



WHIFFLE

WEATHER FINECASTING

WEATHER FINECASTING FOR OFFSHORE WIND ENERGY APPLICATIONS

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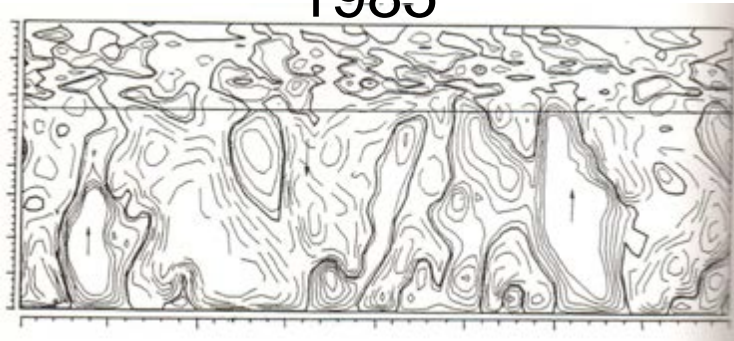
WHAT IS A WEATHER FINECAST?



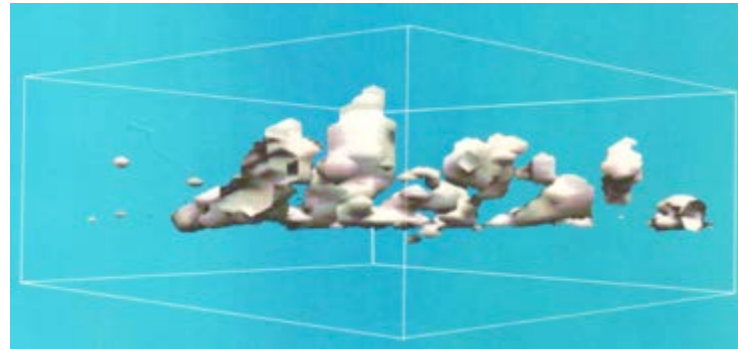
Click link for movie: <https://vimeo.com/254711040/c052d94dfc>

History of Dutch Atmospheric Large Eddy Simulation (KNMI, IMAU, WUR, TUD)

