Based Analysis of Supercells across Oklahoma from 1994 to 2003*. **J. Appl. Meteor.**, **47**, 1518–1538.

Automated supercell detection

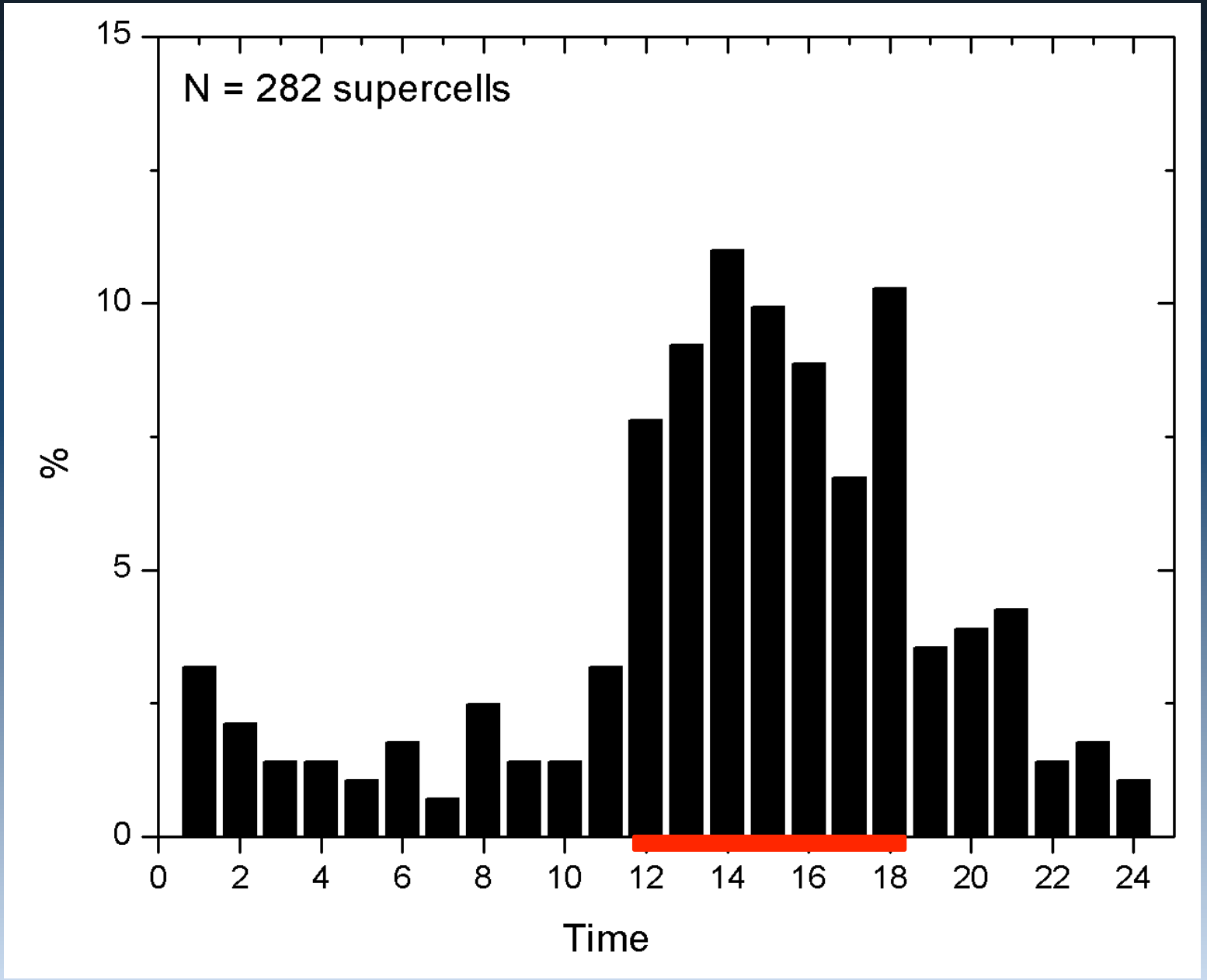
78% of storms occur June-August



