

# Visualizing large gridded data sets on the web with Bokeh Server

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Alpine Data Lovers - Meetup 

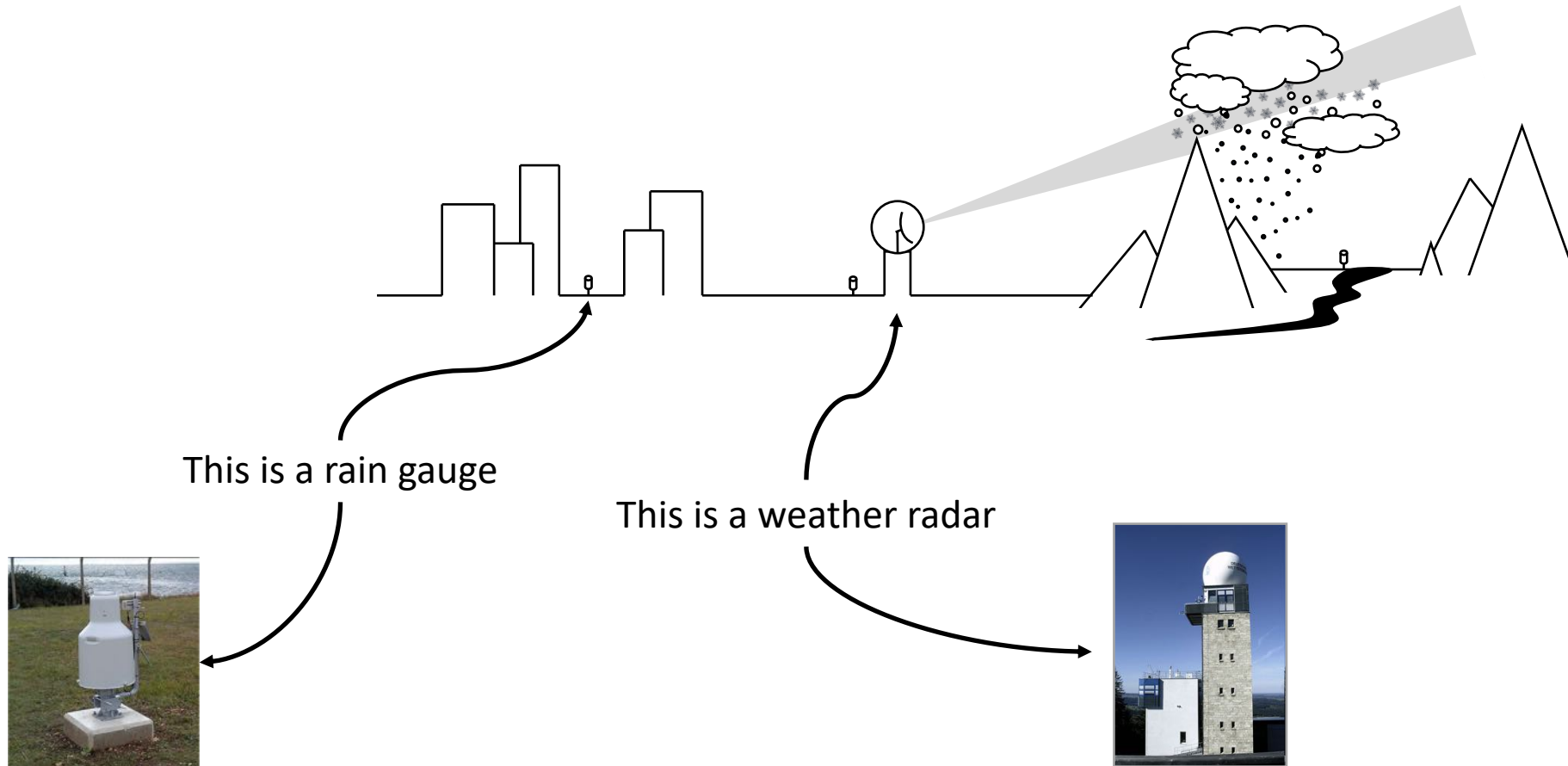
Web tools for effective data visualization

Location: [KIT Campus Alpin, IMK-IFU, Garmisch-Partenkirchen](#)

