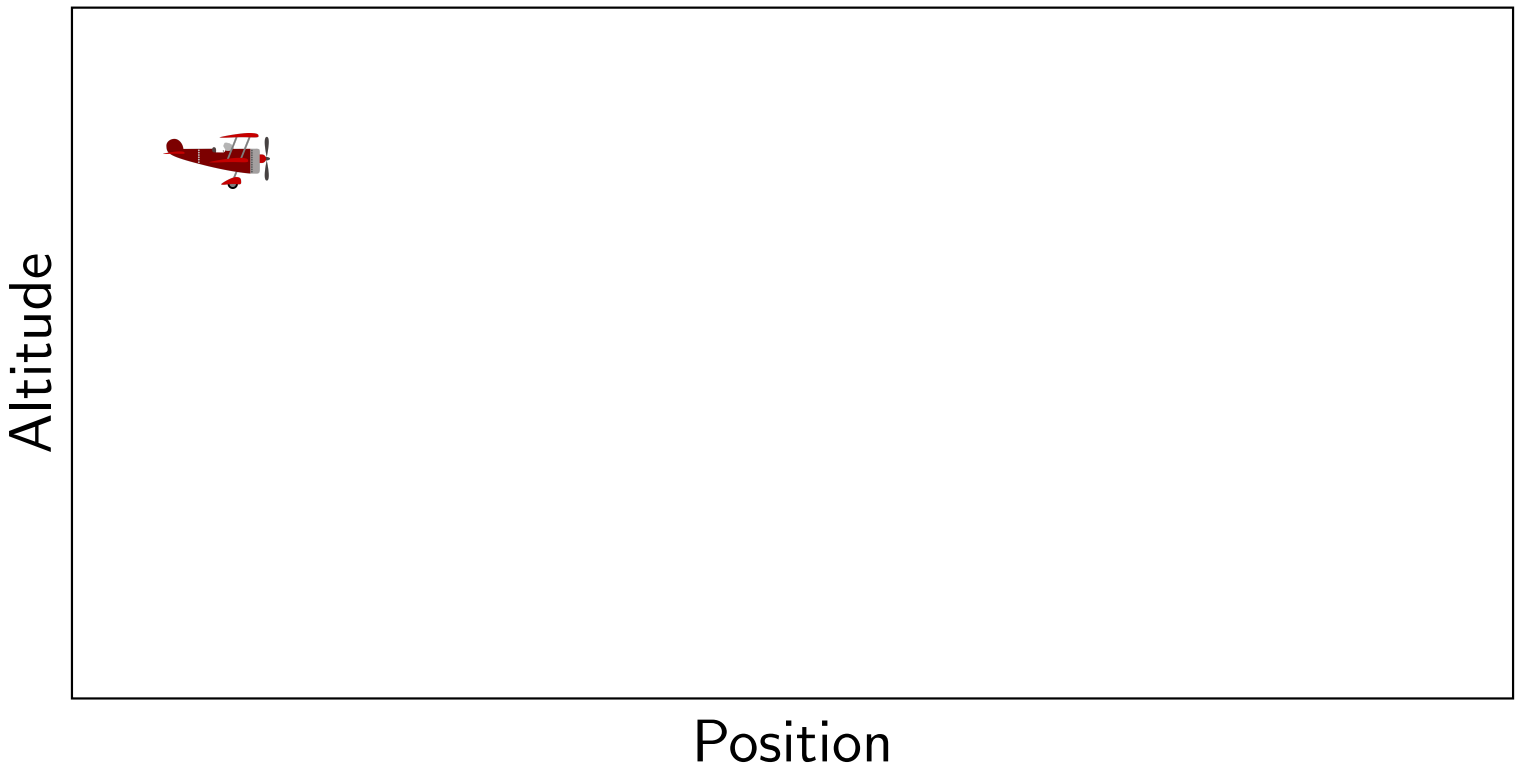
A Sequential Monte Carlo Example

Daniel Lundén

August 28, 2019

A Model for Aircraft Localization



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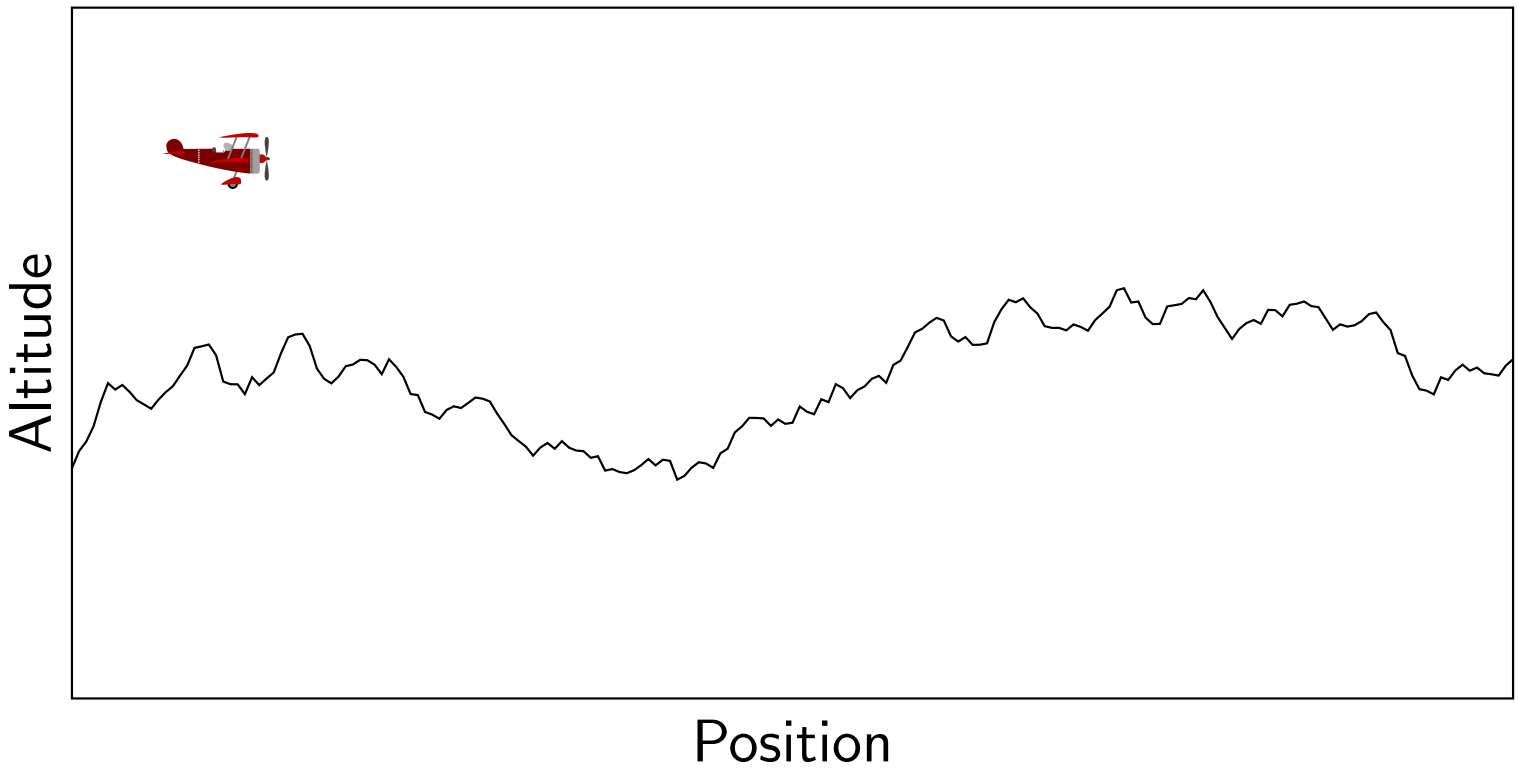

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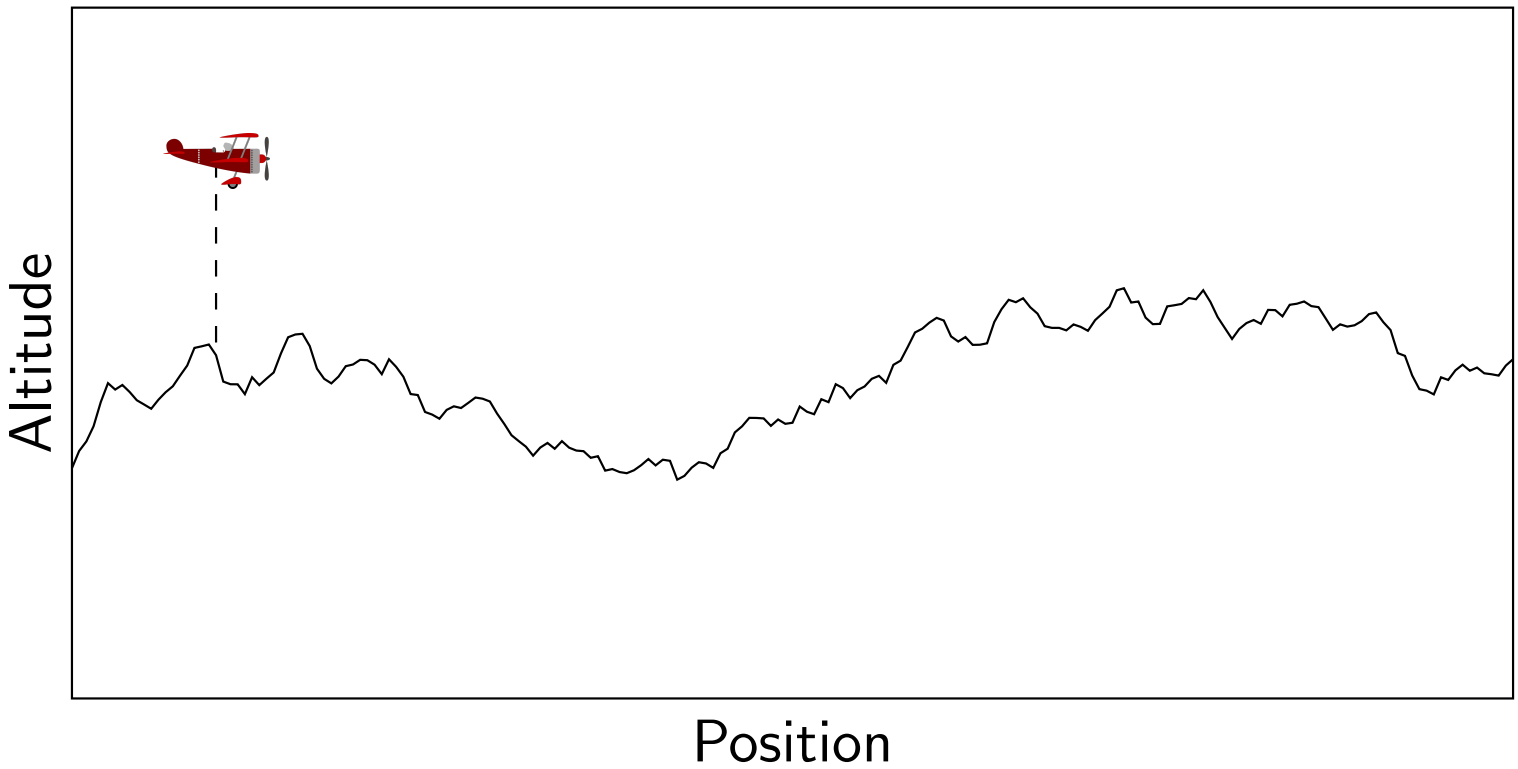

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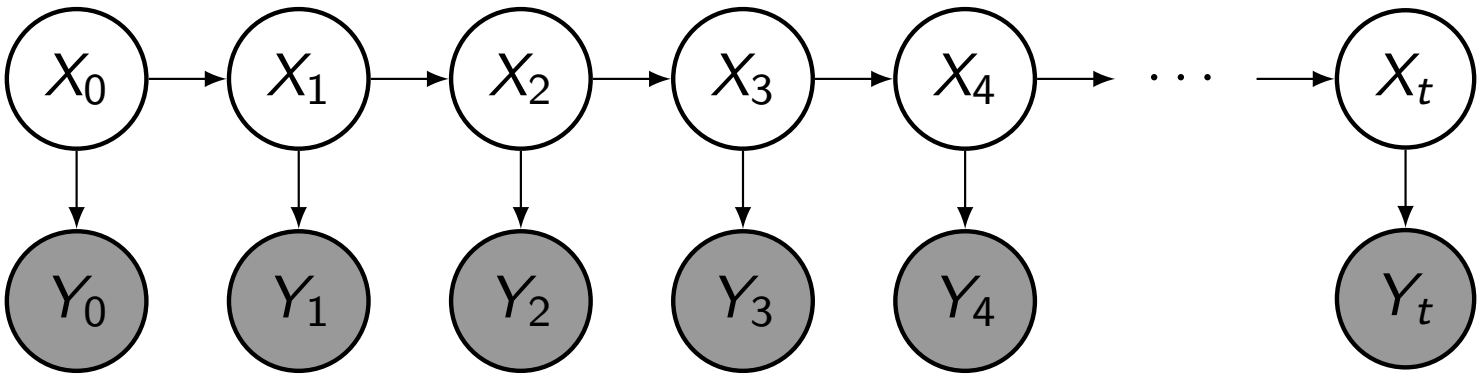
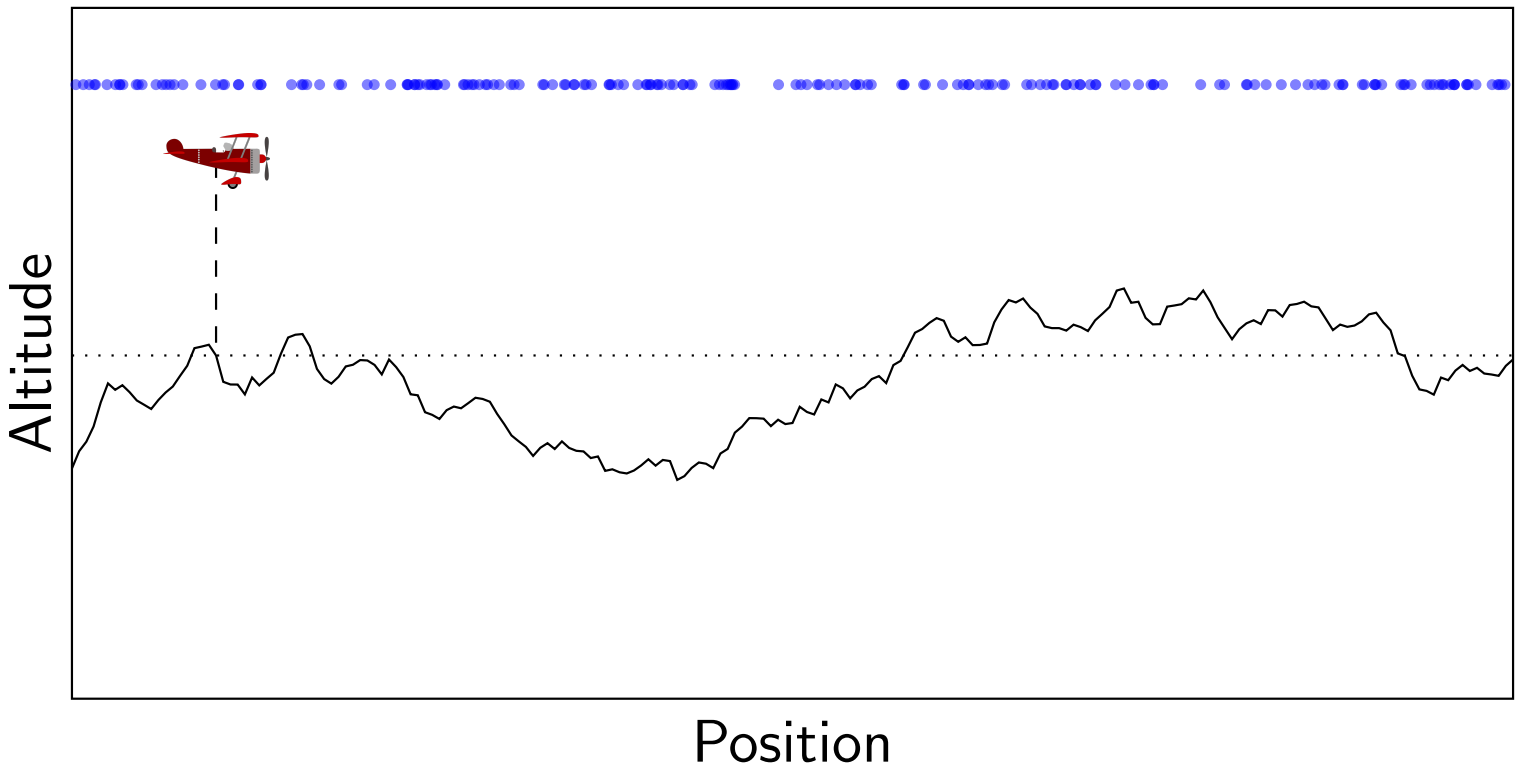