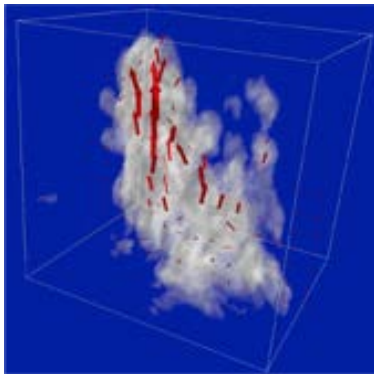
1985



1994



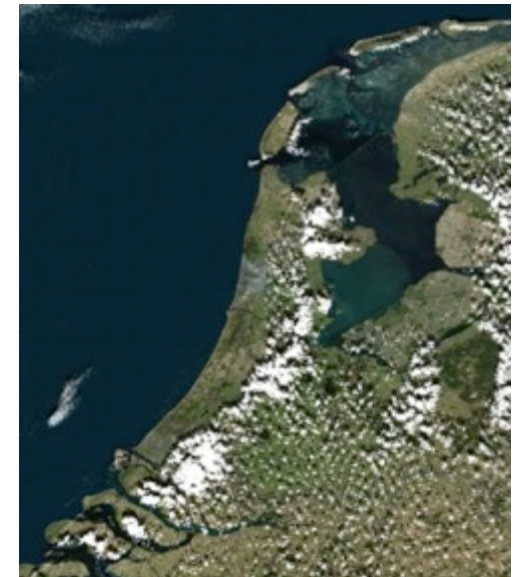
2007



2012

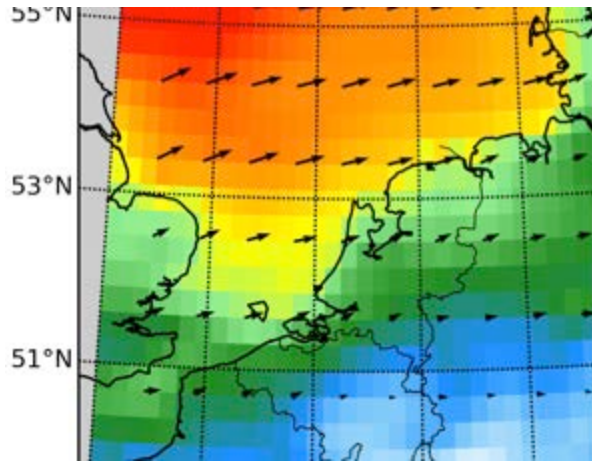


2015

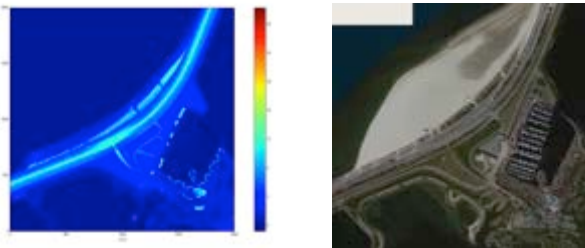


OPERATIONAL FINECASTING

Large-scale weather