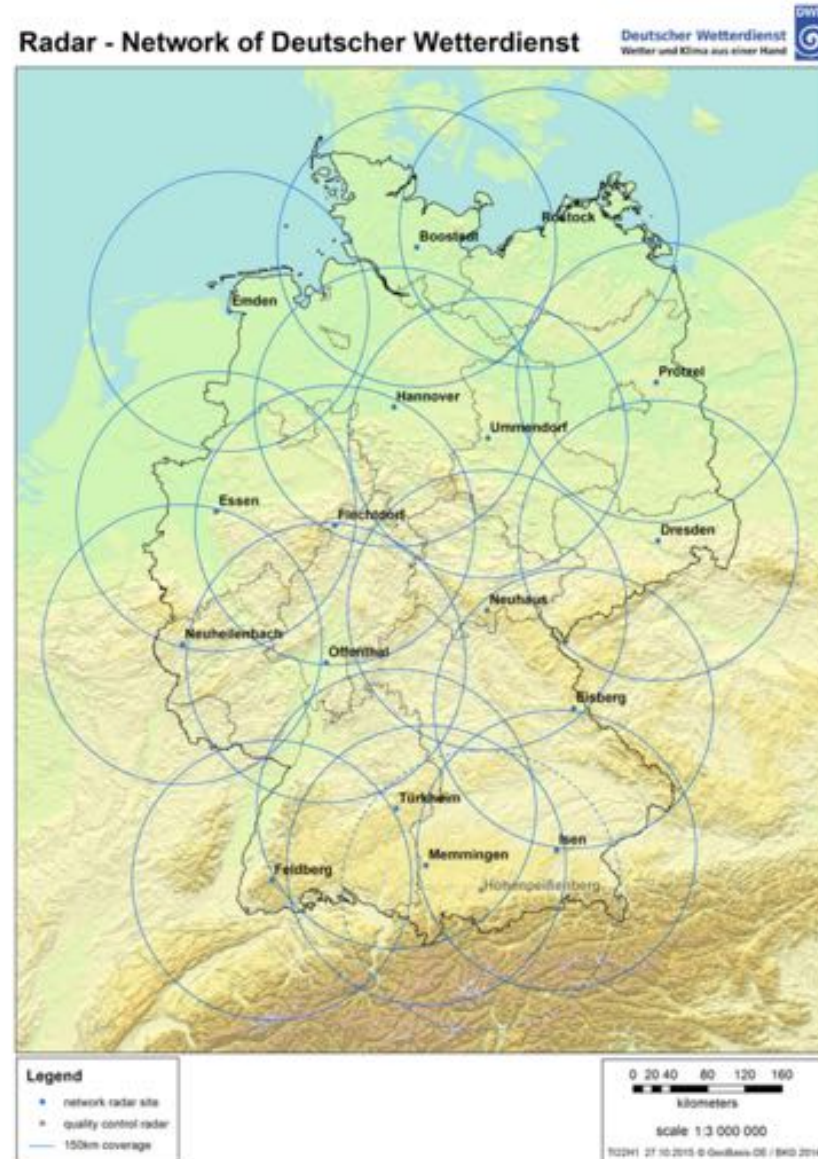
22.01.2020



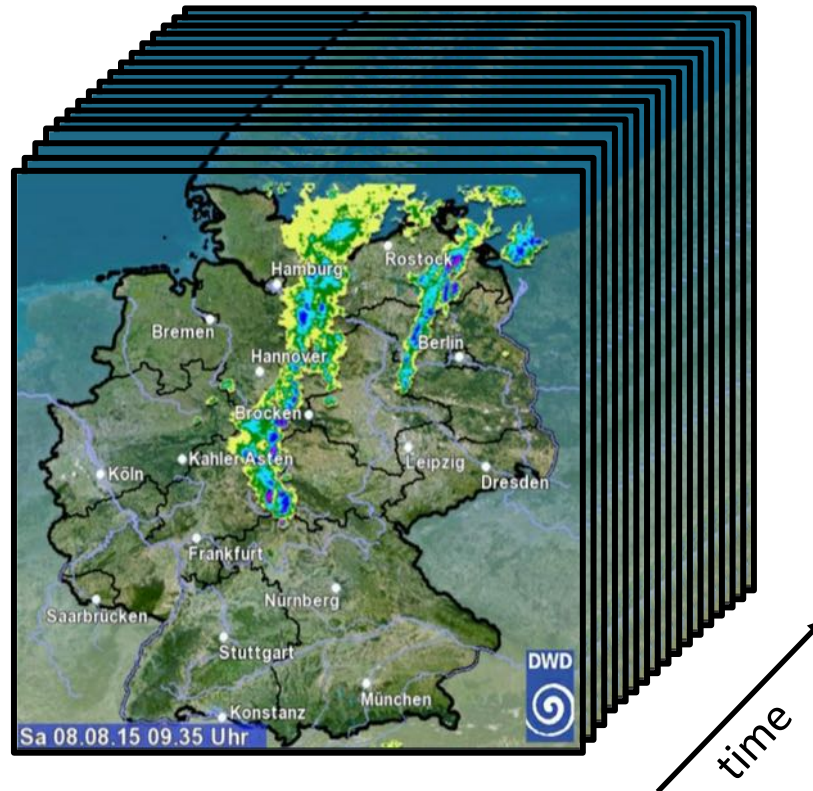
# Weather radars scan the atmosphere and estimate rainfall rates