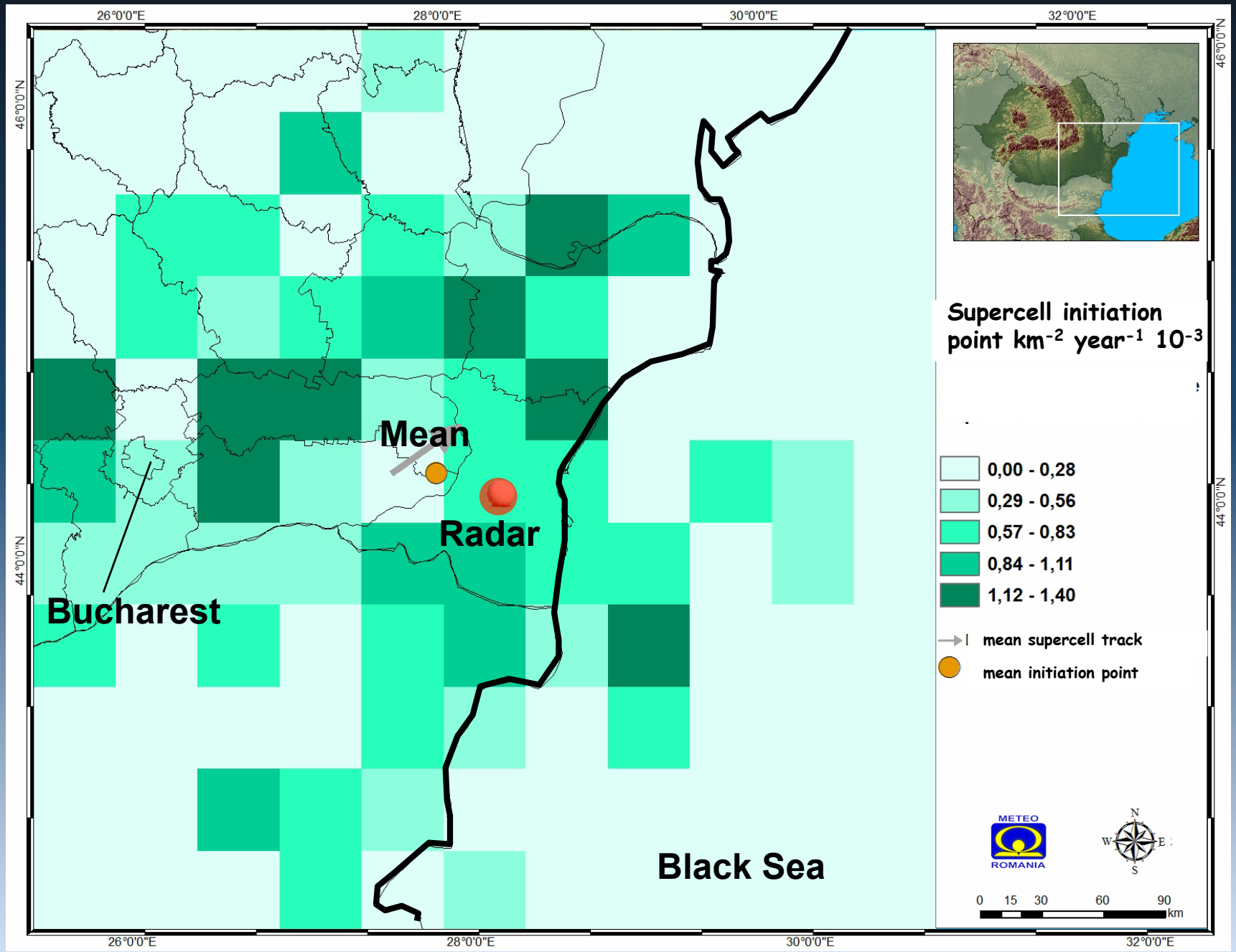
Supercell days - 2.7 storms/day



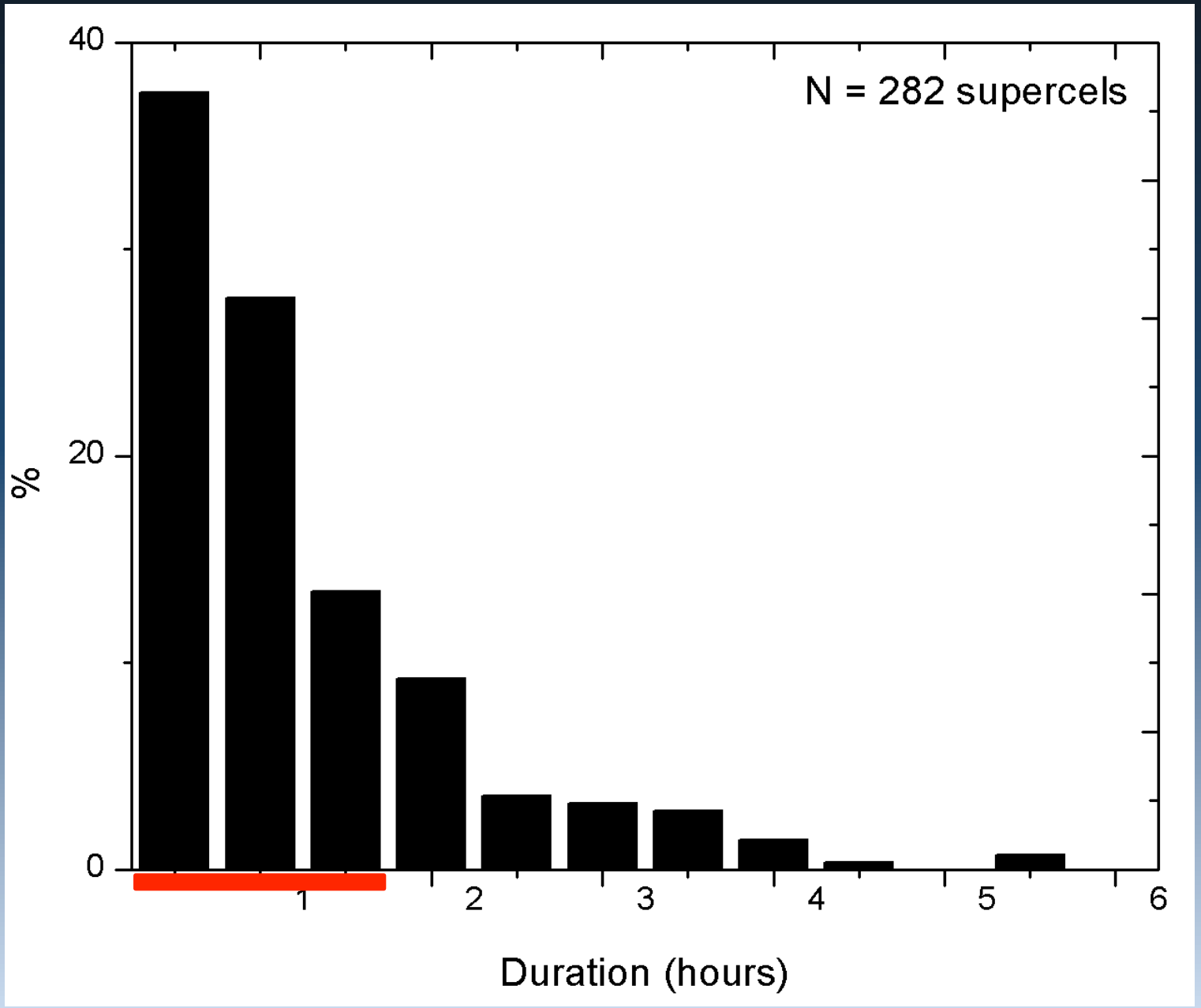
Most storms initiate