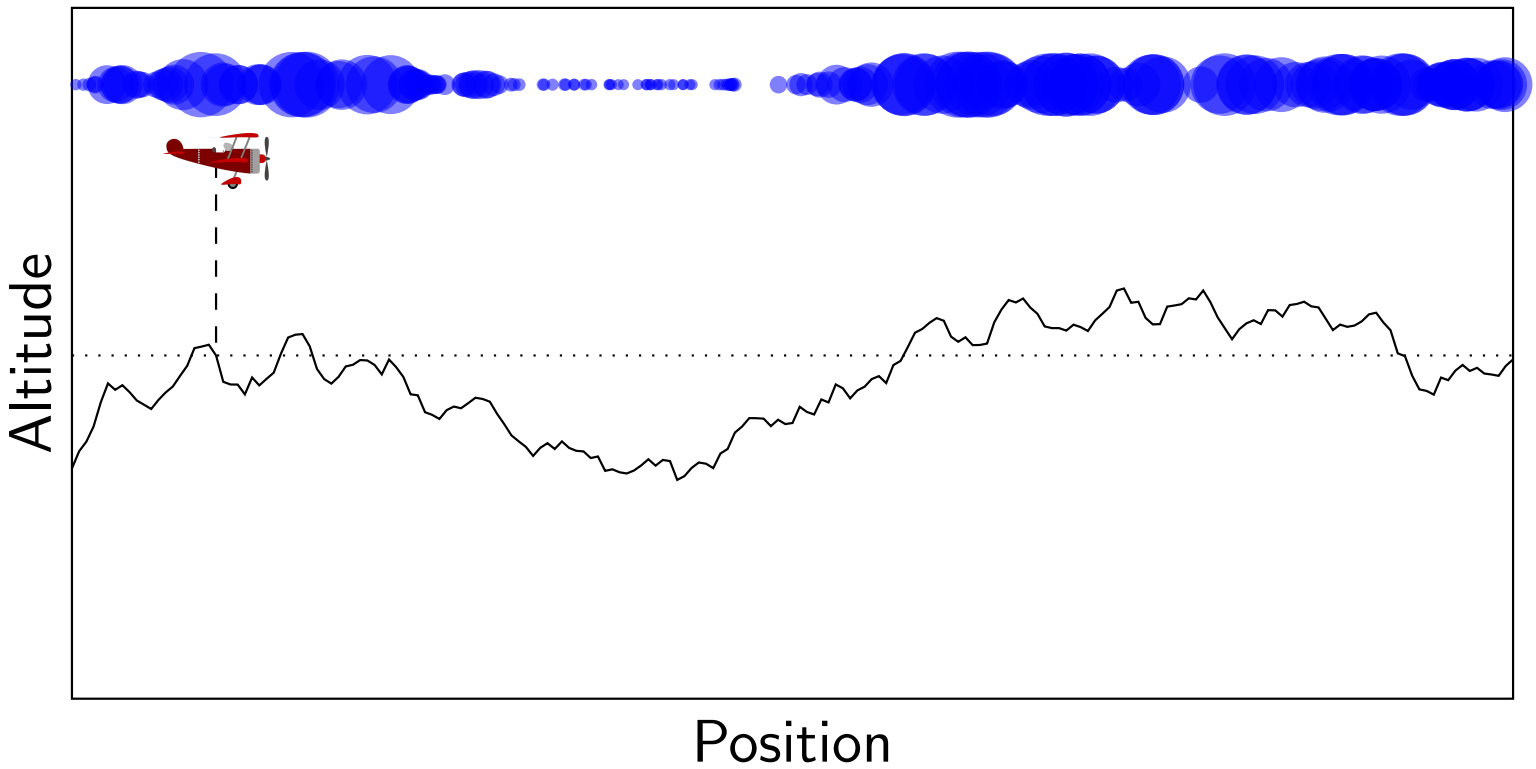
Importance sampling

Initialize 200 samples from X_0



Importance sampling

Weigh samples using observation model



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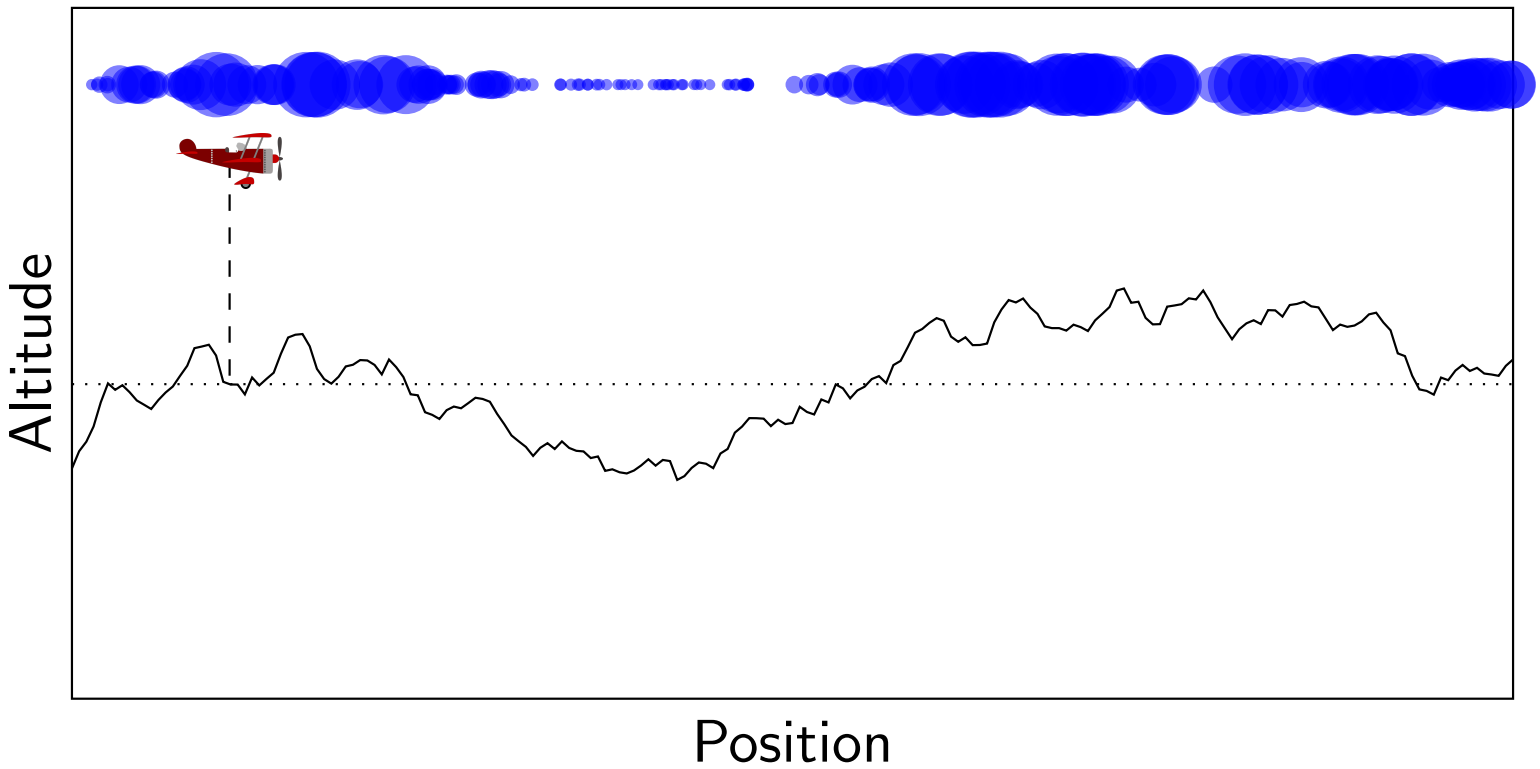
Propagate samples using transition model



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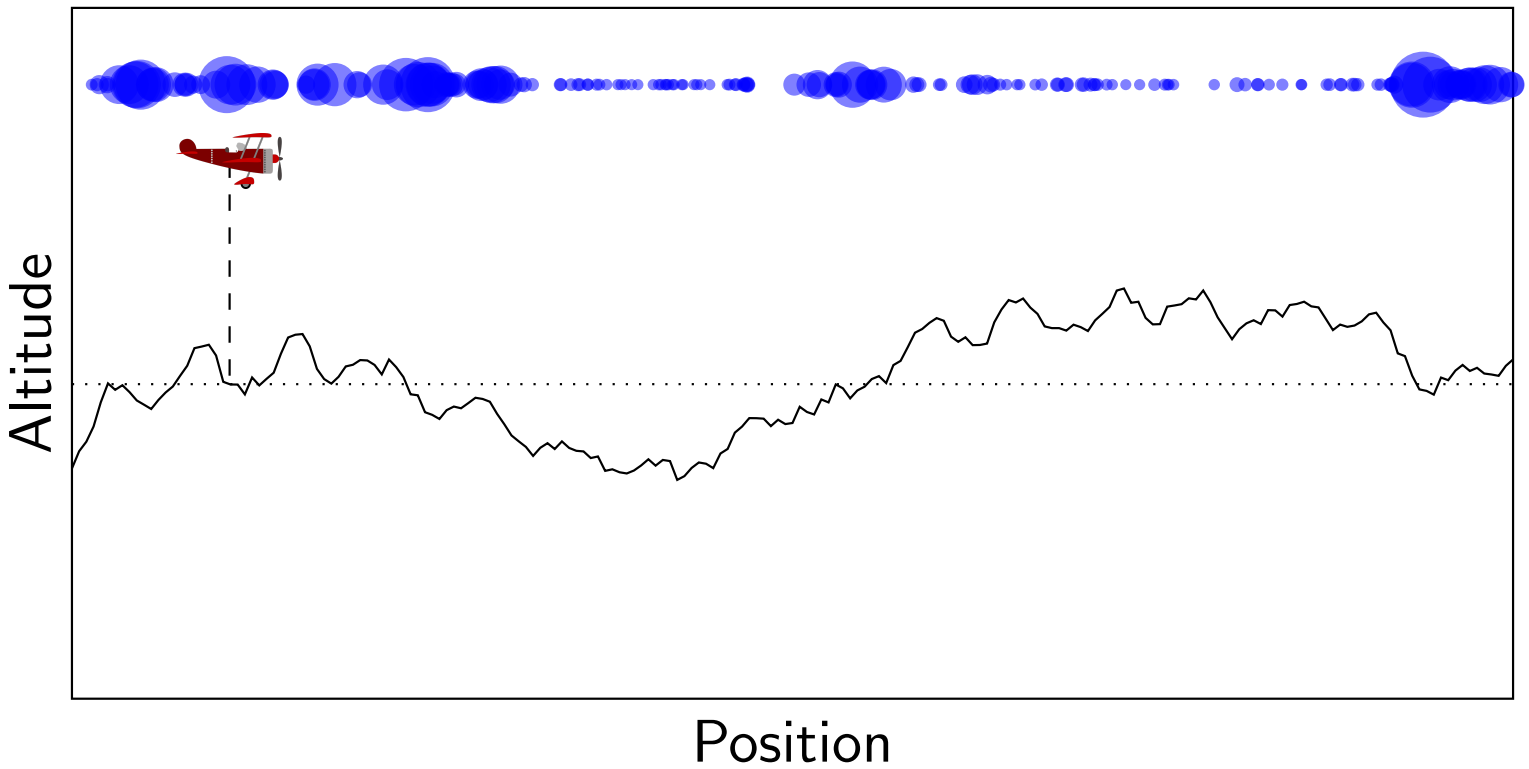

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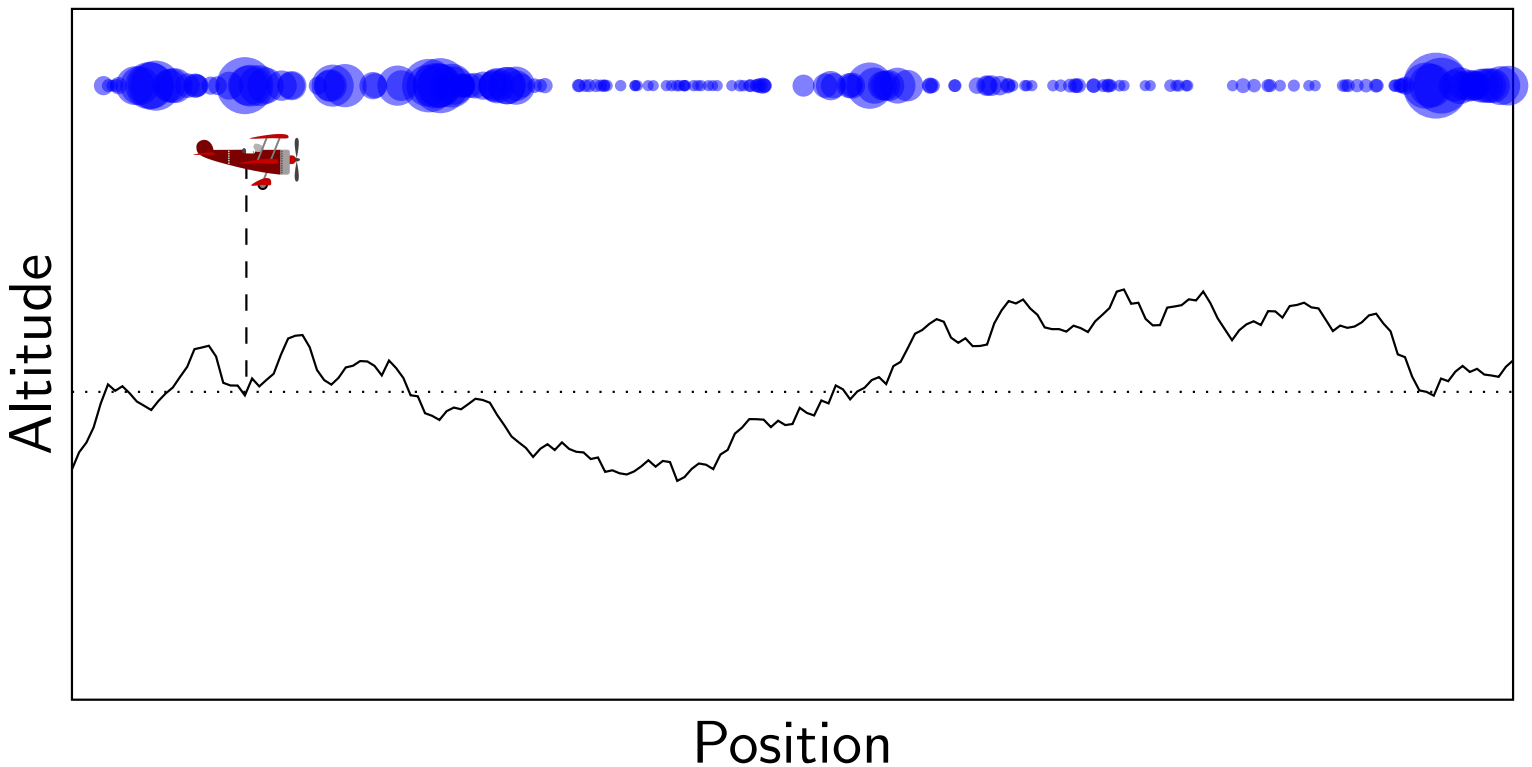

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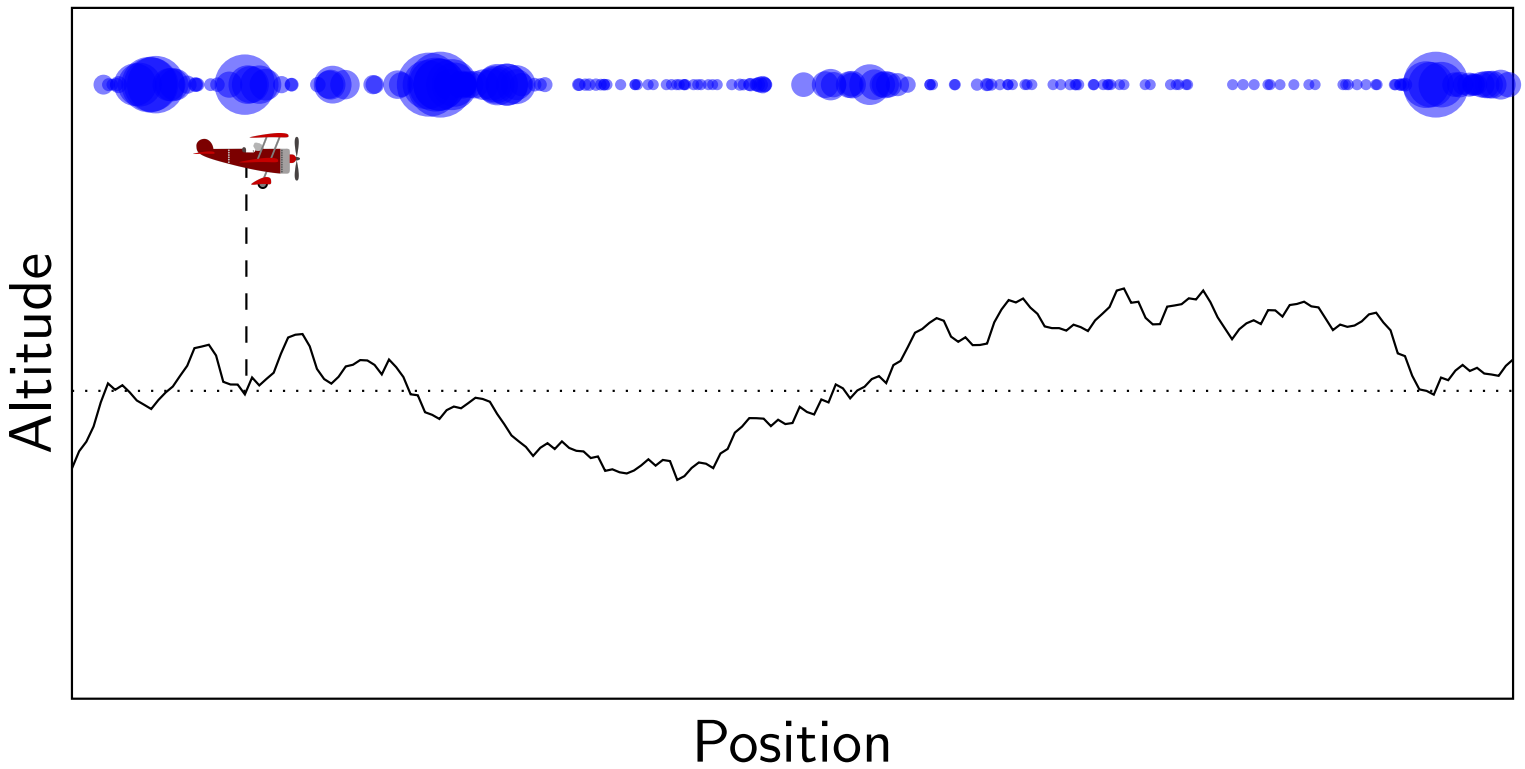

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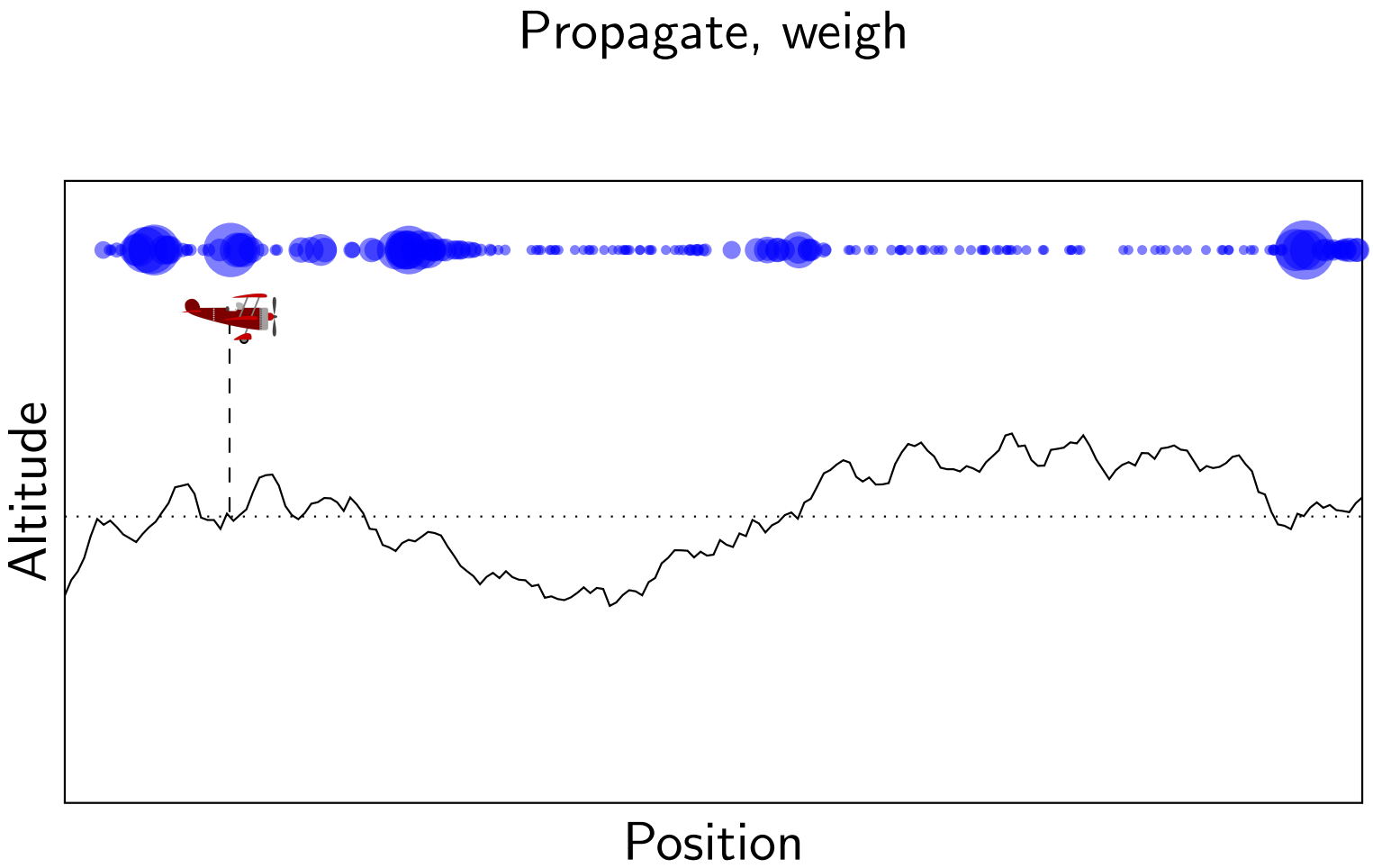