# The DWD operates a network of 17 weather radars



Country-wide data is available every 5 minutes



I will show examples for the *RADOLAN-RW* product

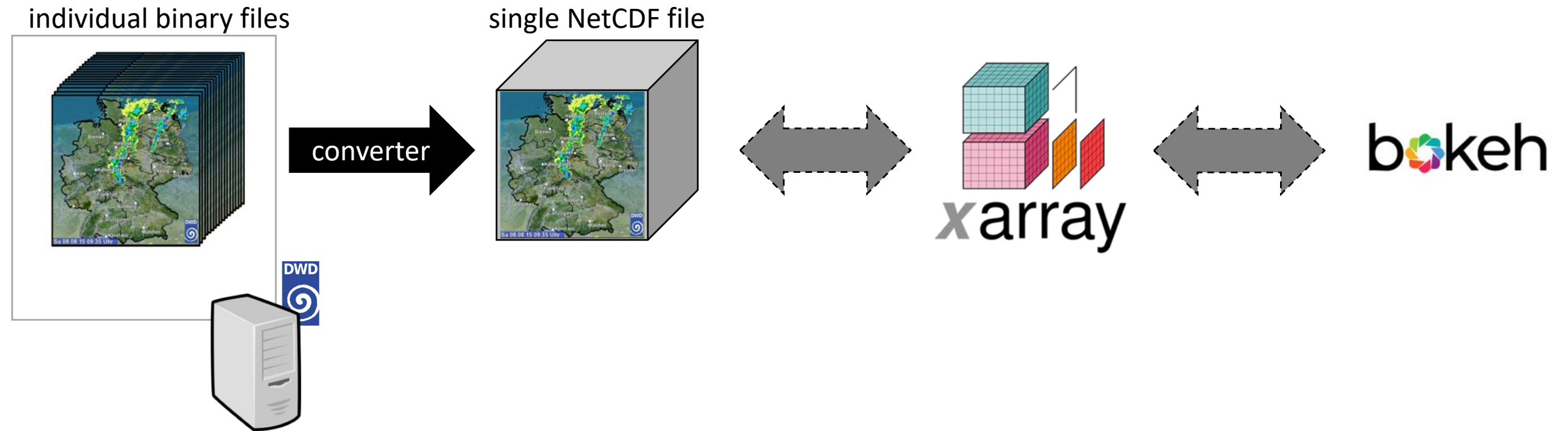
- Radar rainfall estimates are aggregated to 1h rainfall sums
- Radar rainfall sums are corrected with ground-based data from rain gauges
- Size: 900 x 900 pixels x 32bit x 15 years = **420 GB**

More info: <https://www.dwd.de/DE/leistungen/radolan/radolan.html>

→ show APP



# Workflow and tools





→ work in notebook

[https://github.com/cchwala/bokeh\\_examples\\_ifu\\_meetup/blob/master/bokeh\\_opendap\\_radar\\_example.ipynb](https://github.com/cchwala/bokeh_examples_ifu_meetup/blob/master/bokeh_opendap_radar_example.ipynb)

