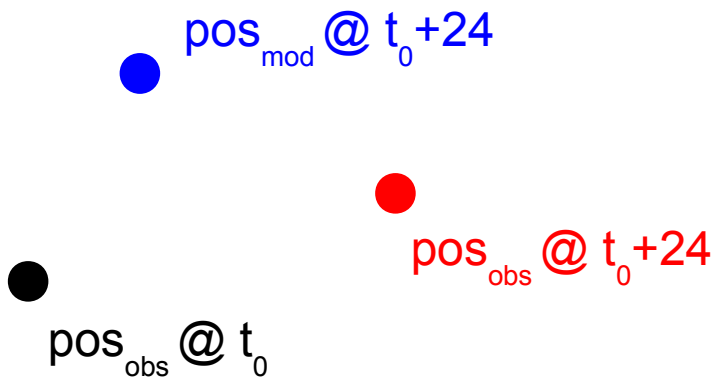
Concepts used in validation of drift

Markers:

Black: observed drifter position @ t_0

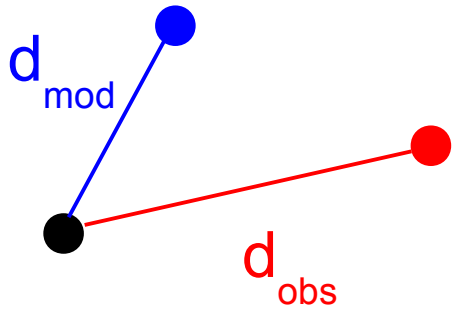
Red: observed drifter position @ t_0+24h

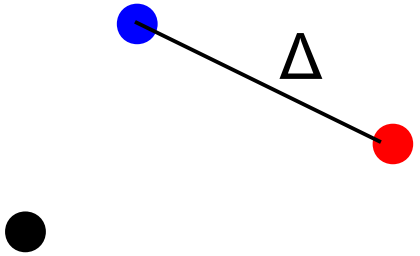
Blue: result of 24h drift simulation, initialized from observation @ t_0



Bias

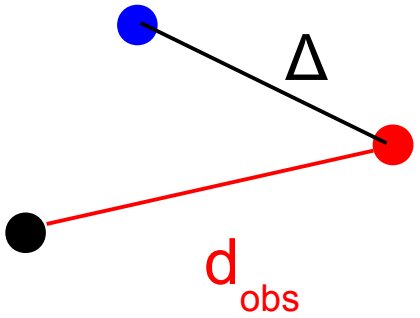
$$N^{-1} \sum (d_{mod} - d_{obs})$$





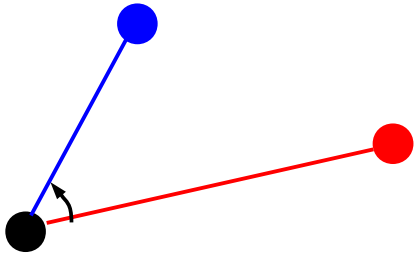
Mean square, end position offset

$N^{-1} \sum \Delta^2$



Ratio, end position separation *vs.* observed drift

Δ / d_{obs}



Angular offset (Δ angle)

positive when model “trajectory” is rotated anti-clockwise (as in example to the left)

Normalized drift w/ observed drift as unit x-axis