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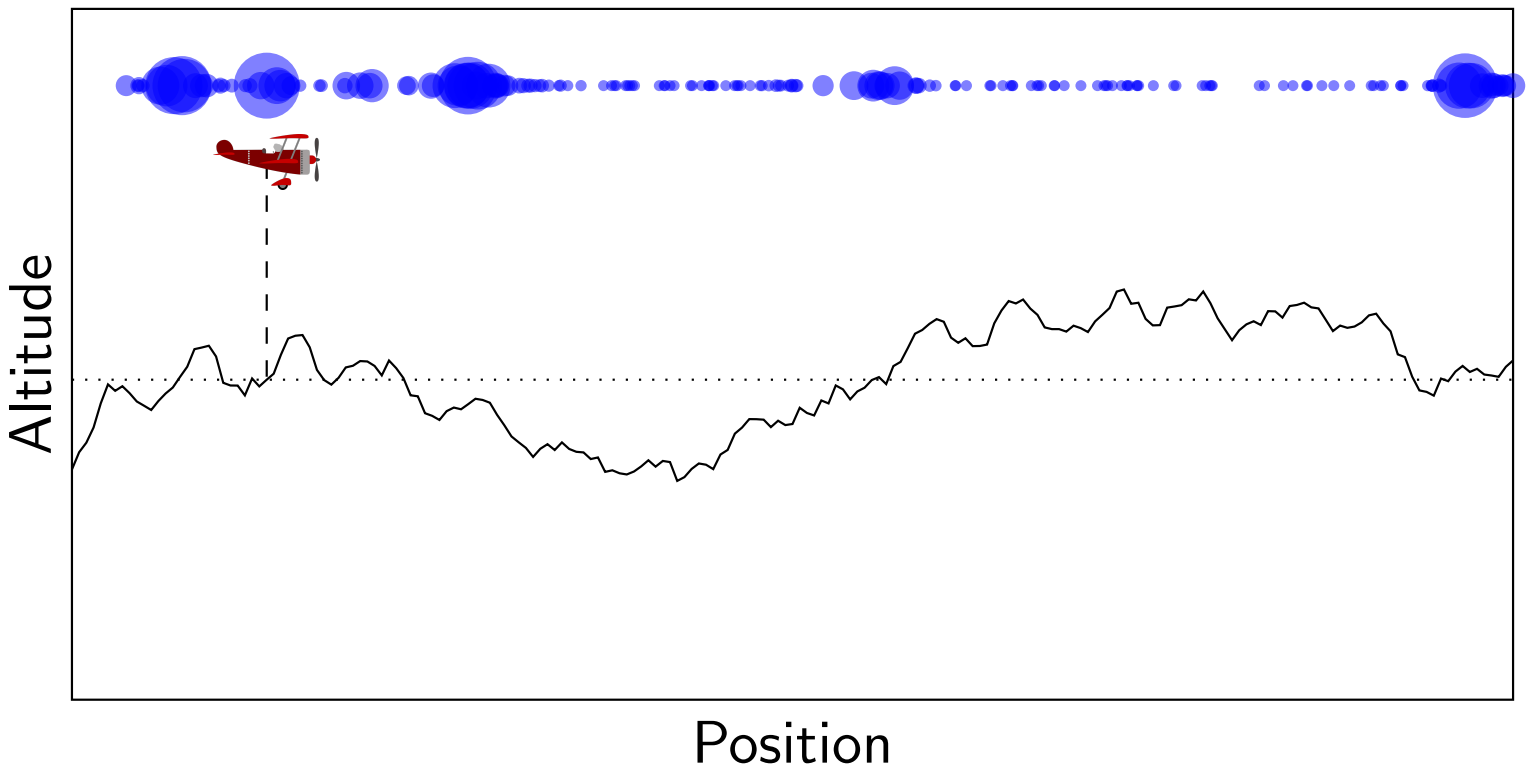

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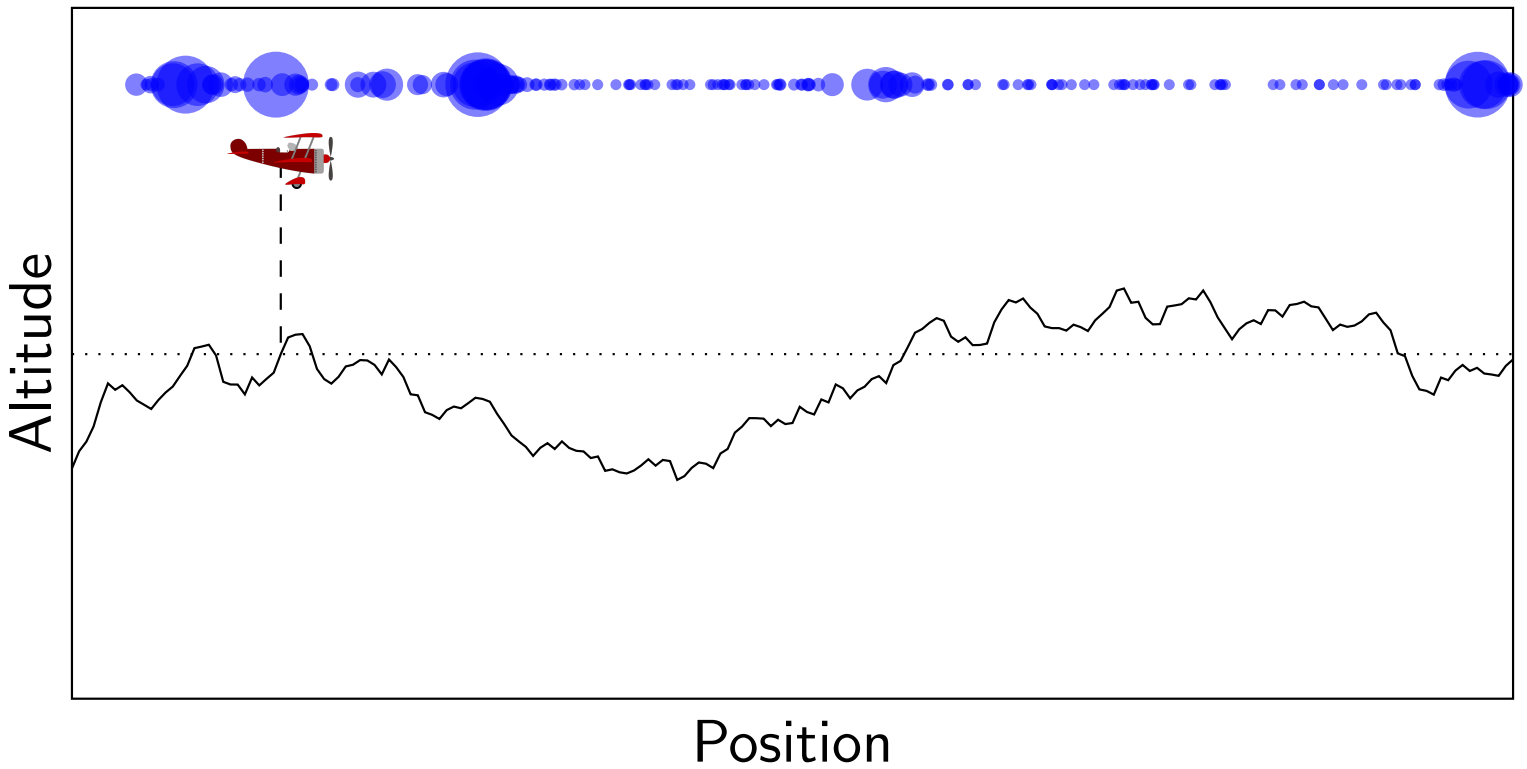

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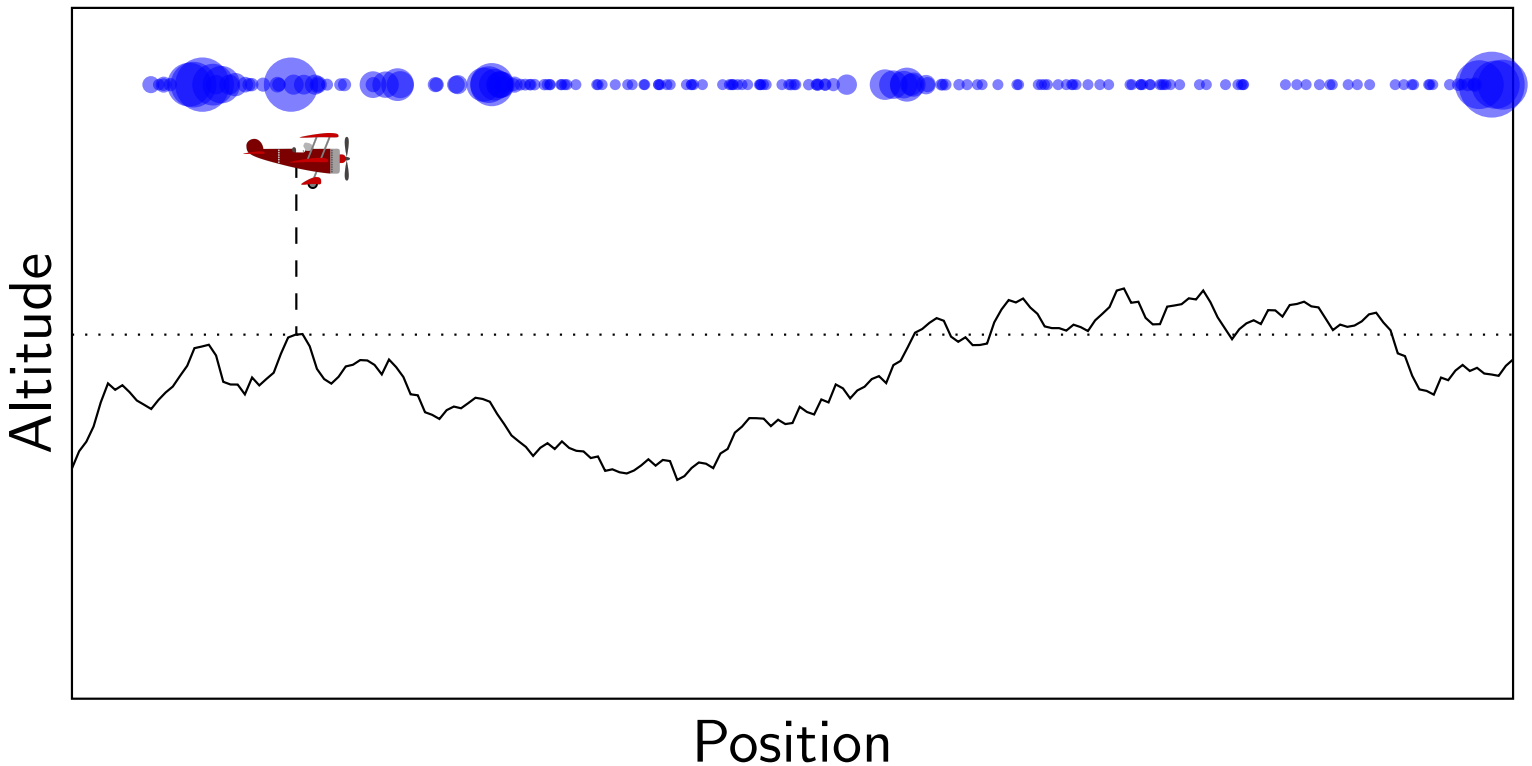

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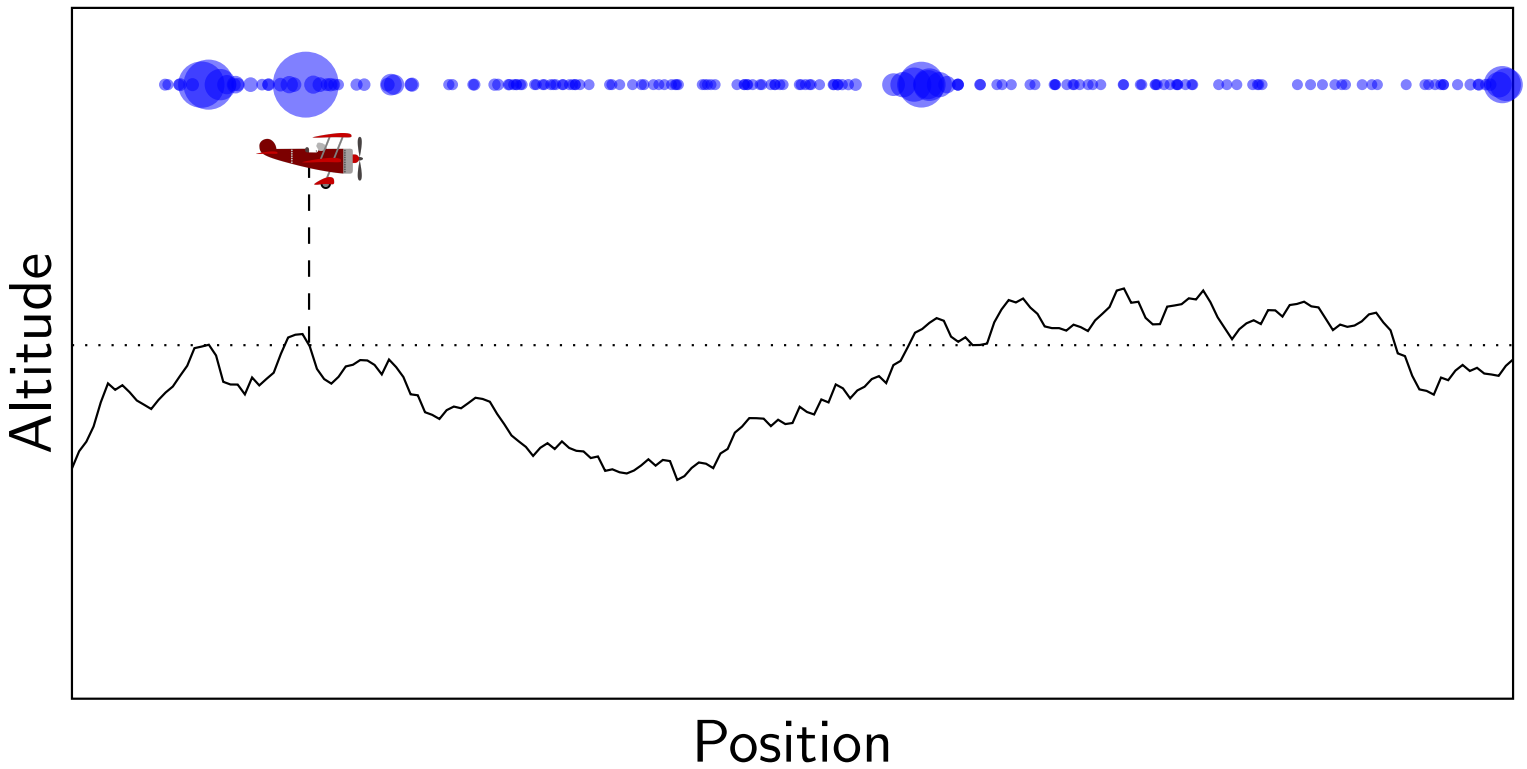

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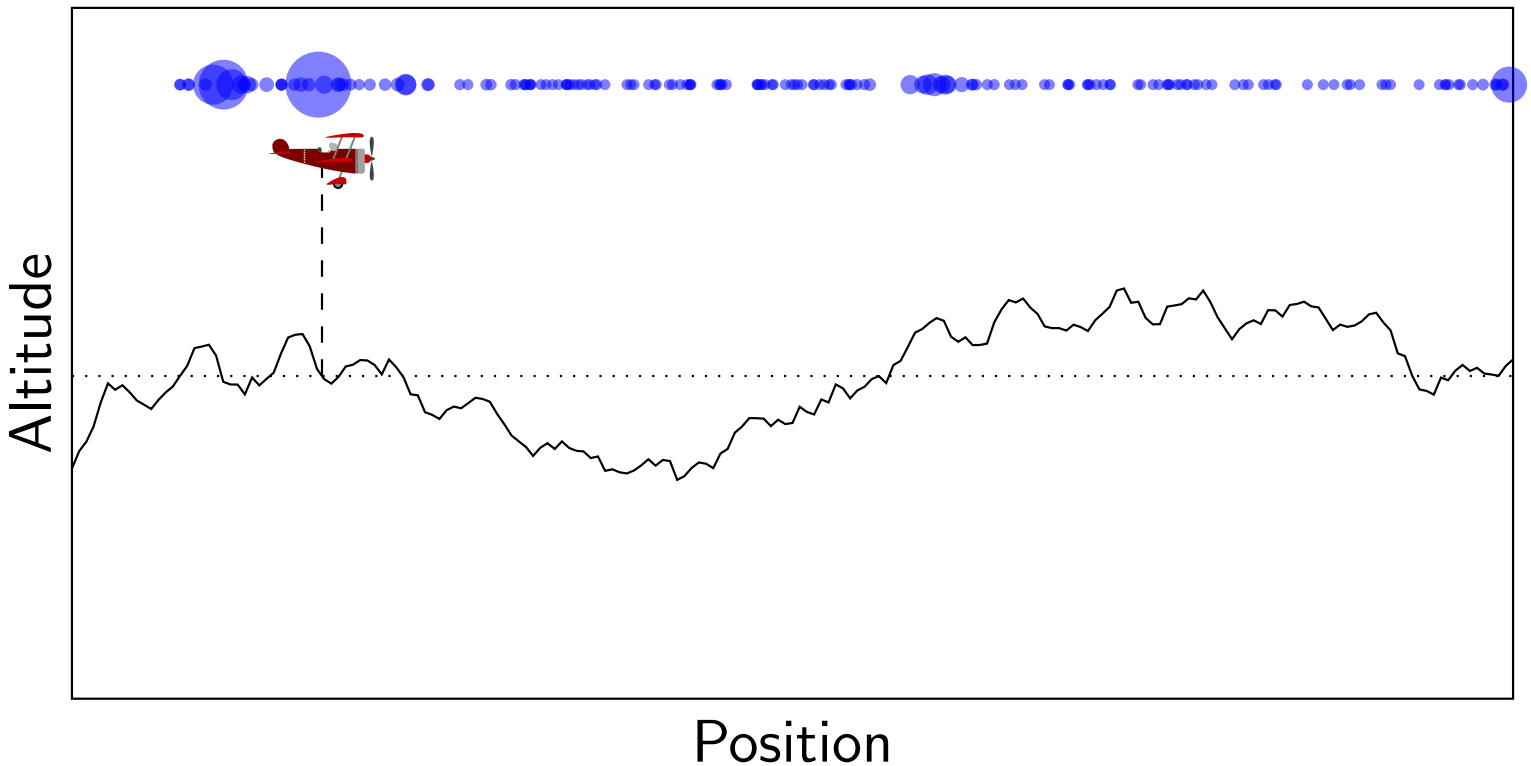

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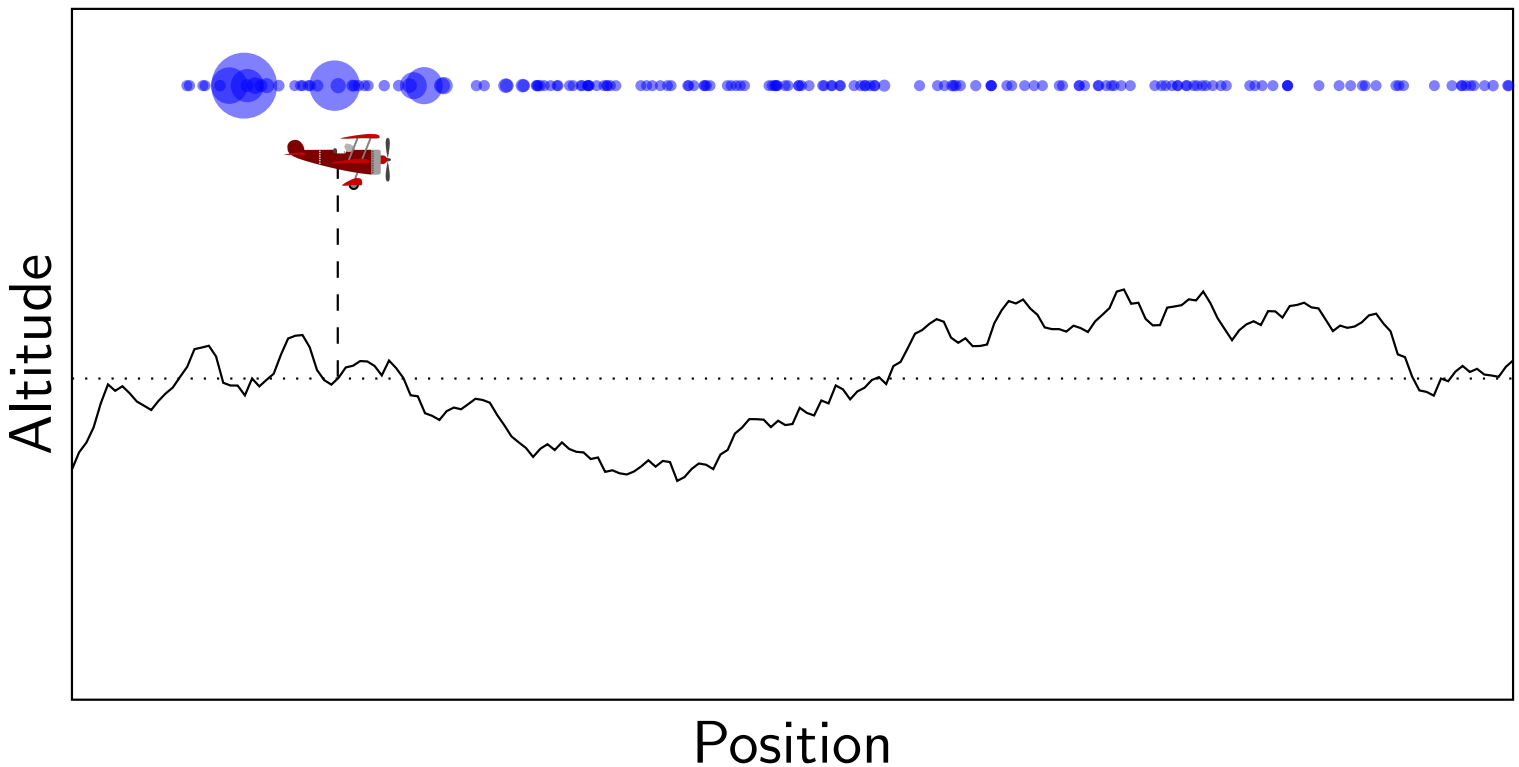