between 3 and 9 PM



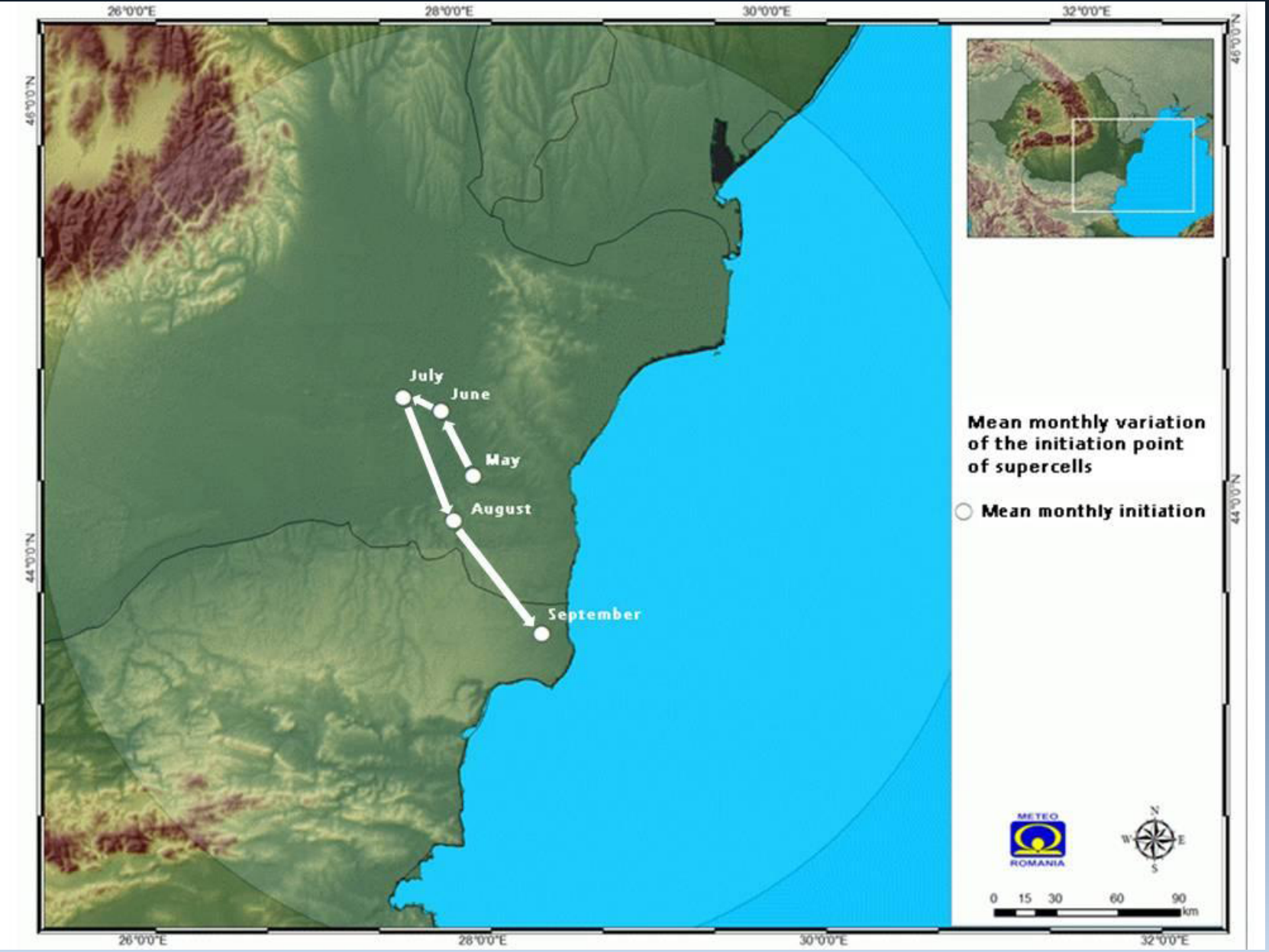
Most storms initiate north and west of the radar



