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Water information

Data downloaded from sea floor sensors : website

- Quite nice interface
- Wrote a python module to get the data for a given detector config/time period
  - Will probably end-up in km3pipe
- Lot of different variables :
  - Time, ~ every 3 minutes
  - X_East, Y_North, Z_up and Speed, [m.s-1]
  - Direction, Heading, Roll, Pitch, [degree]
  - TIS (temperature ?), [°C]
  - Pressure, [dbar]
  - Batterie [V]
  - SoundSpeed [m.s-1]
  - Amplitude_X, Amplitude_Y, Amplitude_Z [a.u]
- For each of the variable, ‘mean’ and ‘std’ available (I guess over the 3 minutes)

Speed, direction, quite trivial ...

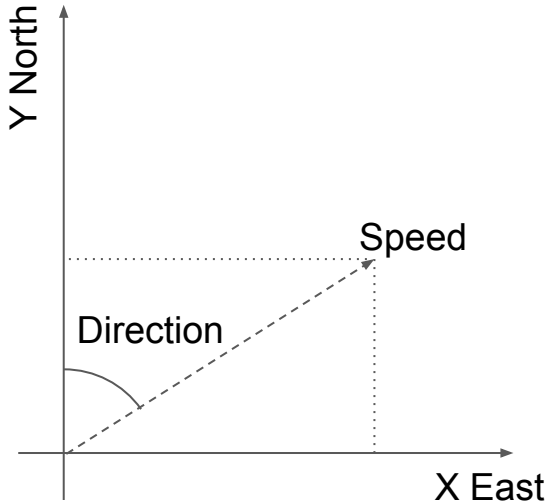
If we forget “Z up” for a while …

- Speed = $\sqrt{(x\_east^2 + y\_north^2)}$
- Direction = $\cos^{-1}(y\_north/speed)$