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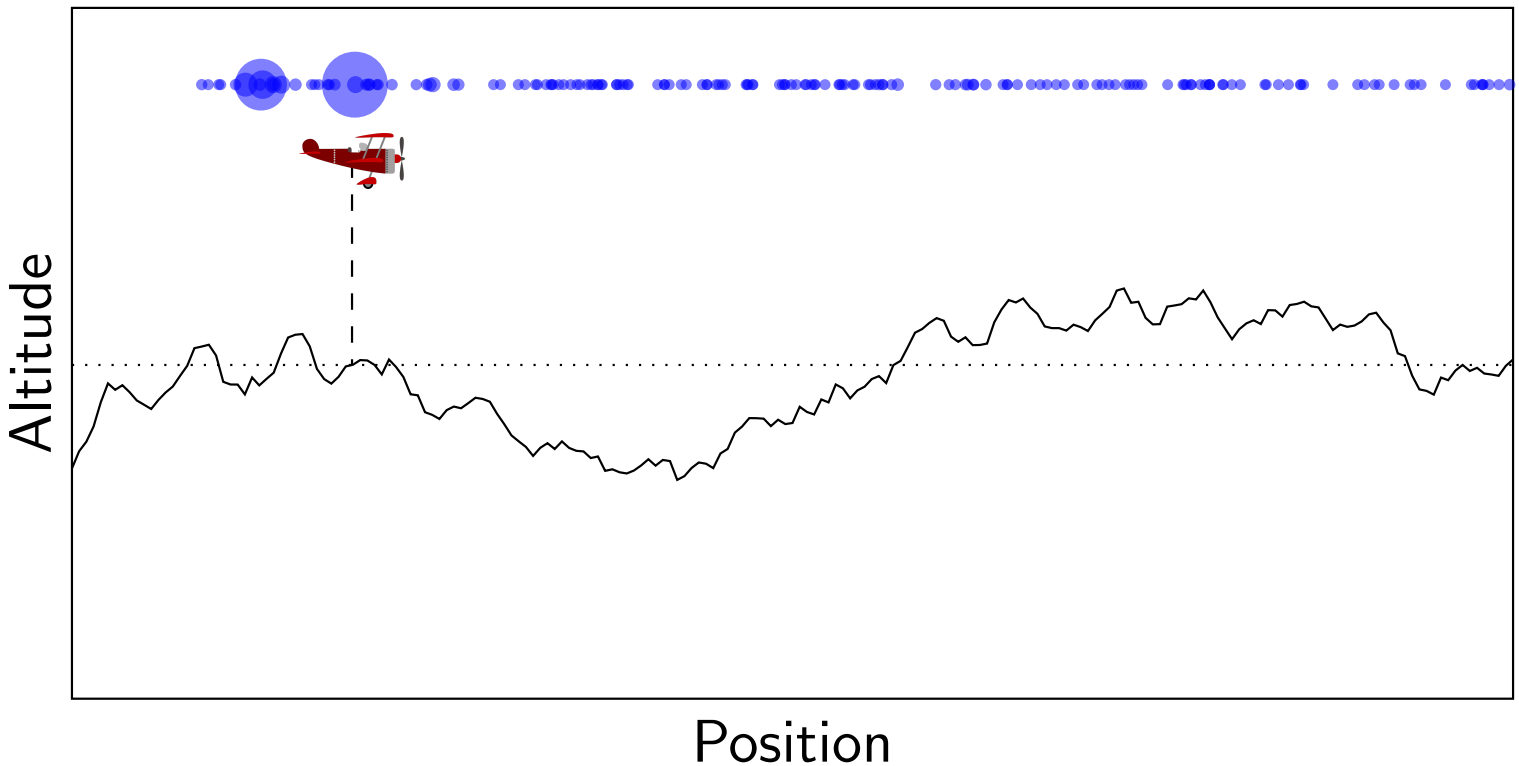

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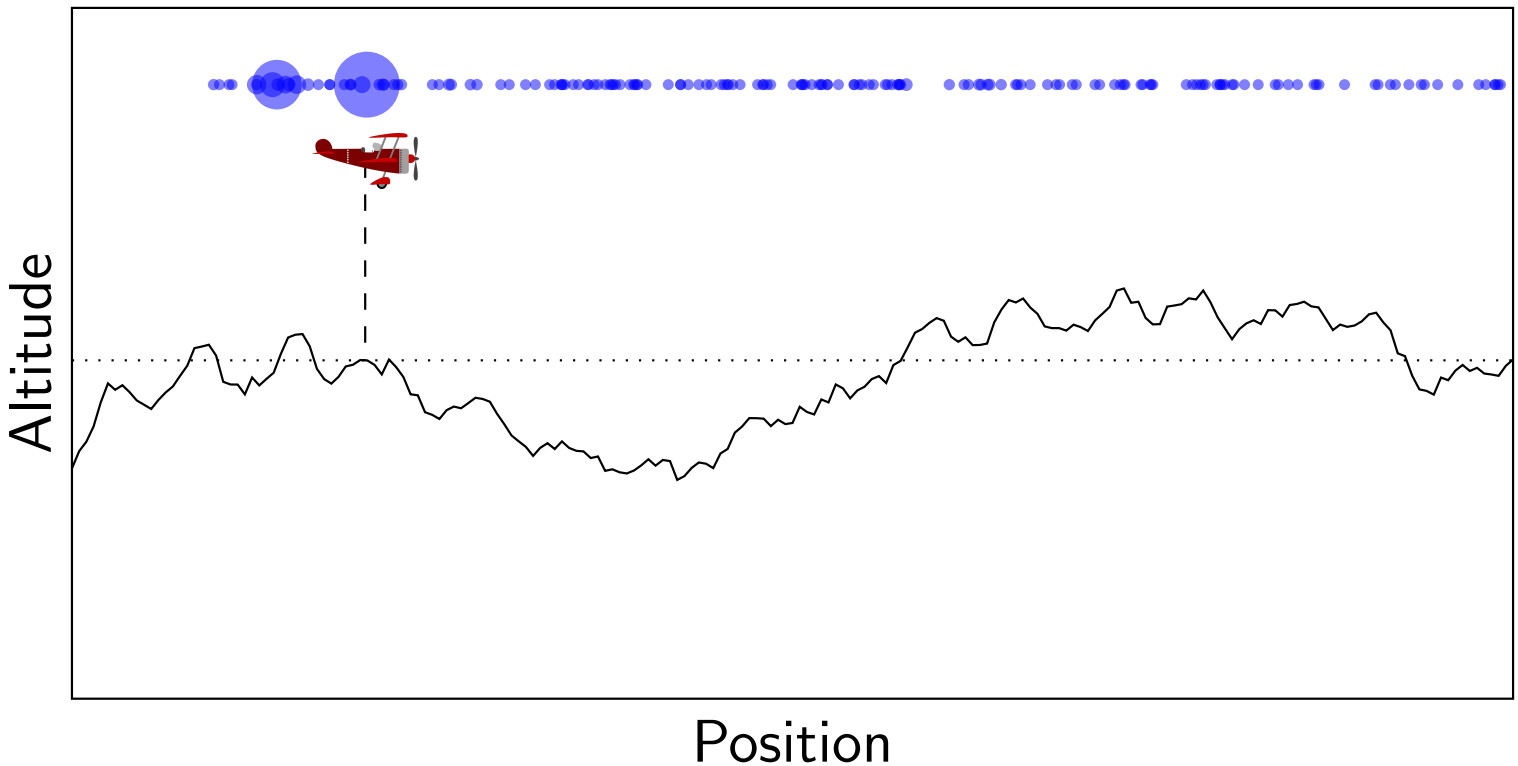

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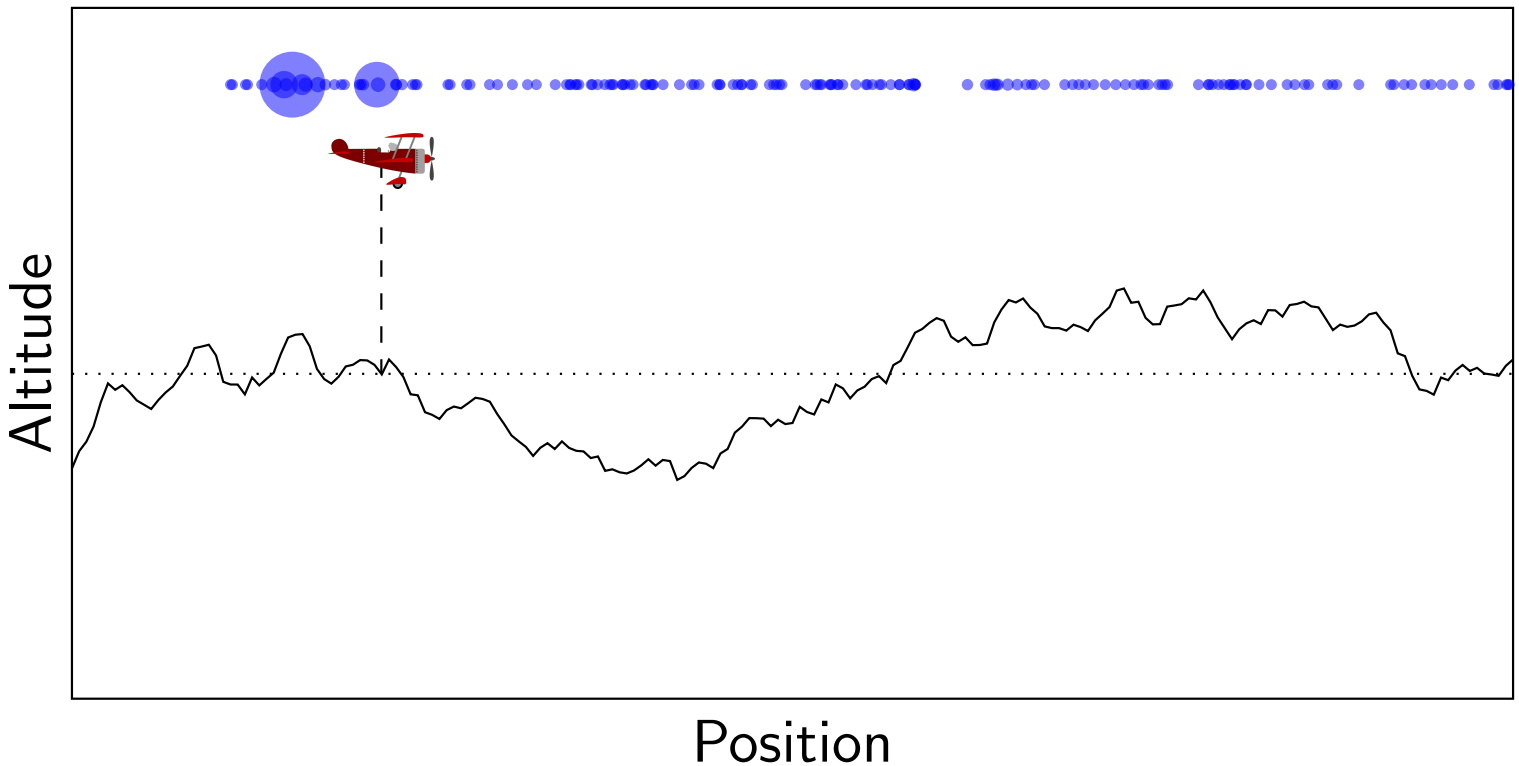

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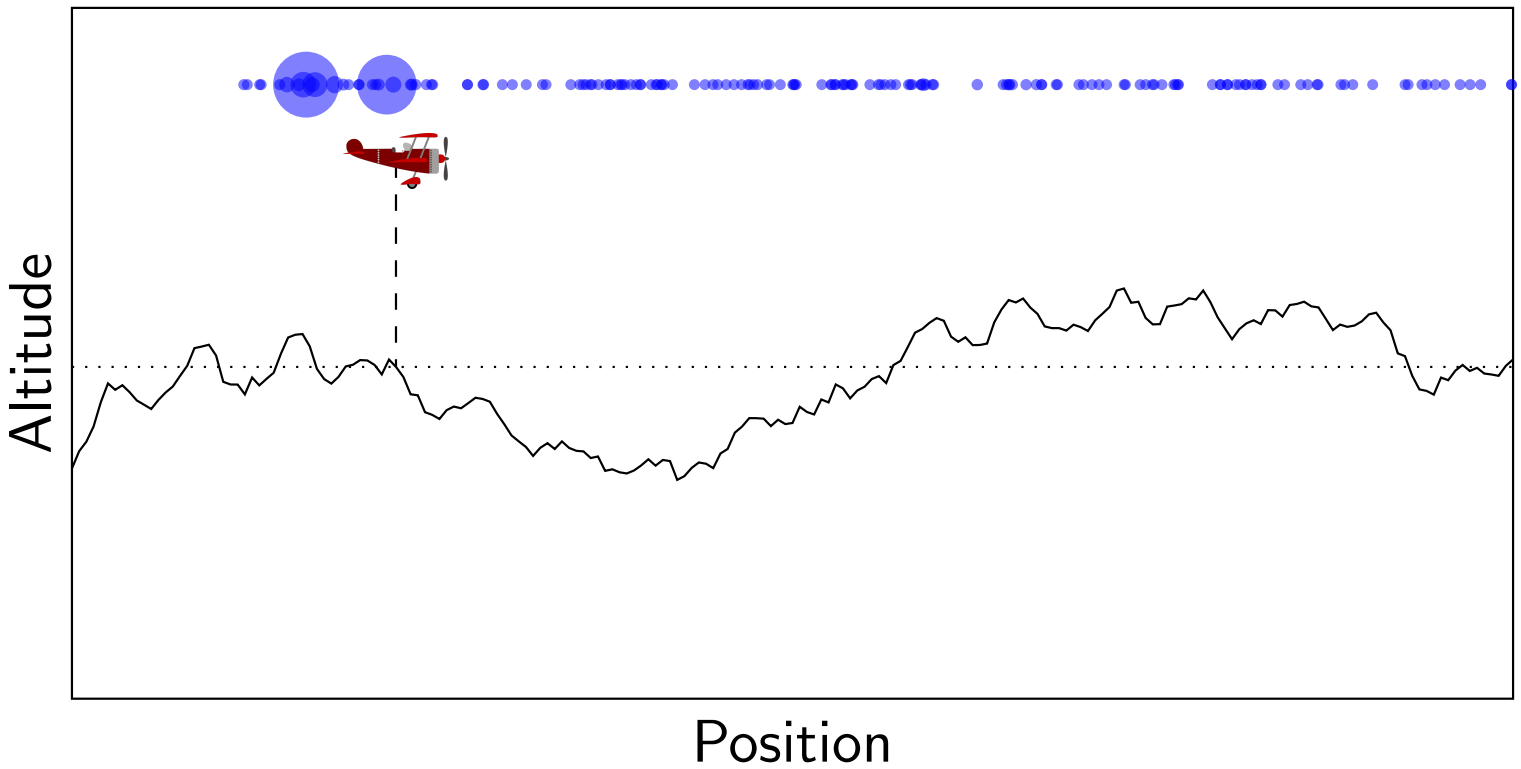

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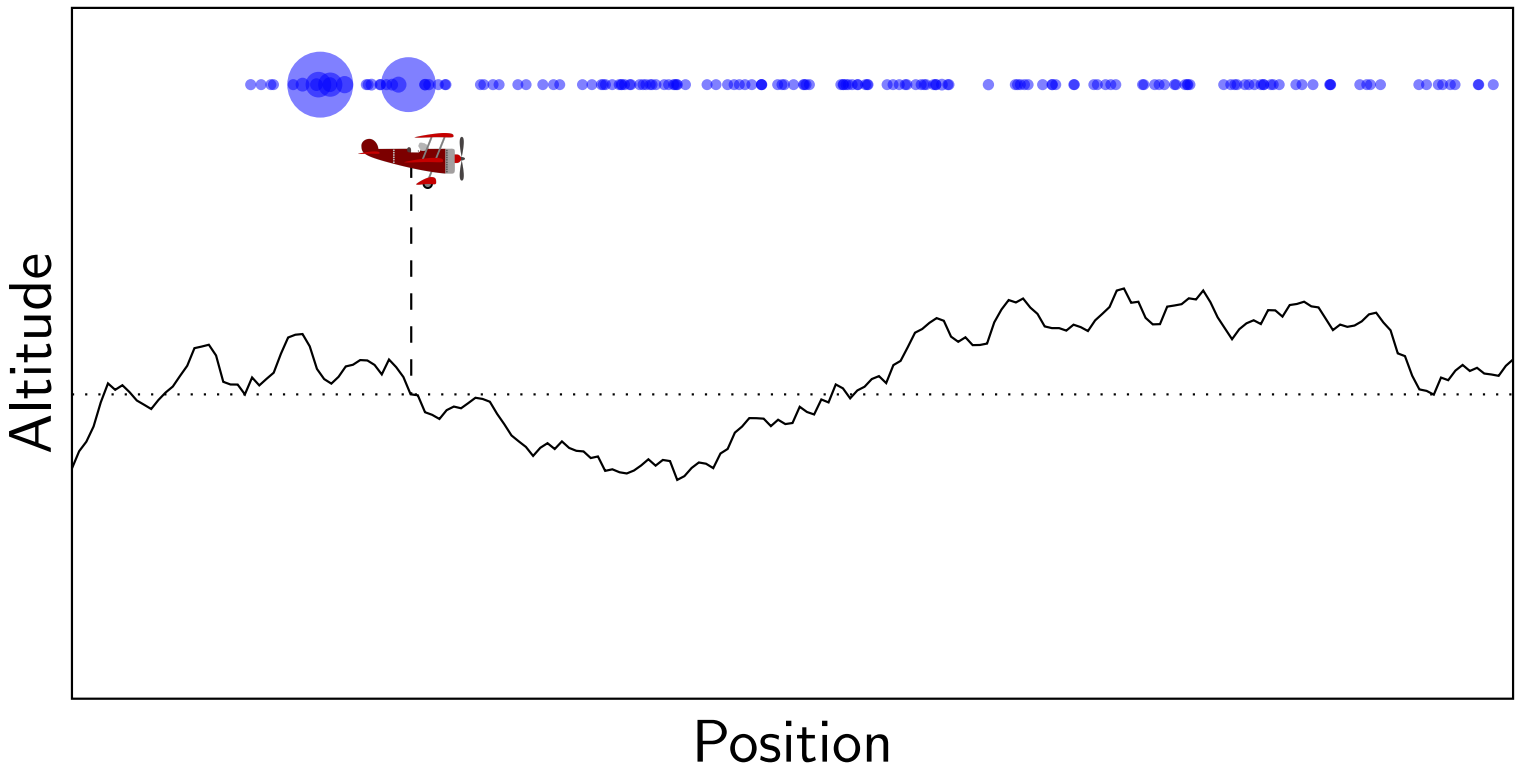