forecast

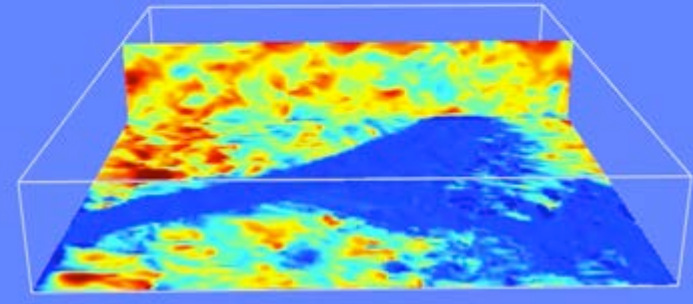


Local terrain details

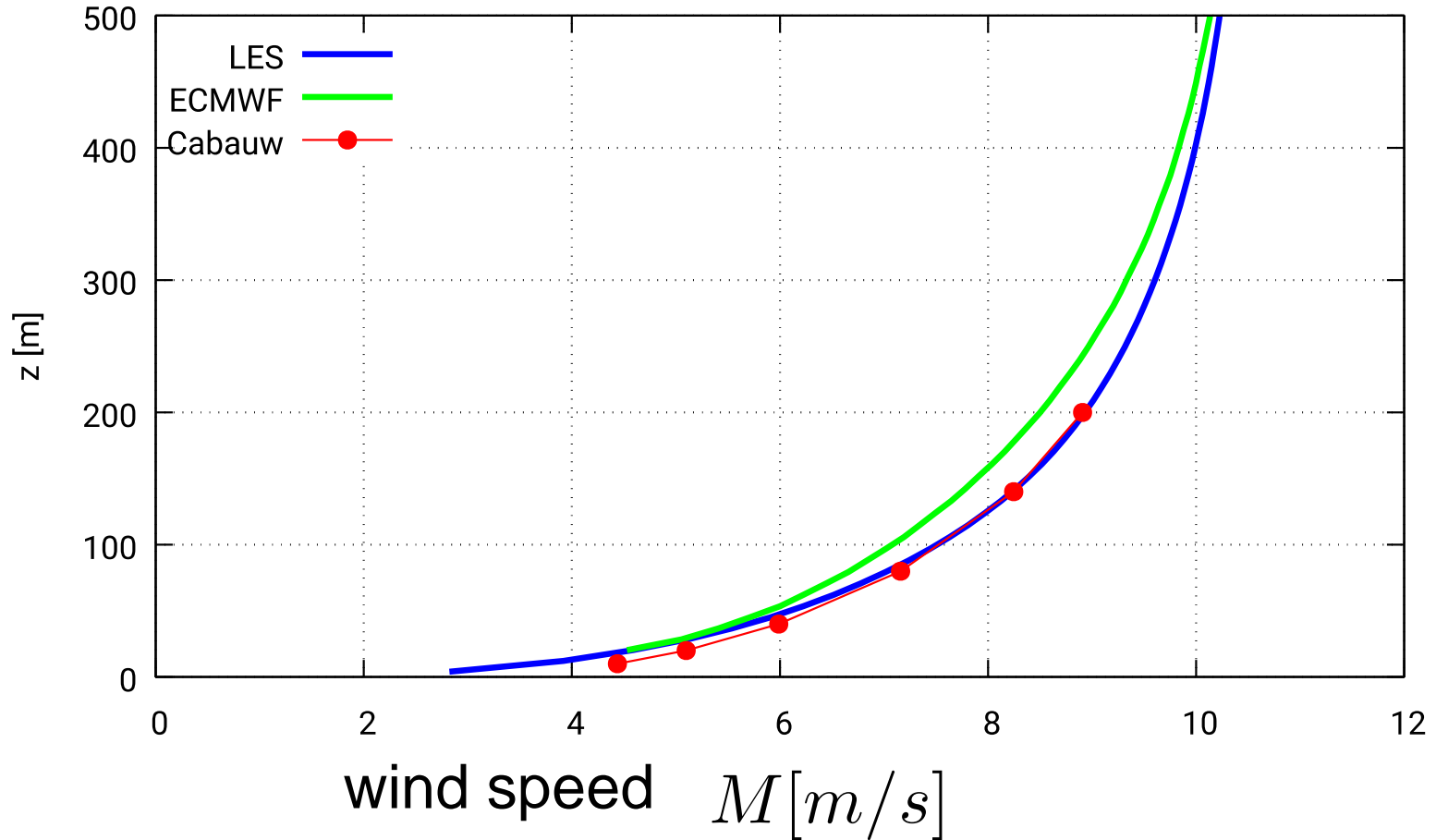


Local weather forecast

2017, Jun 13, 10:24

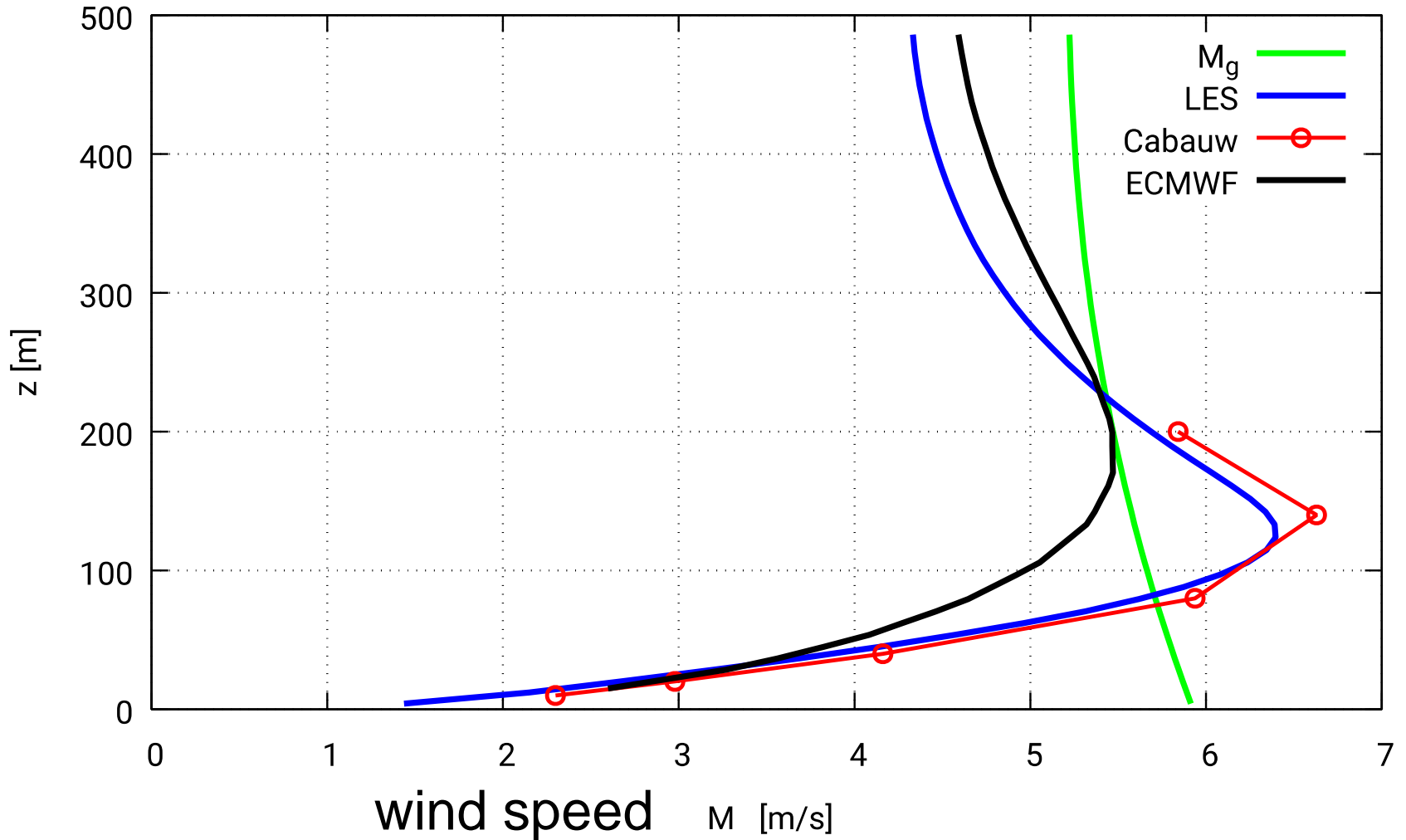


Cabauw validation wind profile (yearly average)



