

Update on COAPS Compact Versions of Scatterometer Winds

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Goal and History

- The goal is ease of use rather than intercalibration.
 - For all available scatterometer missions
 - US, European, Indian, Chinese
- COAPS originally worked with Marco Portabella to make easy to read version of datasets that are difficult to obtain in the United States.
- That led to a partnership with KNMI, sharing data passing through KNMI
- We also put JPL data in a similar format
 - All these data sets have an internally consistent naming convention and file structure
 - Same (as much as is possible) variable names
 - Metadata lists the version number and original producer
 - Files are organized by day rather than orbit
 - Only the selected ambiguity is saved
 - Quality control data are interpreted into one flag (thanks to Anton for updated advise)



Example Data Structure

➤ netcdf ASCATC_25_2026021 {dimensions:
 along_track = UNLIMITED; (16023)
 cross_track = 42 ;

➤ variables:

```
int time(along_track) ;  
float lat(along_track, cross_track) ;  
lon(along_track, cross_track) ;  
float eastward_wind(along_track, cross_track) ;  
float northward_wind(along_track, cross_track) ;  
float wind_speed(along_track, cross_track) ;  
float wind_to_direction(along_track, cross_track) ;  
int simplified_wvc_quality_flag(along_track, cross_track) ;
```

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We added vector components

We simplified down to one flag



Currently Available Data Sets

Data Set	Time Range
ASCAT-A	3/28/2007 - 11/15/2021
ASCAT-B	10/30/2012 - ongoing
ASCAT-C	4/3/2022 - ongoing
OSCAT3	10/30/2024 - 4/30/2026
HY-2B	11/4/2021 - 4/30/2026
HY-2C	11/4/2021 - 4/30/2026
HY-2D	11/8/2023 - 11/3/2024

- ASCAT temporal coverage:
 - 25km dataset goes back to 2007,
 - Coastal ASCAT-A goes back to 2010
- We are in the process of updating our processing such that data from recent days are also available
- We're also starting to work through older datasets
- These are (or soon will be available through a THREDDS server
 - Linked from the COAPS scatterometry web pages

- Data outages are largely consistent with the list provided by KNMI
 - https://scatterometer.knmi.nl/hy2b_25_prod/
 - It's been suggested we work with KNMI to better advertise or share this information.



Additional Tools In Development

- We're working towards sharing (via our public Marine Data Center repository)
 - Read code
 - Code for calculating spatial derivatives using swath data
 - Spatial filtering code for these curl and divergence
- We are willing to listen to requests and work with others to make these data easier to use.



Questions?



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