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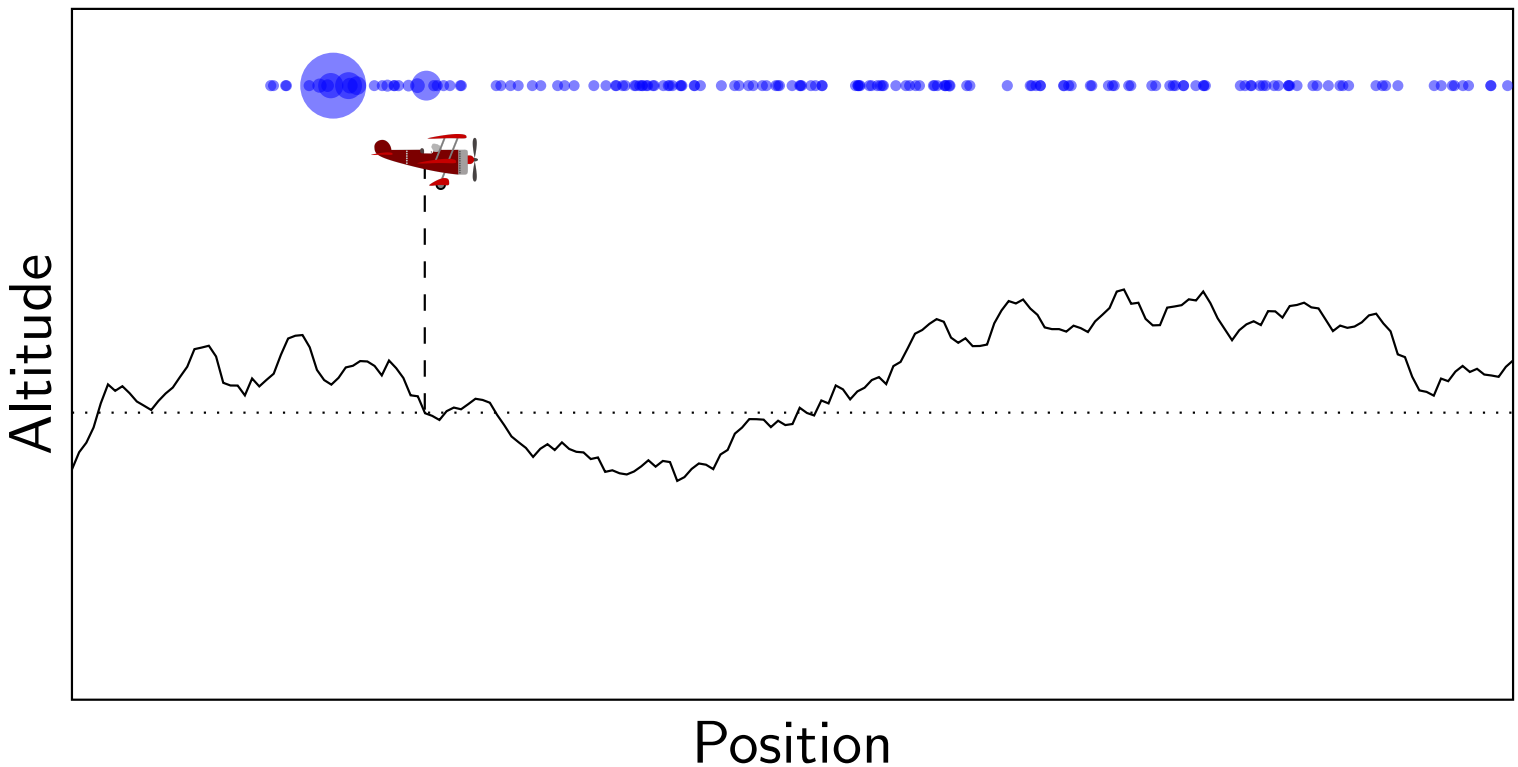

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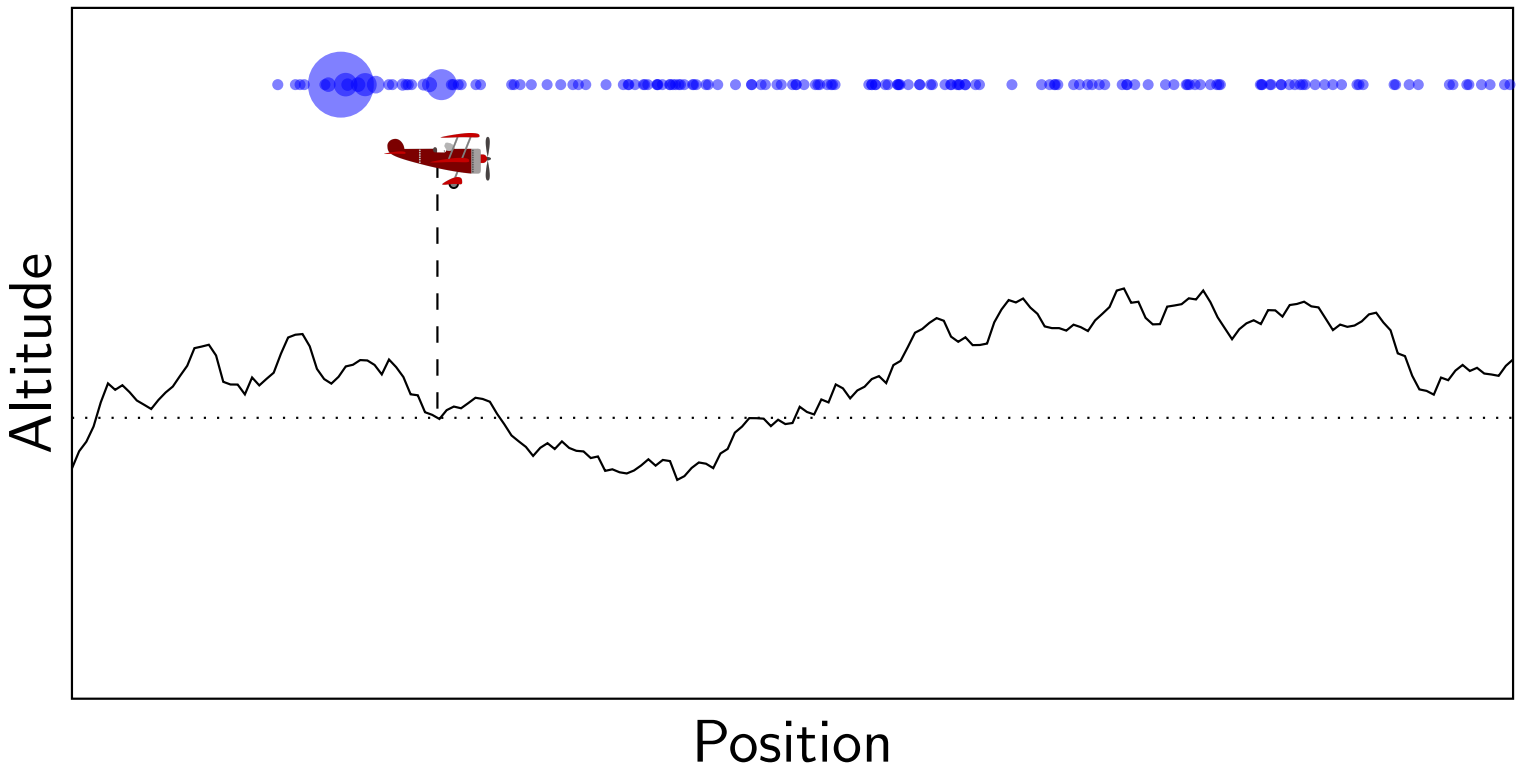

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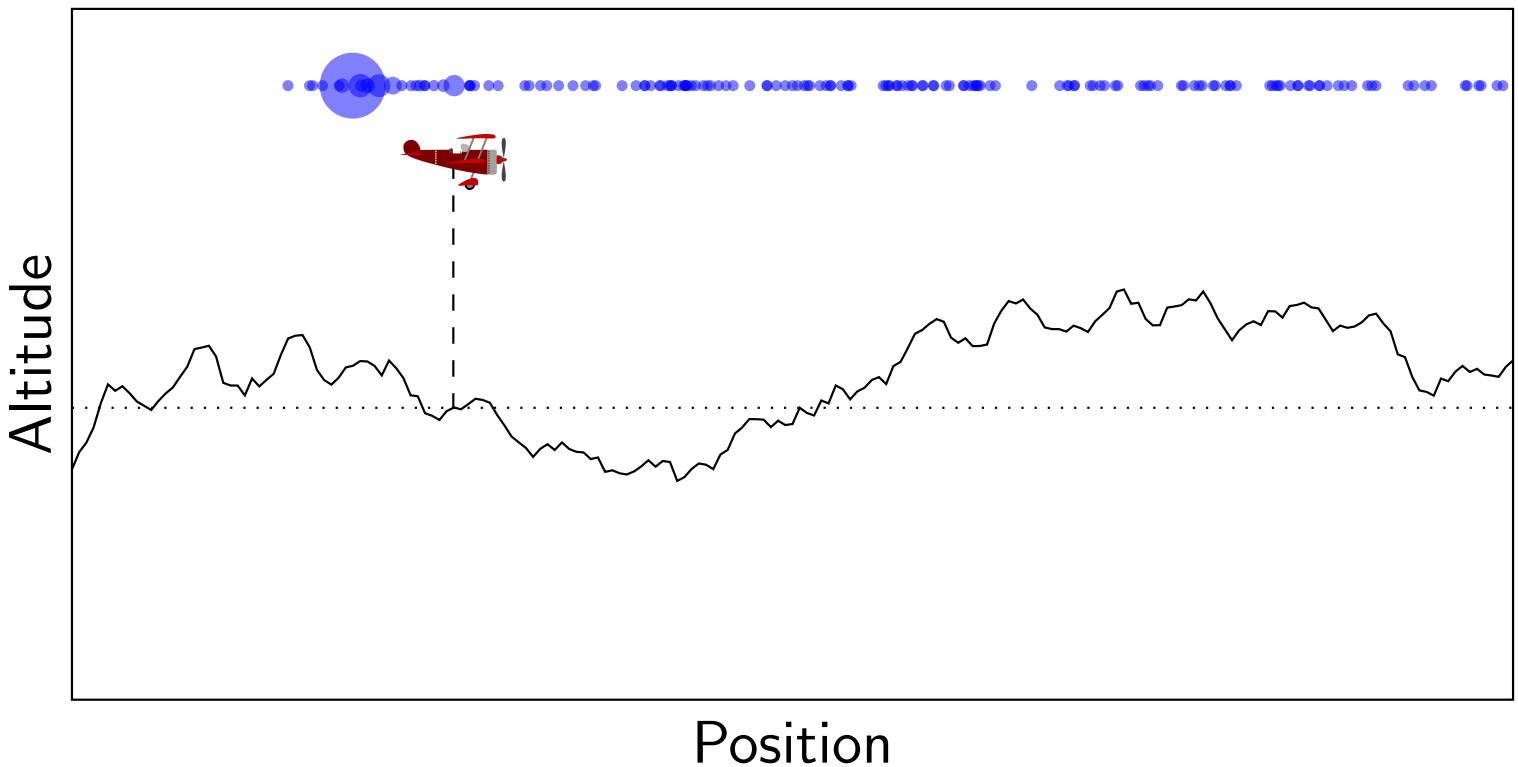

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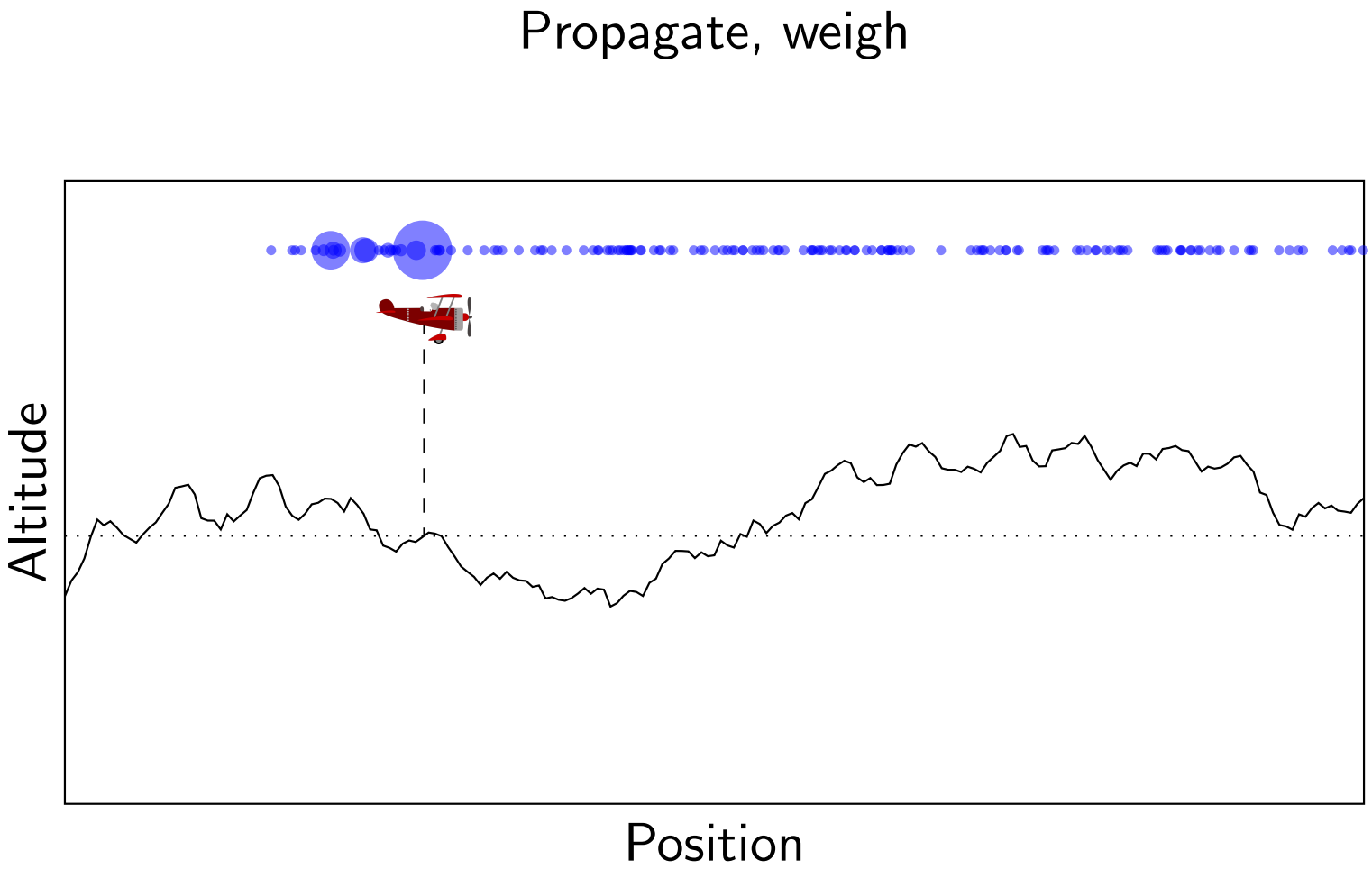

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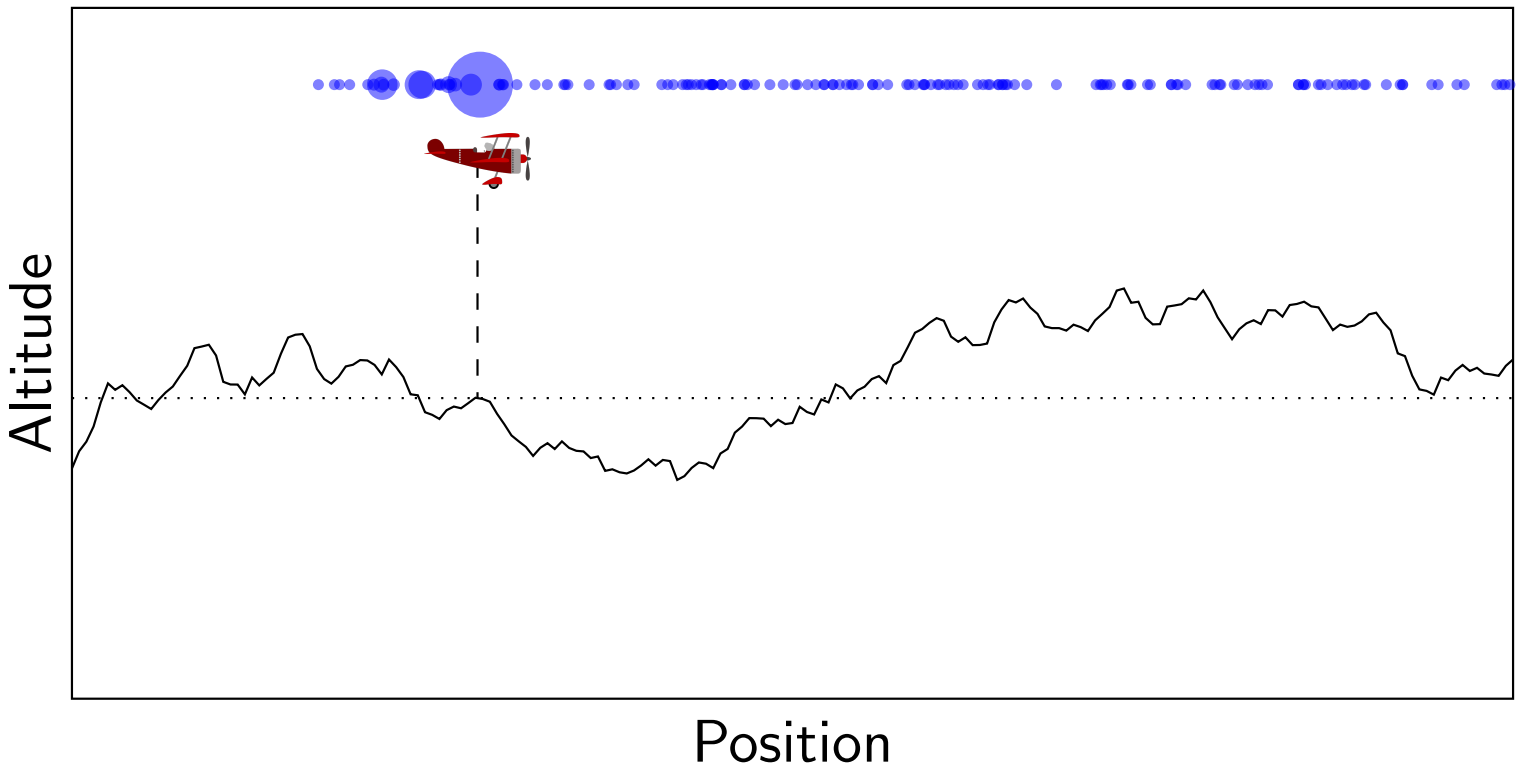

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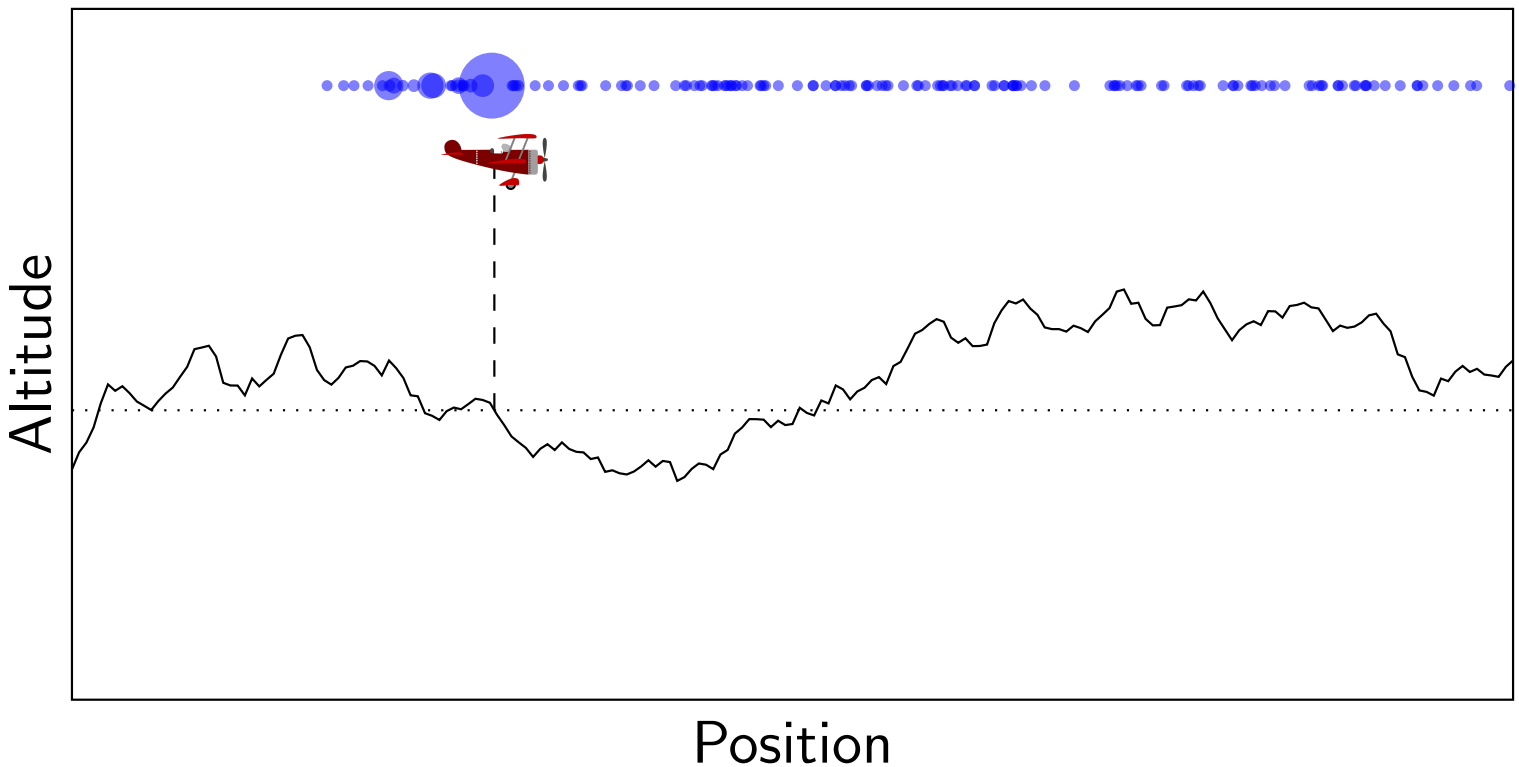