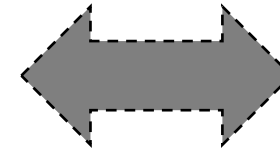
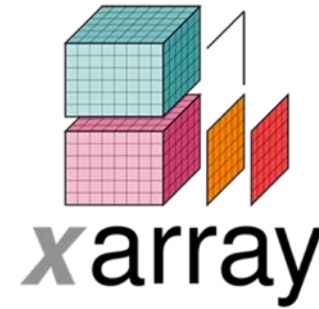
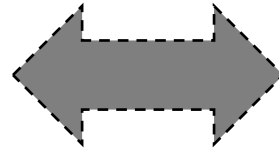
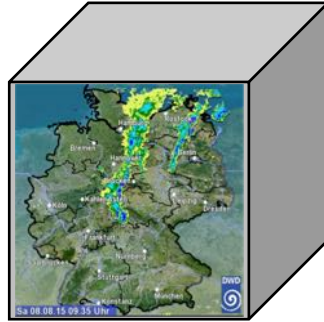
# OPenDAP workflow and tools

individual binary files



converter

single NetCDF file



bokeh



# OPenDAP workflow and tools

NetCDF files



**THREDDS  
Data Server**

OPenDAP

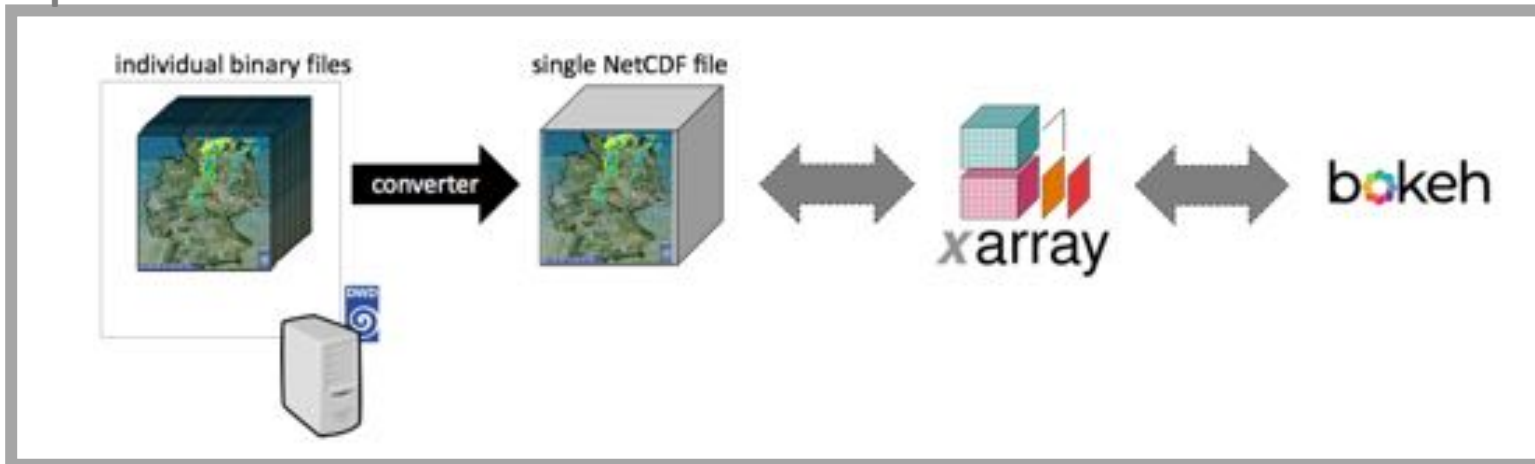


**bkeh**

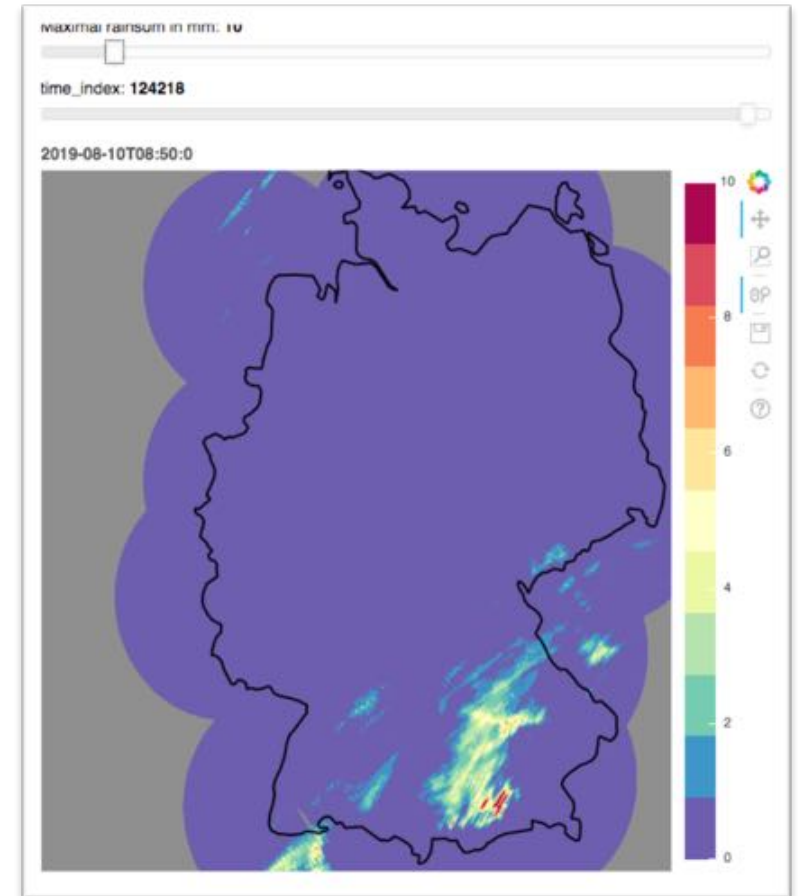