LES predicts nocturnal jets well

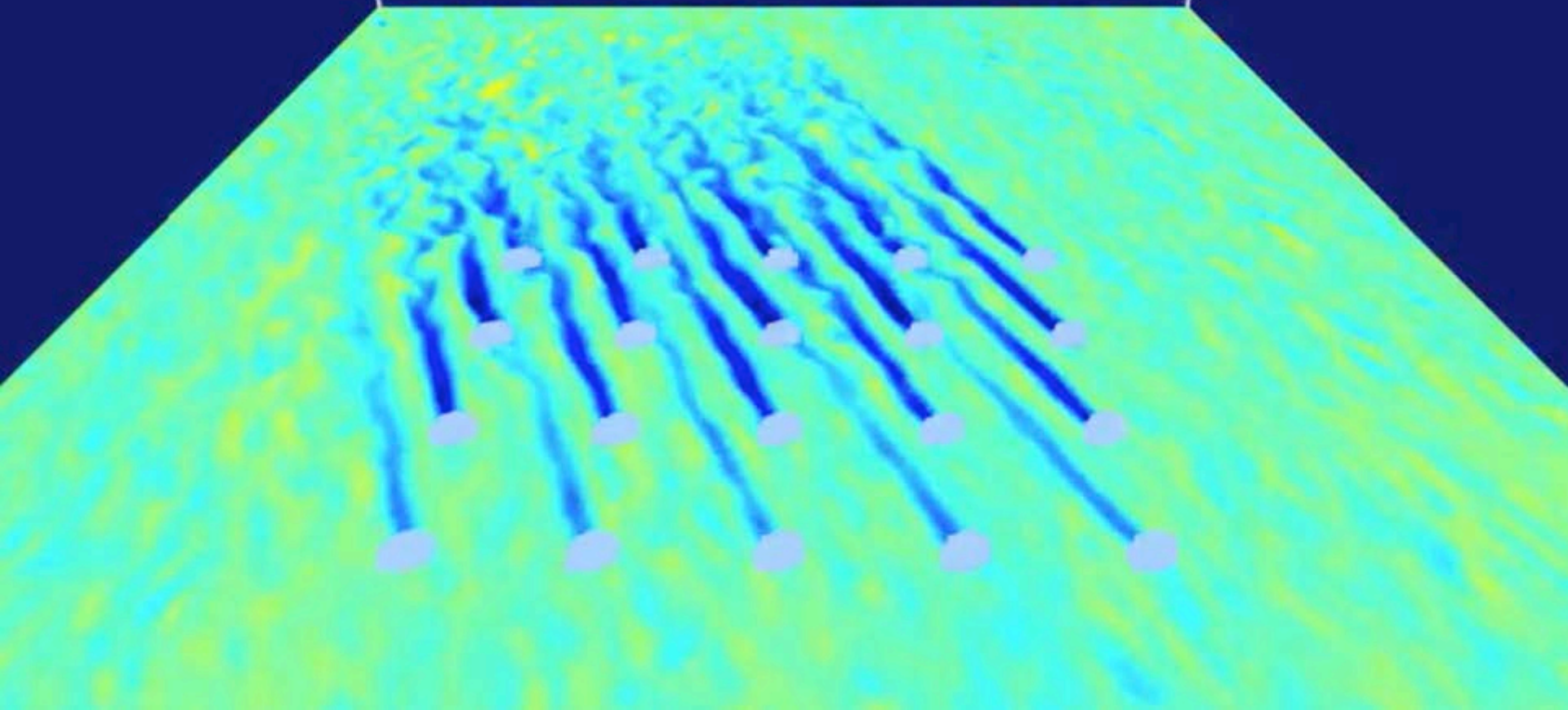
$M(140m) > M(200m)$



2017-08-23 17:29:41 UTC

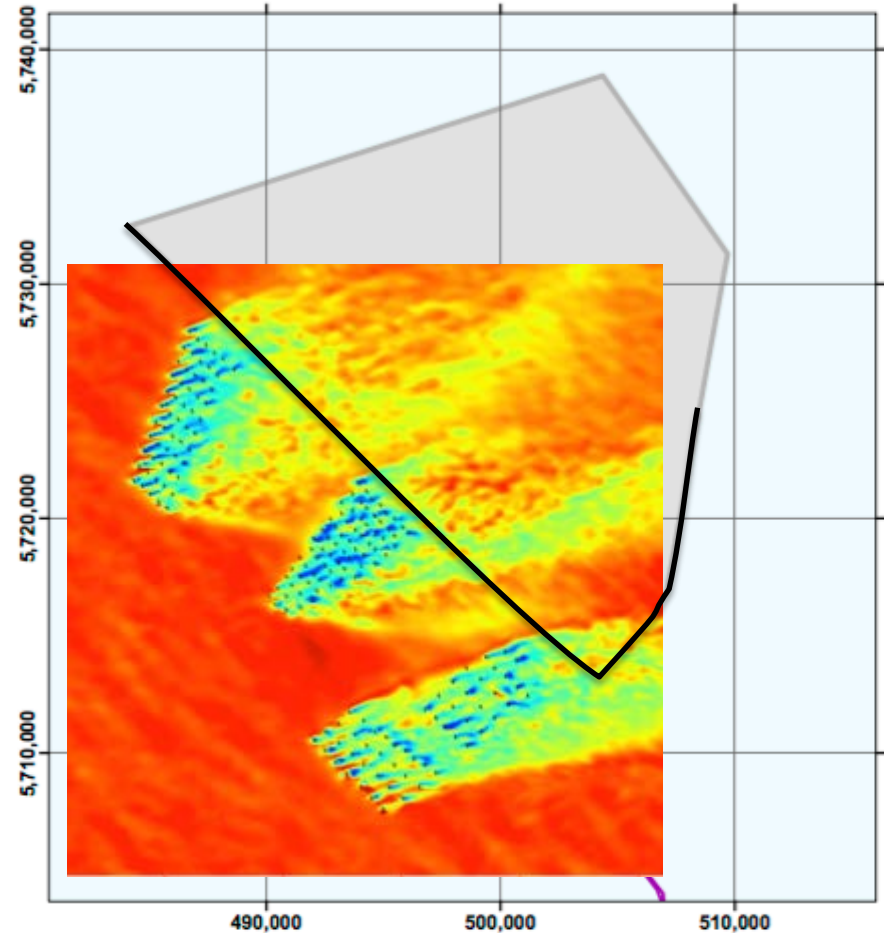
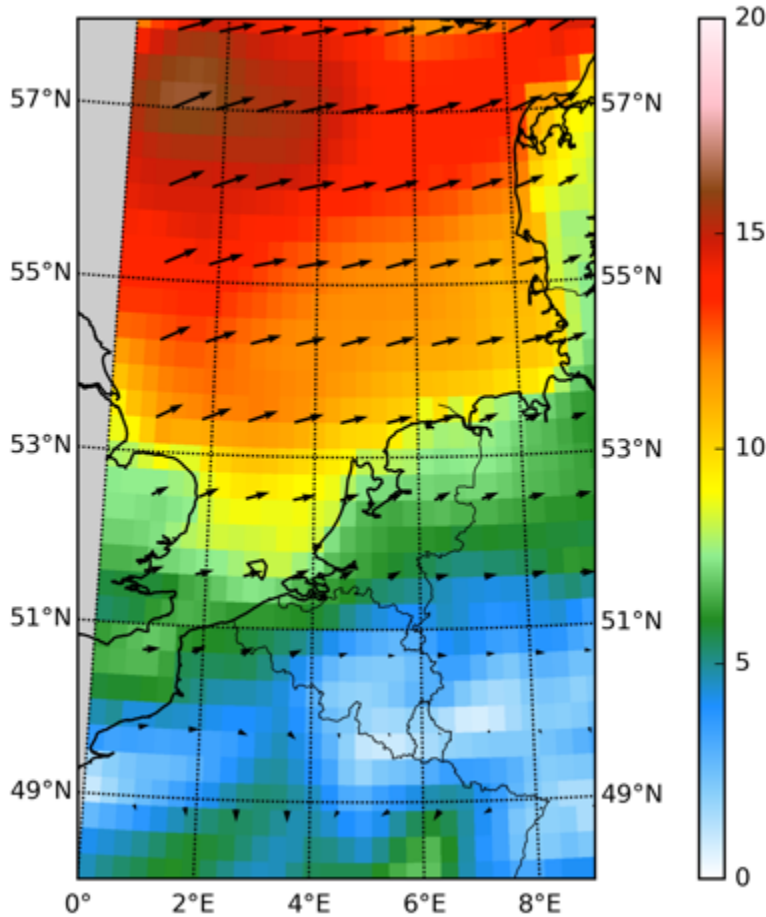