80% of supercells last up to 1½ hours



Mean monthly variation of the initiation point of supercells



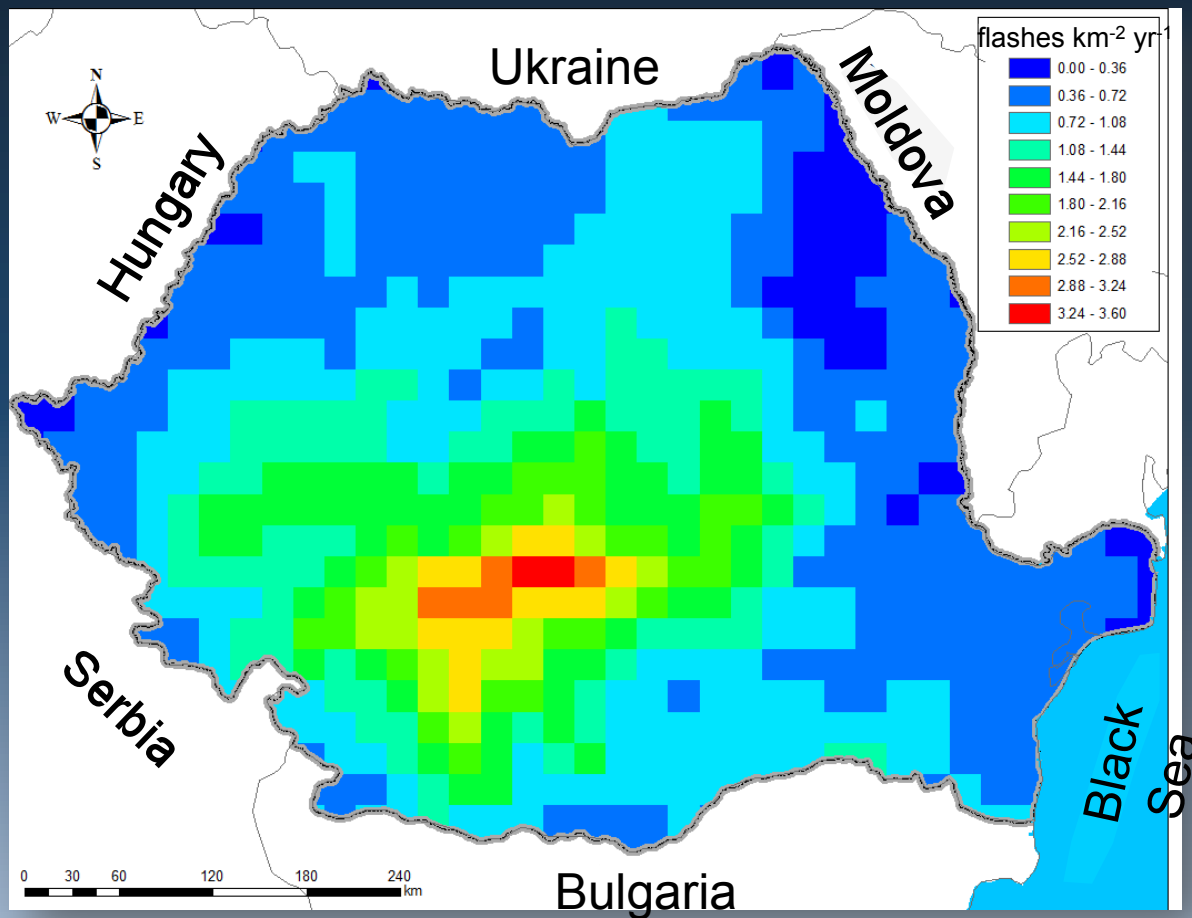
Conclusions

Beginning constructing the first climatology of supercells for Romania

The study was designed to quantify the spatial and temporal characteristics of supercells across SE Romania

The findings are consistent with the conceptual models for storm initiation developed for Romania

"A Cloud-to-Ground Lightning Climatology for Romania"



Antonescu, B., and S. Burcea, 2010:
A Cloud-to-Ground Lightning Climatology for Romania.
Mon. Wea. Rev., **138**, 579-591.

Tornadoes 1886-2009