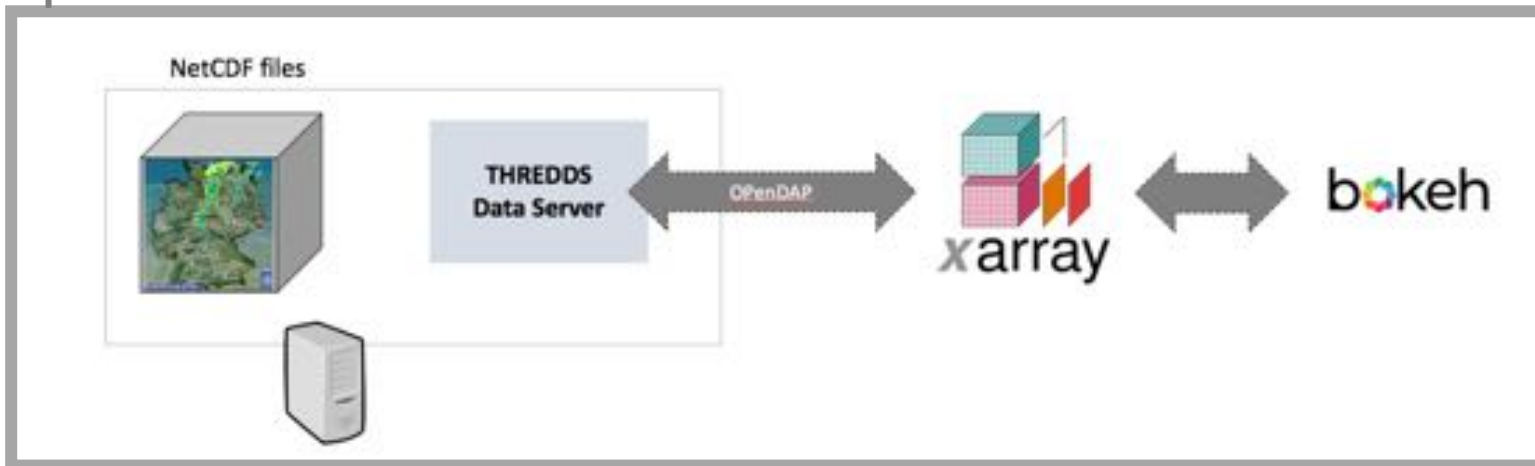
→ work in notebook

[https://github.com/cchwala/bokeh\\_examples\\_ifu\\_meetup/blob/master/bokeh\\_opendap\\_radar\\_example.ipynb](https://github.com/cchwala/bokeh_examples_ifu_meetup/blob/master/bokeh_opendap_radar_example.ipynb)

## Option 1



## Option 2



Dr. Christian Chwala



- <https://www.uni-augsburg.de/de/fakultaet/fai/geo/prof/georkl/uber-uns/c-chwala/>
- <https://github.com/cchwala>
- Twitter @cchwala