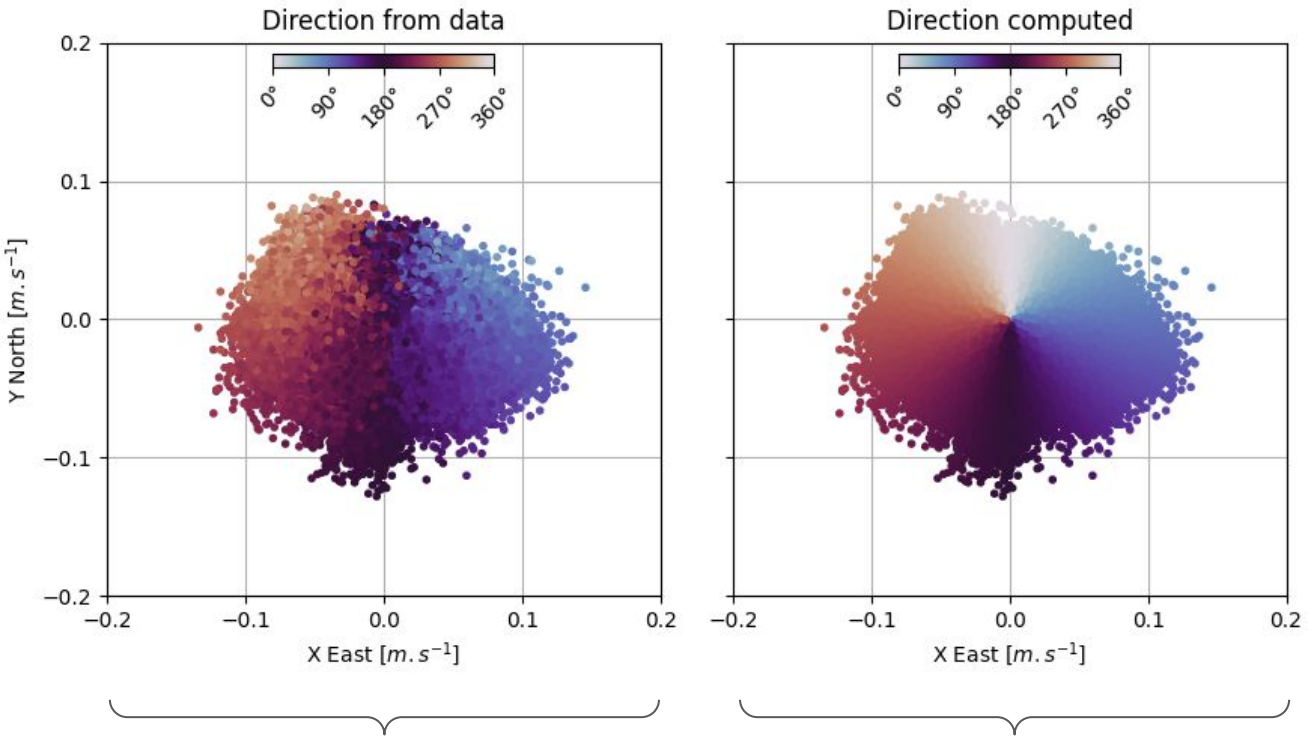
Sounds simple, but …

BUT...

BUT ....

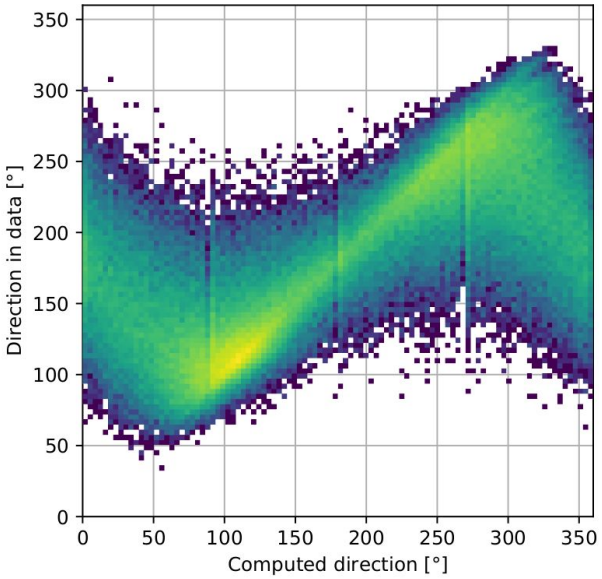


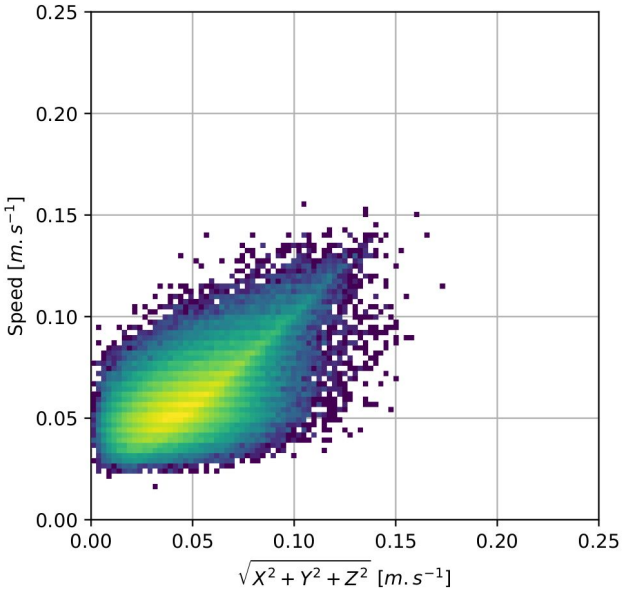
...



What I got

What I expected


Direction in data [°]
Computed direction [°]
0
50
100
150
200
250
300
350


Speed [$m.s^{-1}$]
$\sqrt{X^2+Y^2+Z^2}$ [$m.s^{-1}$]
0.00
0.05
0.10
0.15
0.20
0.25


[visible confusion]