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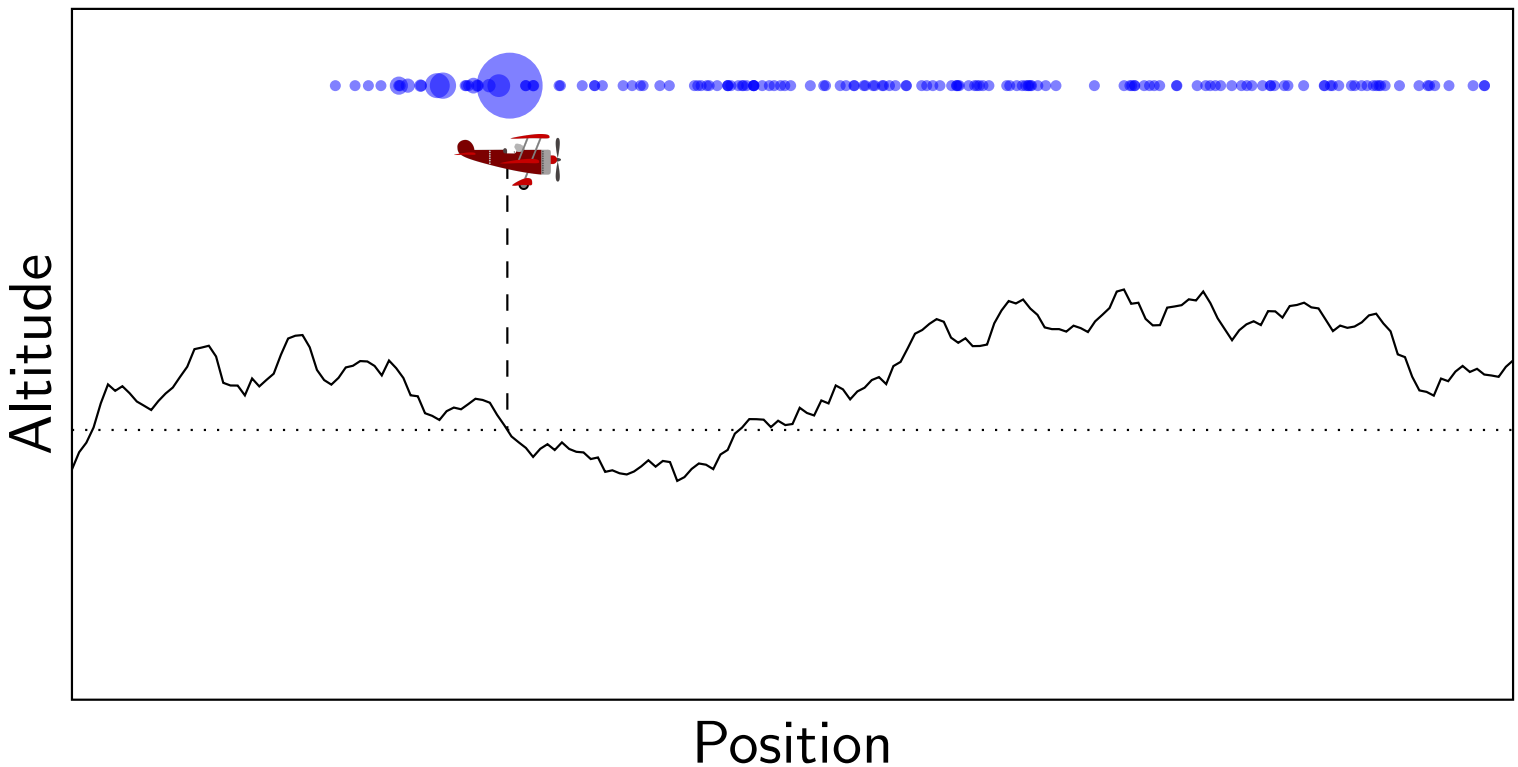

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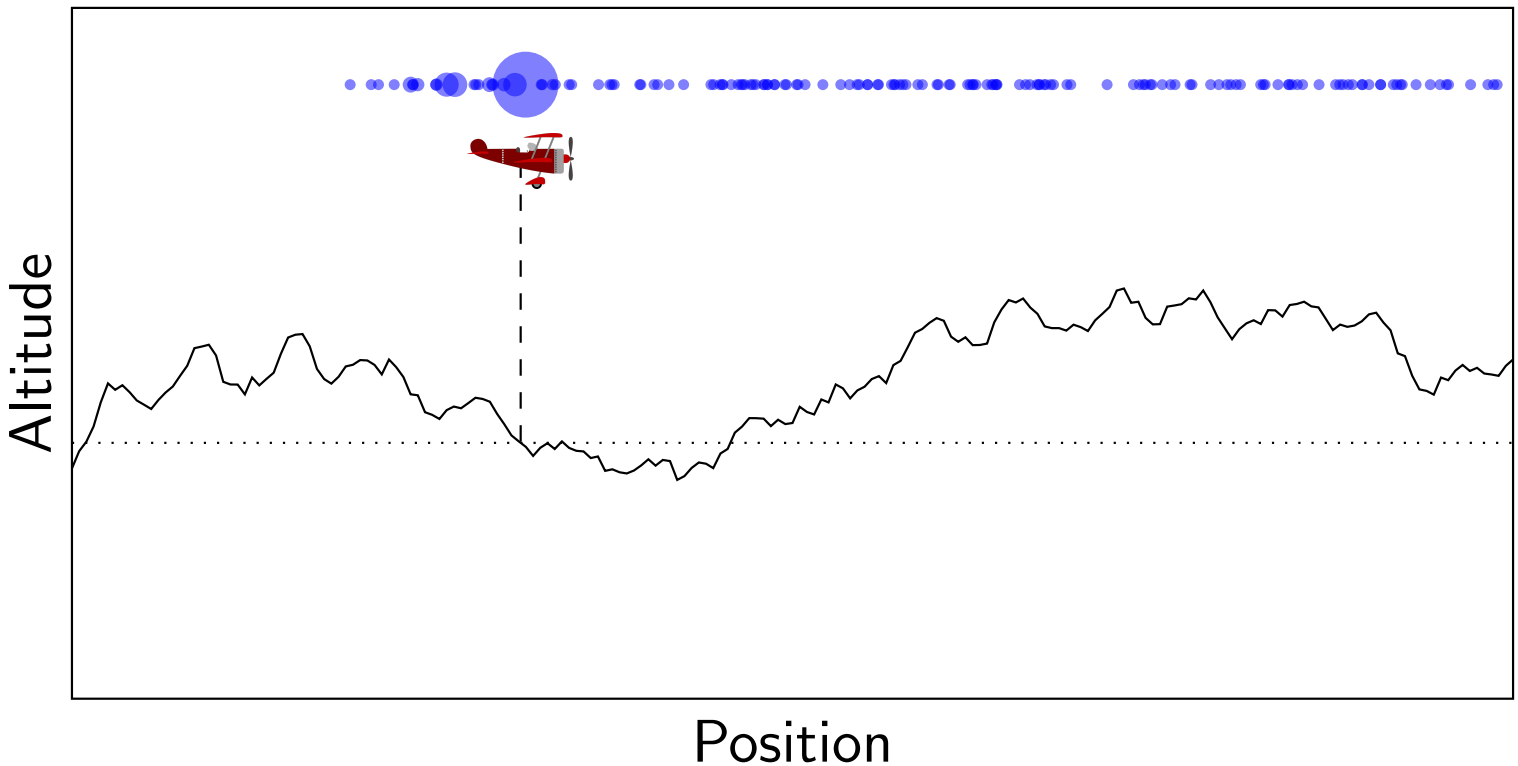

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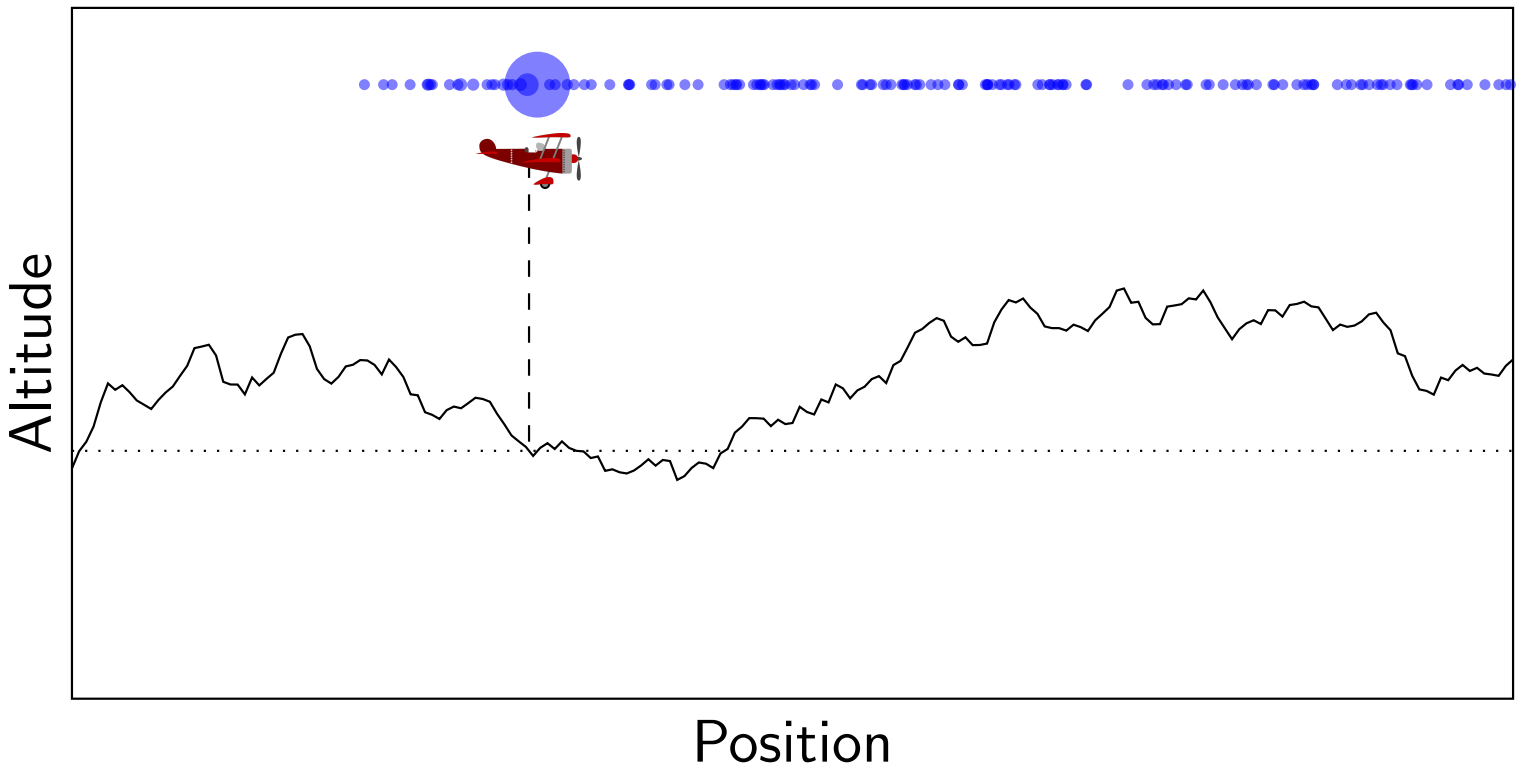

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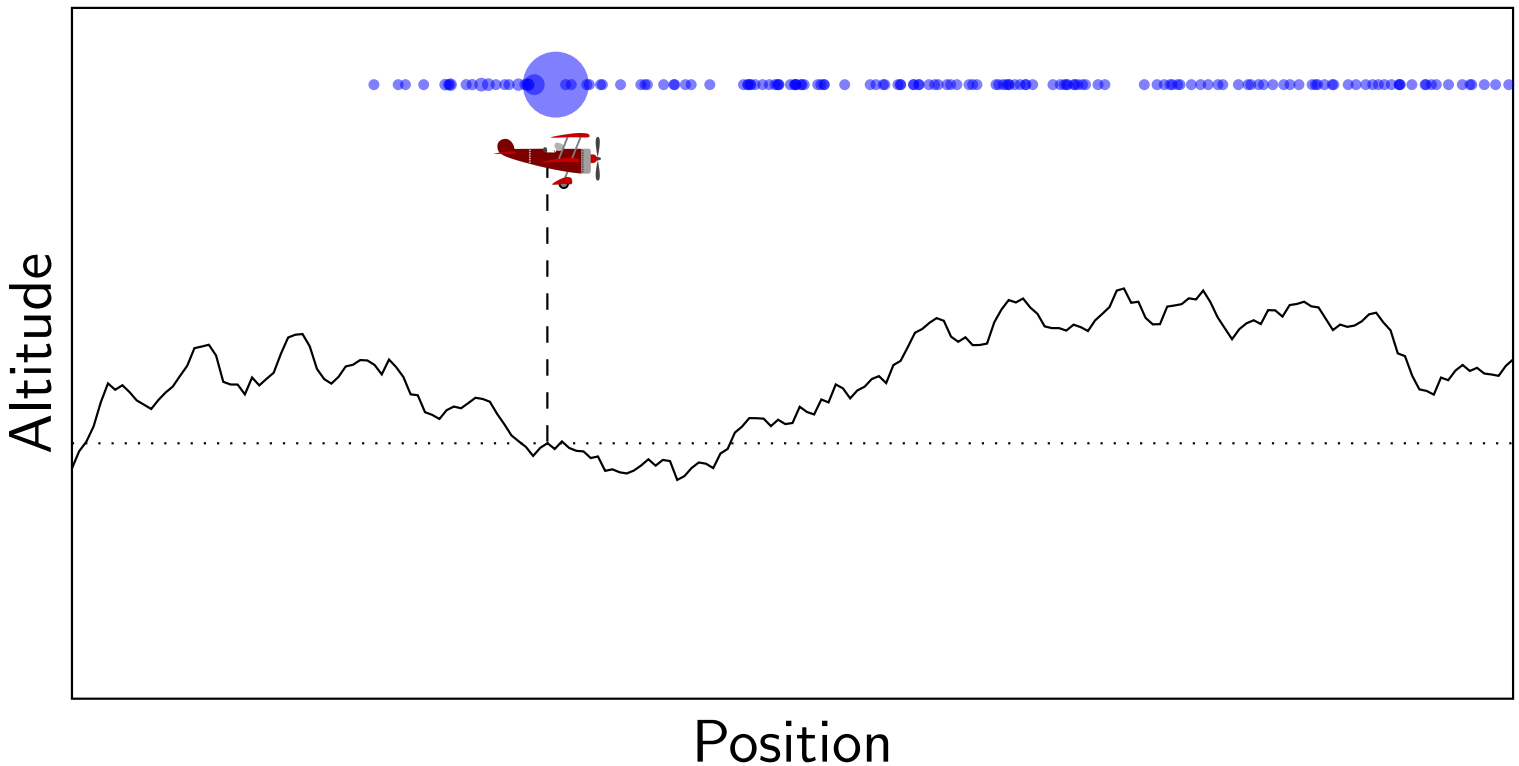

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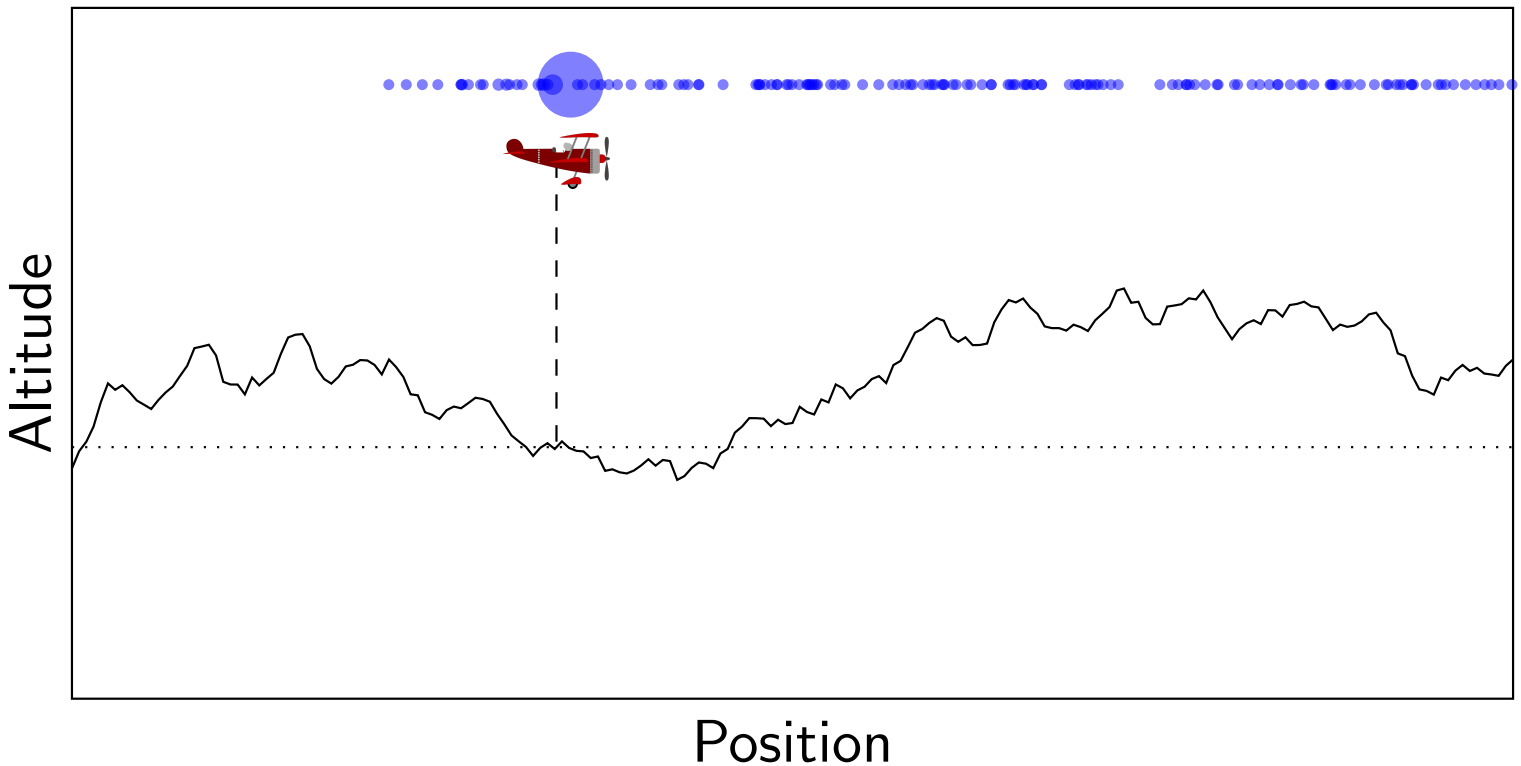