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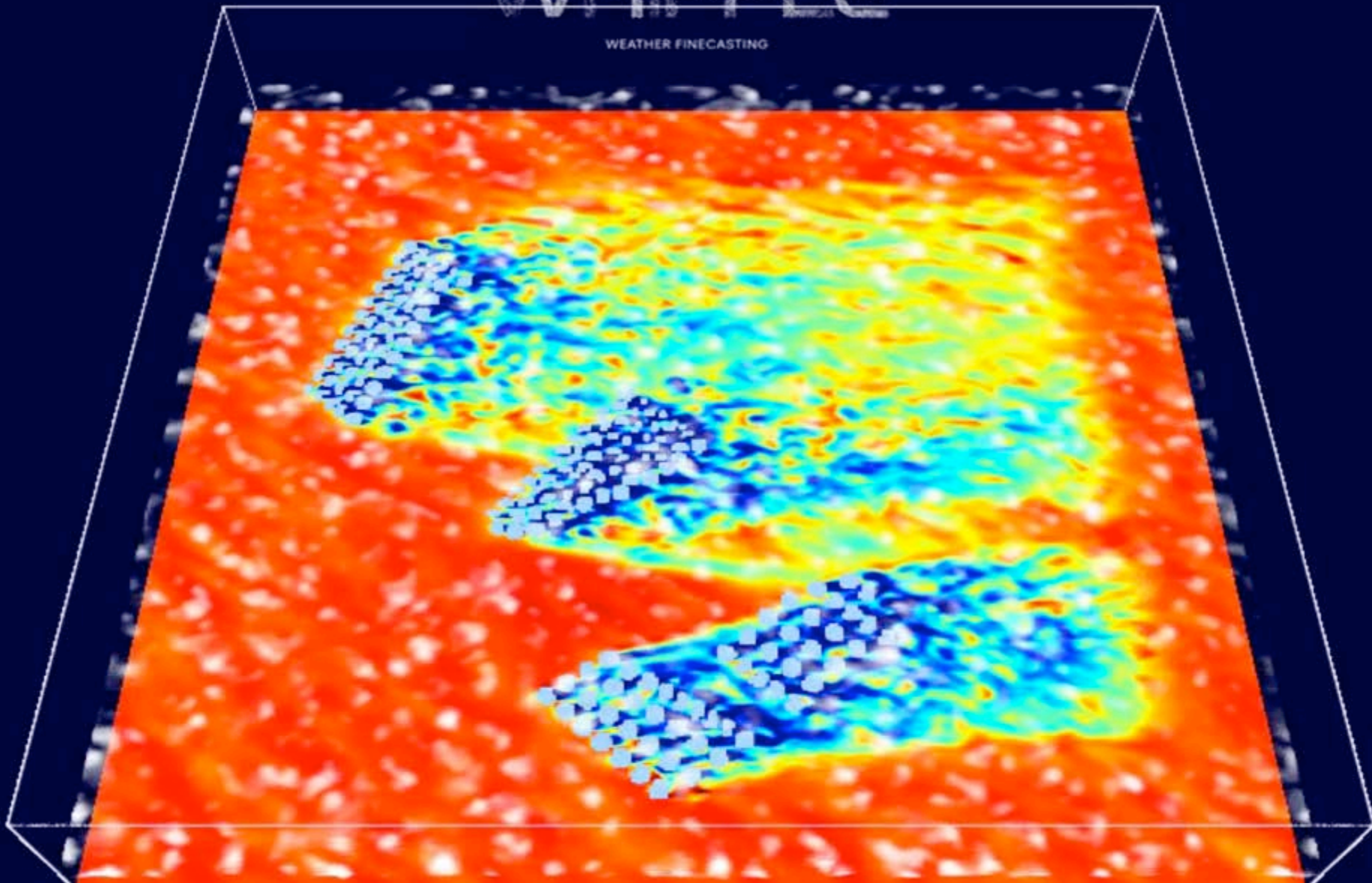
Click link for movie: <https://vimeo.com/254708472/79a3ef631e>

Finecasting for offshore wind energy



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WEATHER FINECASTING



Click link for movie: <https://vimeo.com/254711489/d12c28ee50>

Conclusions

- Operational LES proven viable and valuable
- Challenges to fully exploit finecast potential
- Will the Dutch energy sector become an early adopter?