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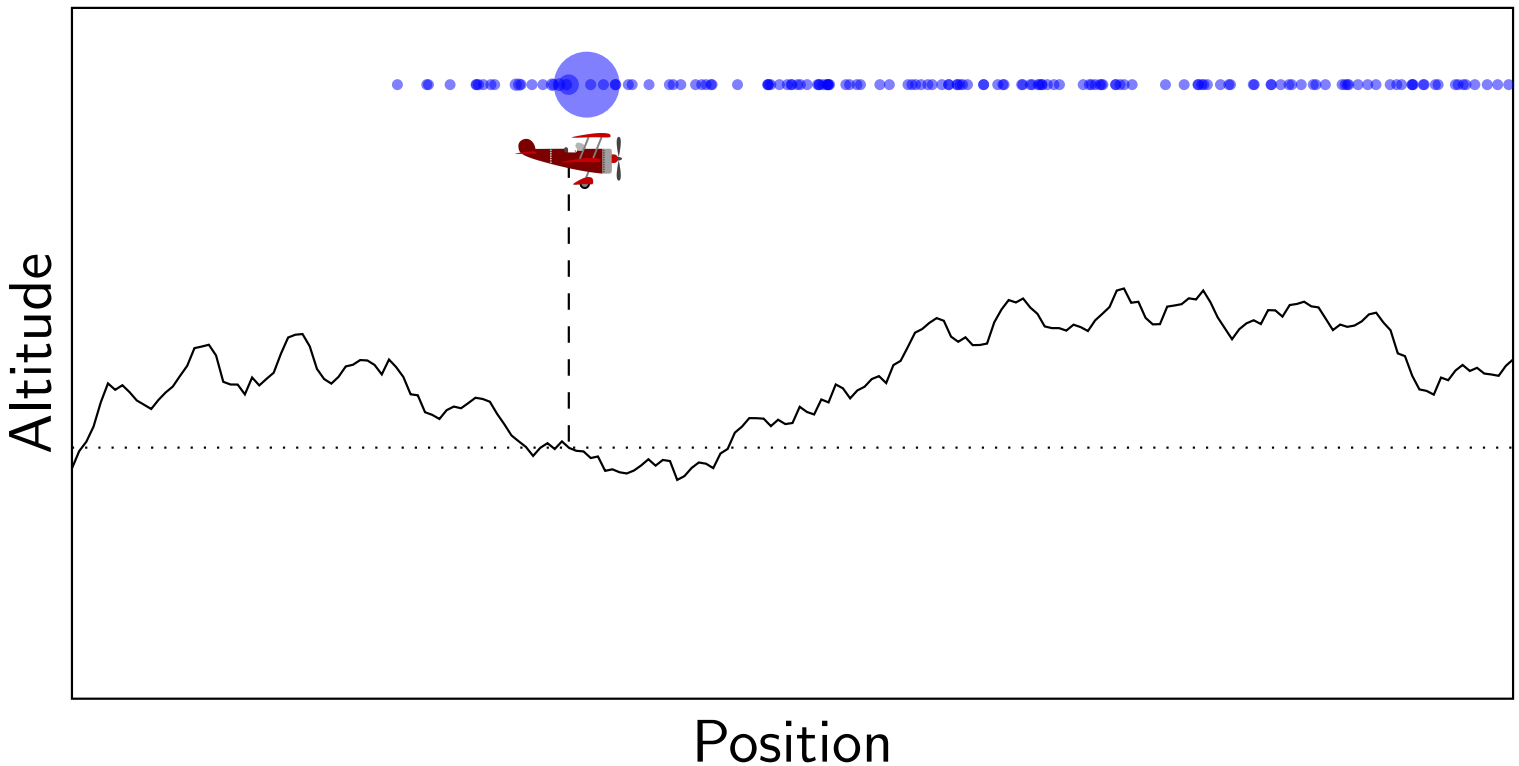

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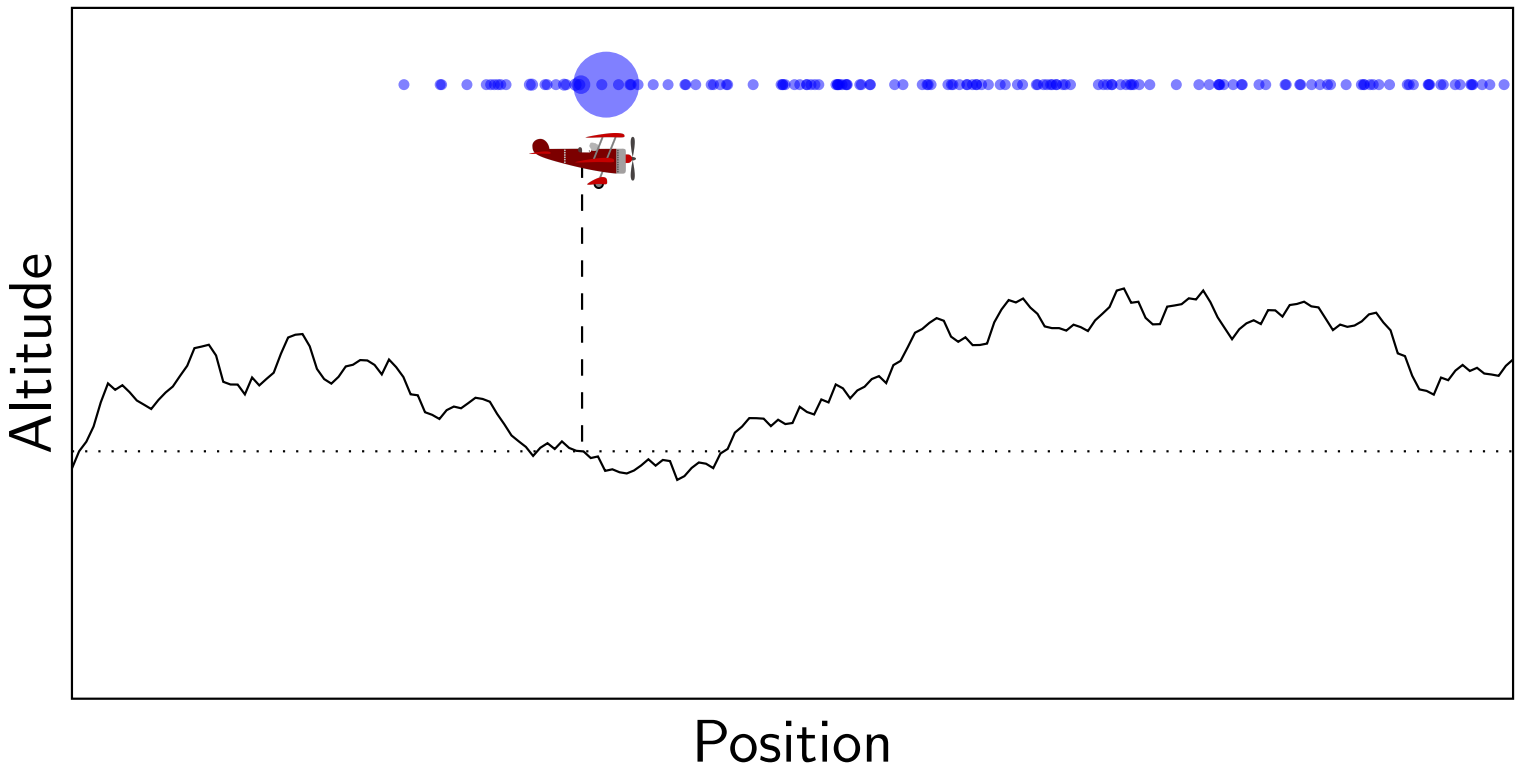

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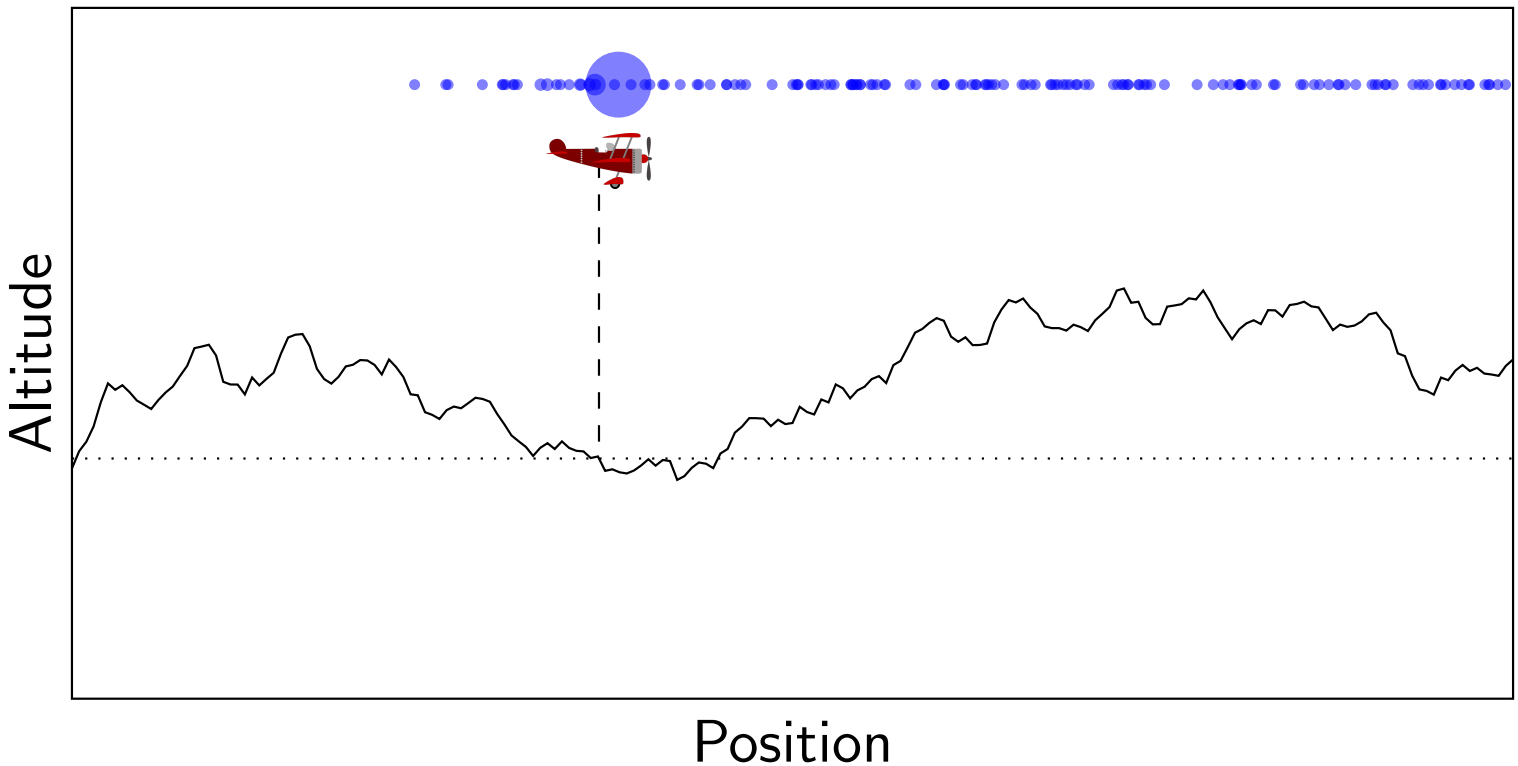

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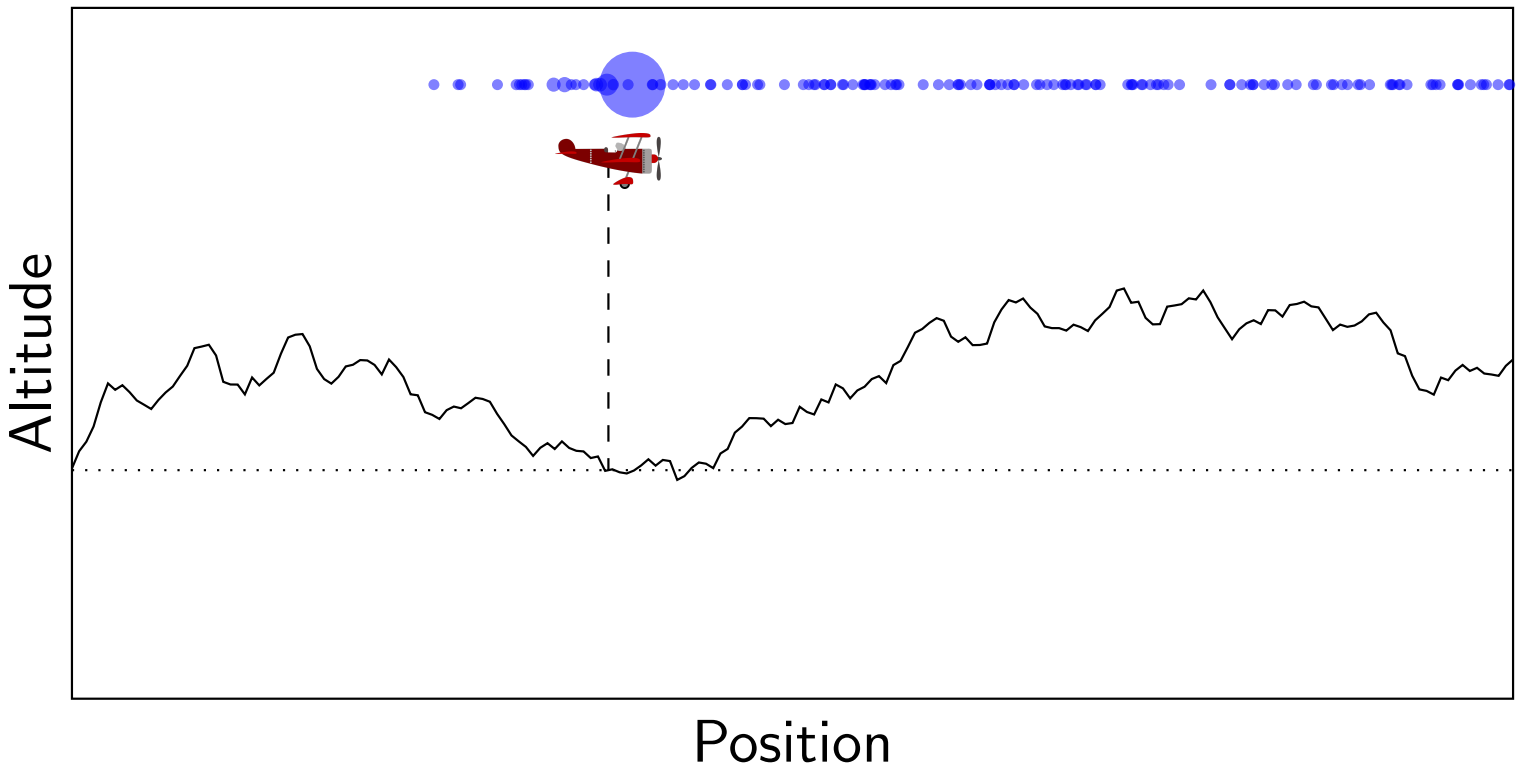
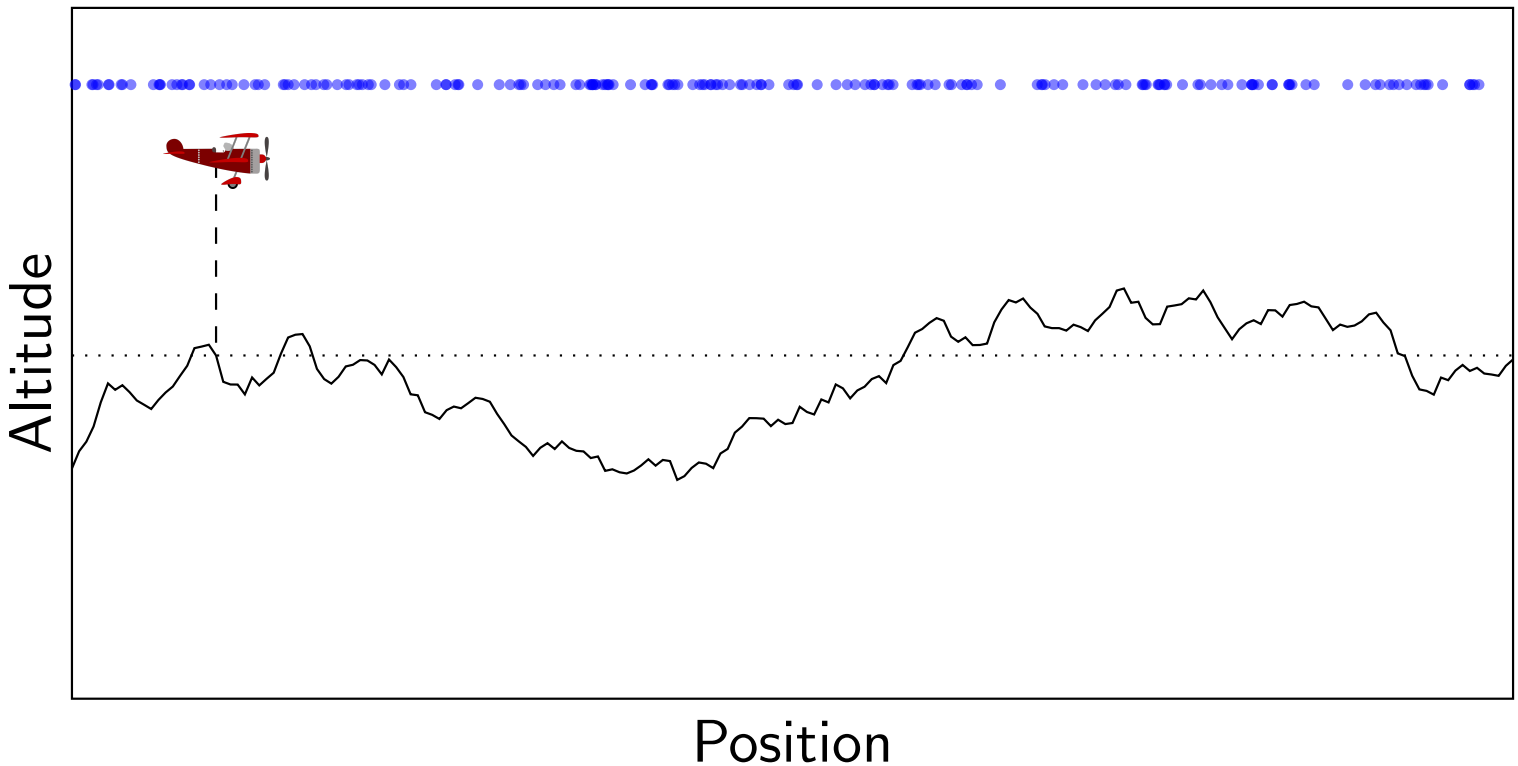


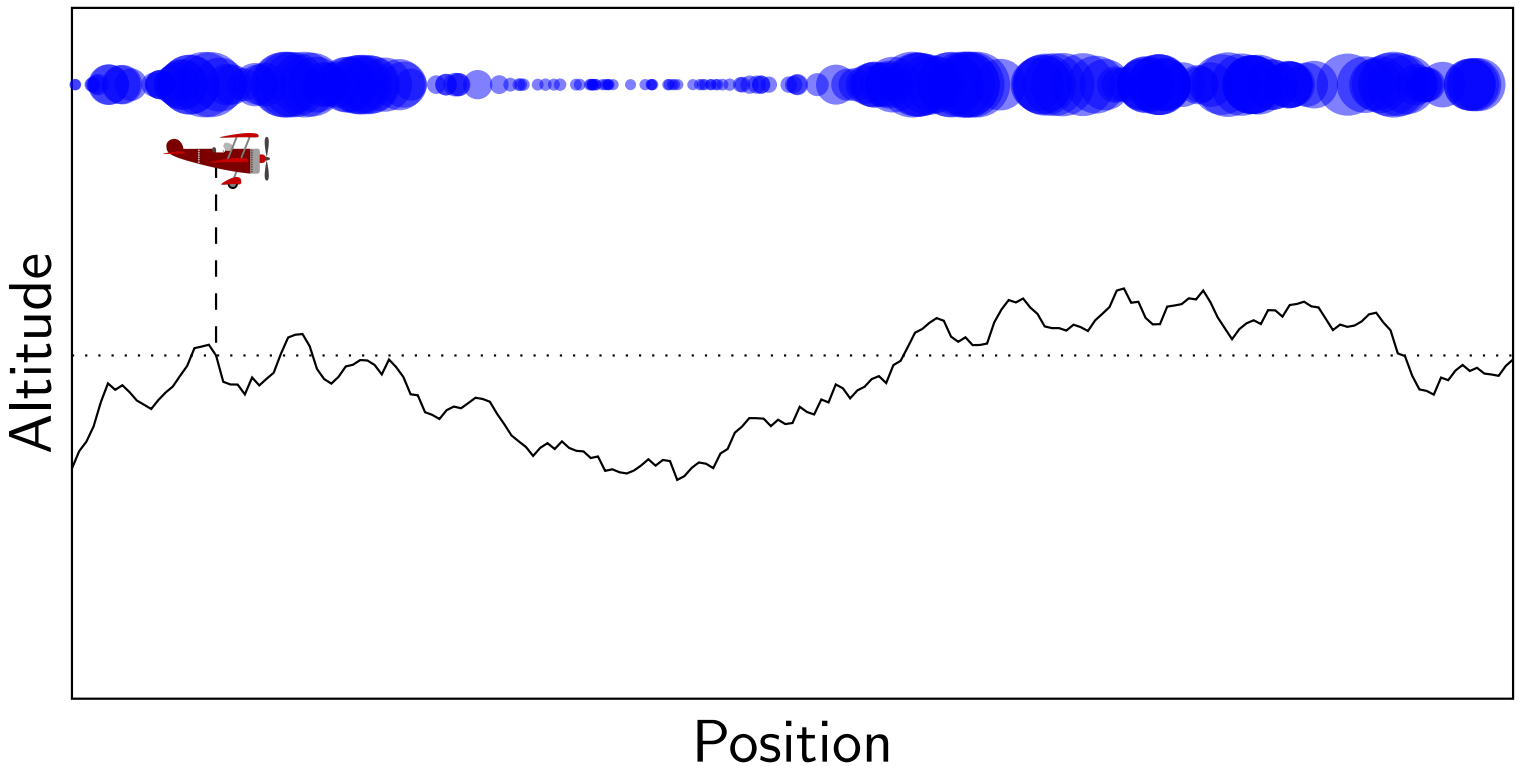
Sequential Monte Carlo inference

Initialize 200 samples from X_0



Sequential Monte Carlo inference

Weigh samples using observation model



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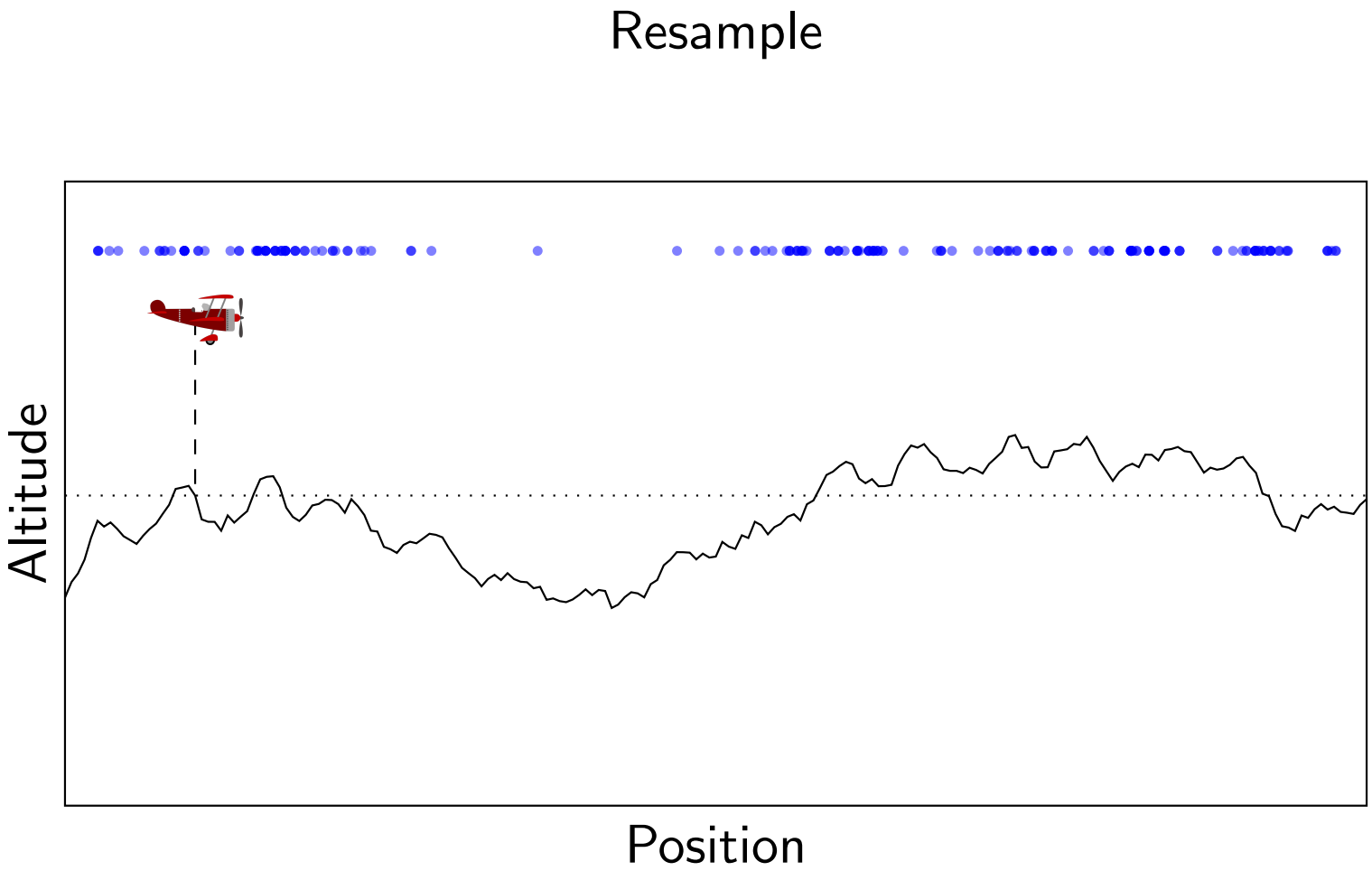
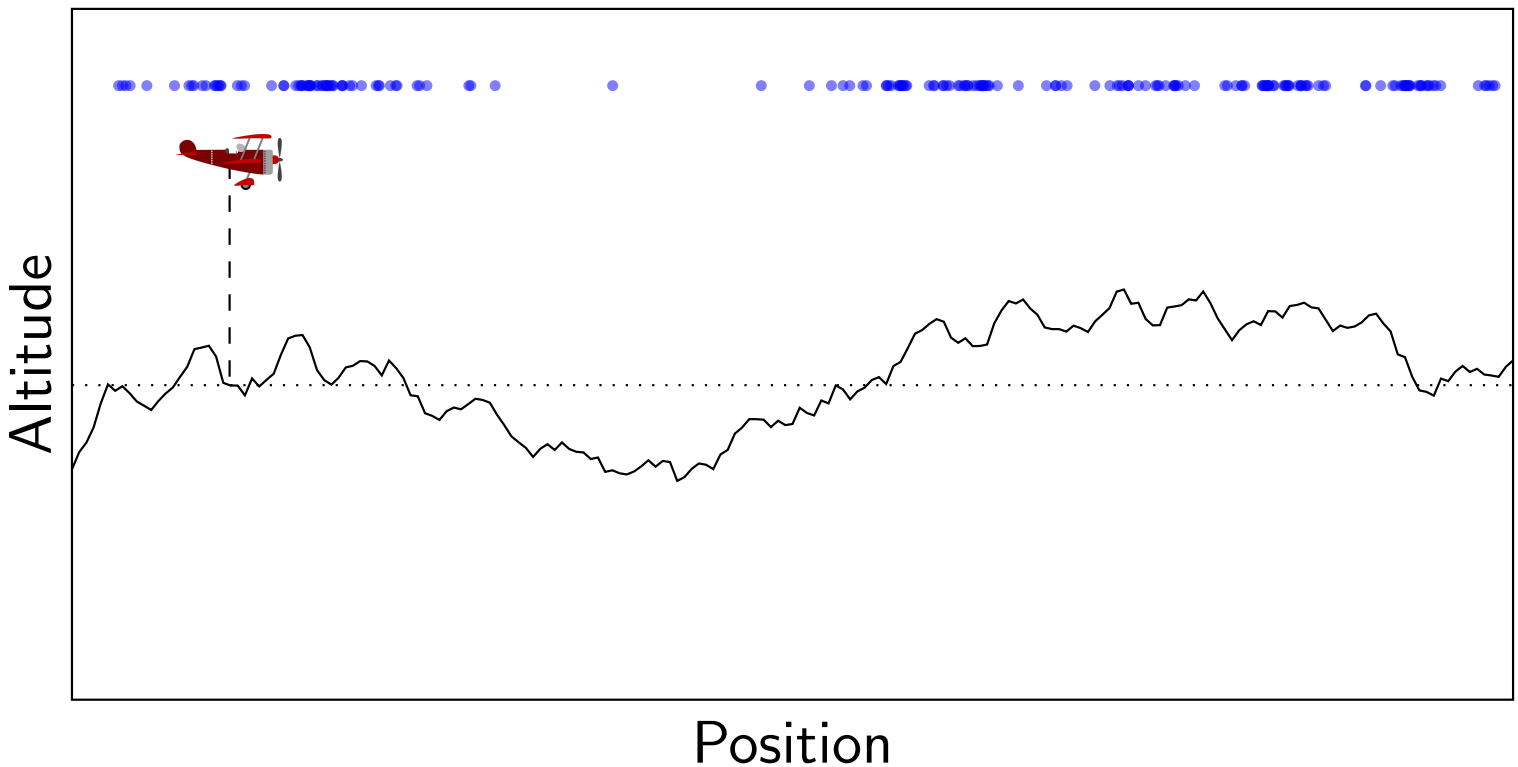


Sequential Monte Carlo inference

Propagate samples using transition model



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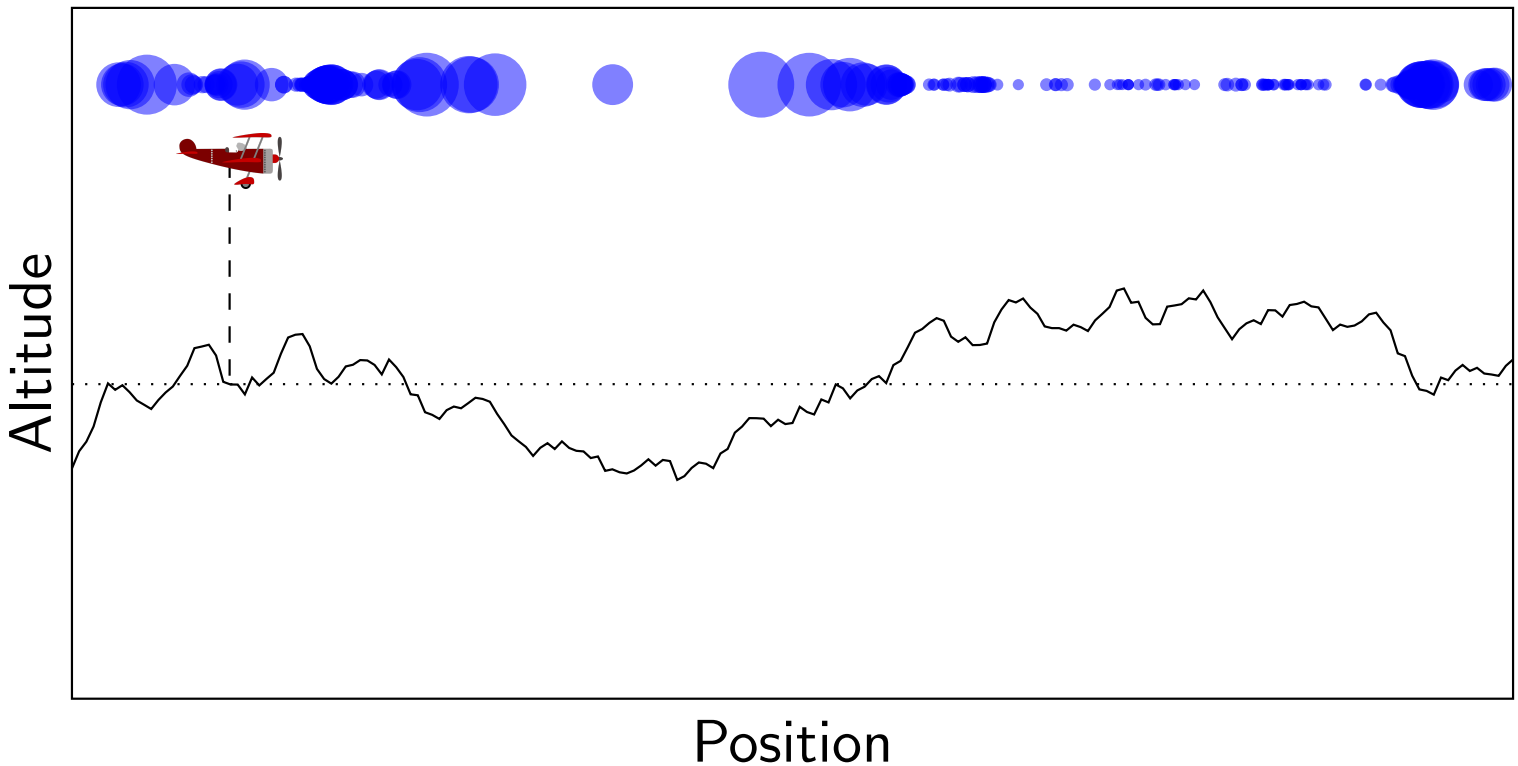

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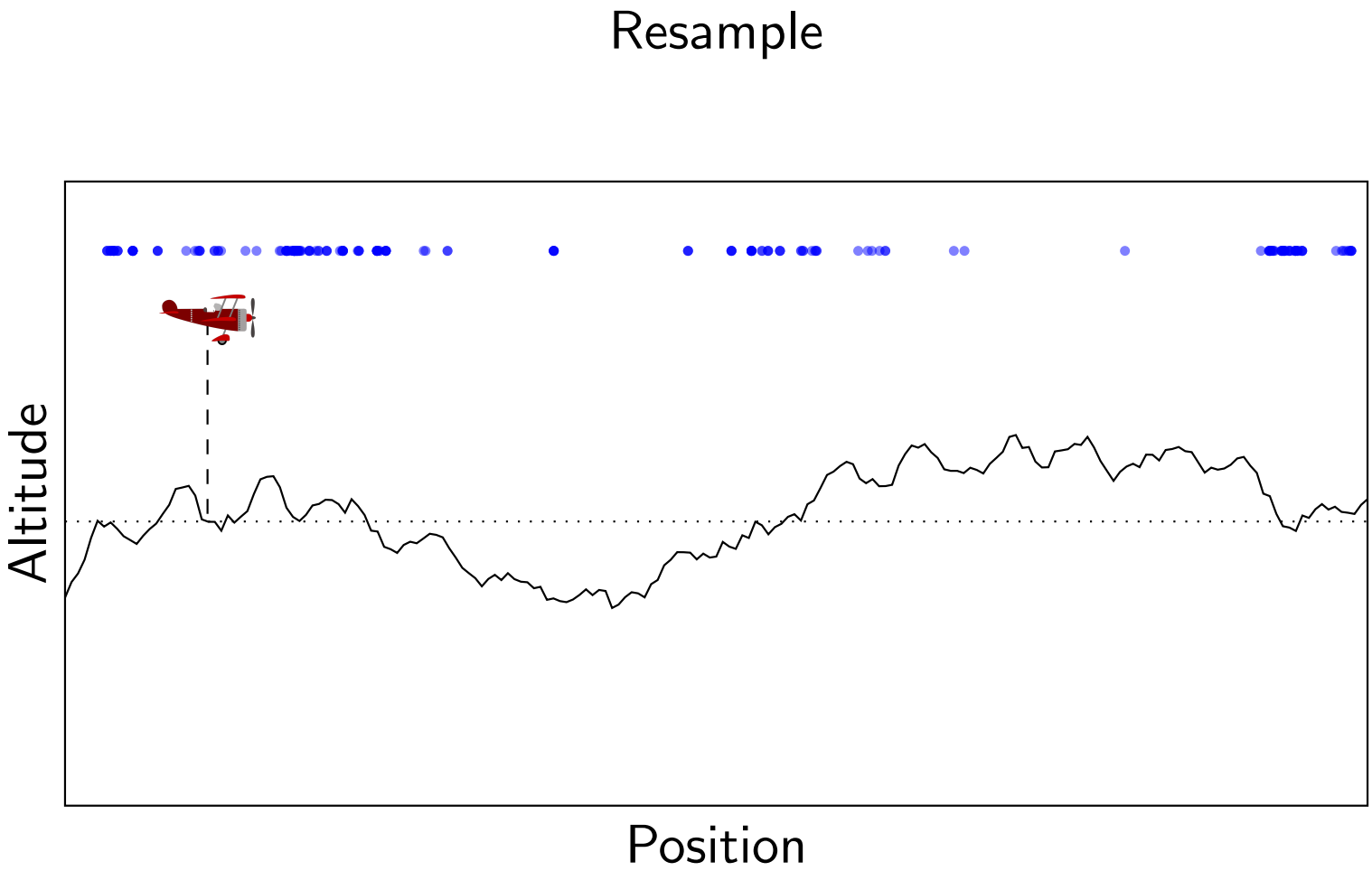

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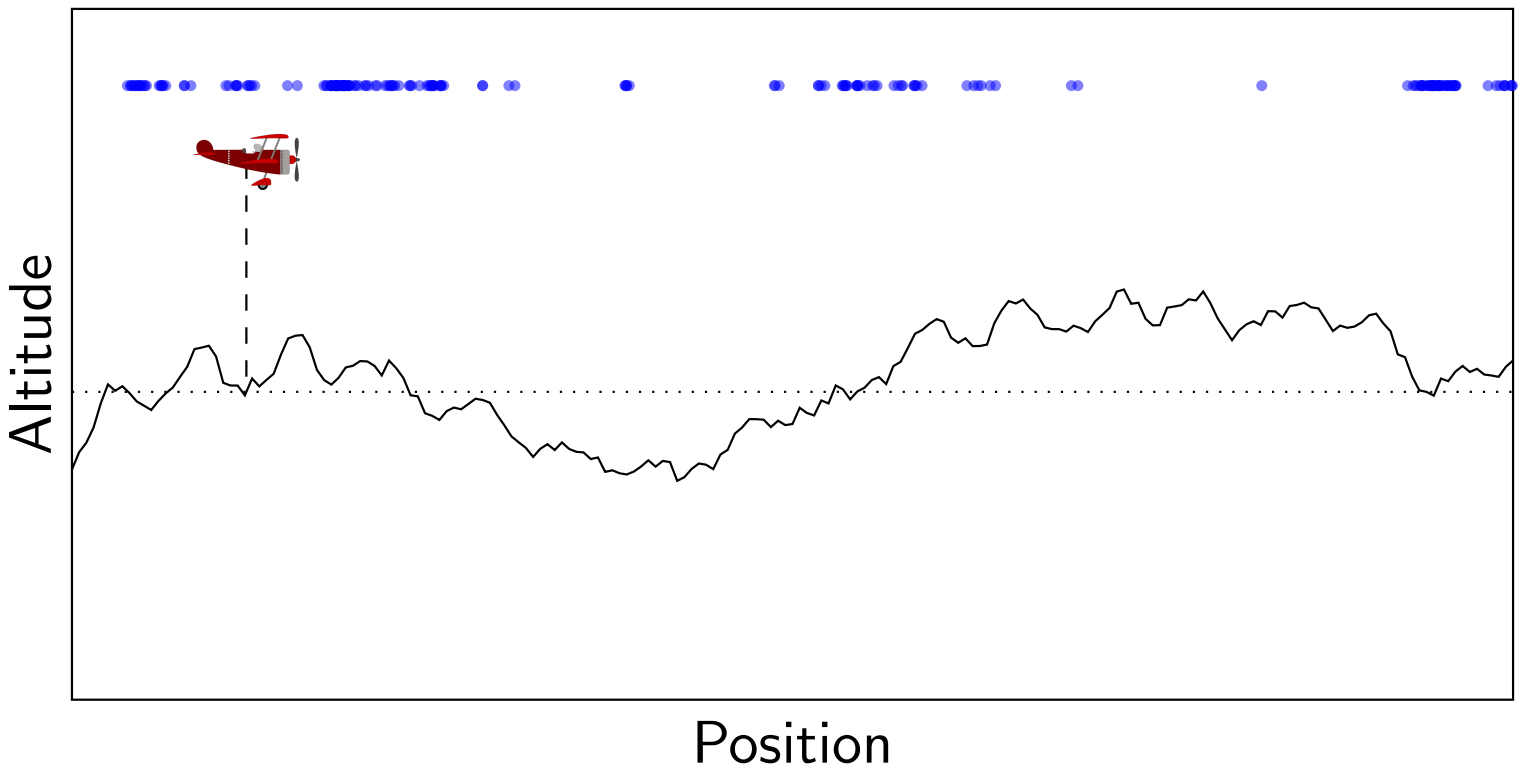

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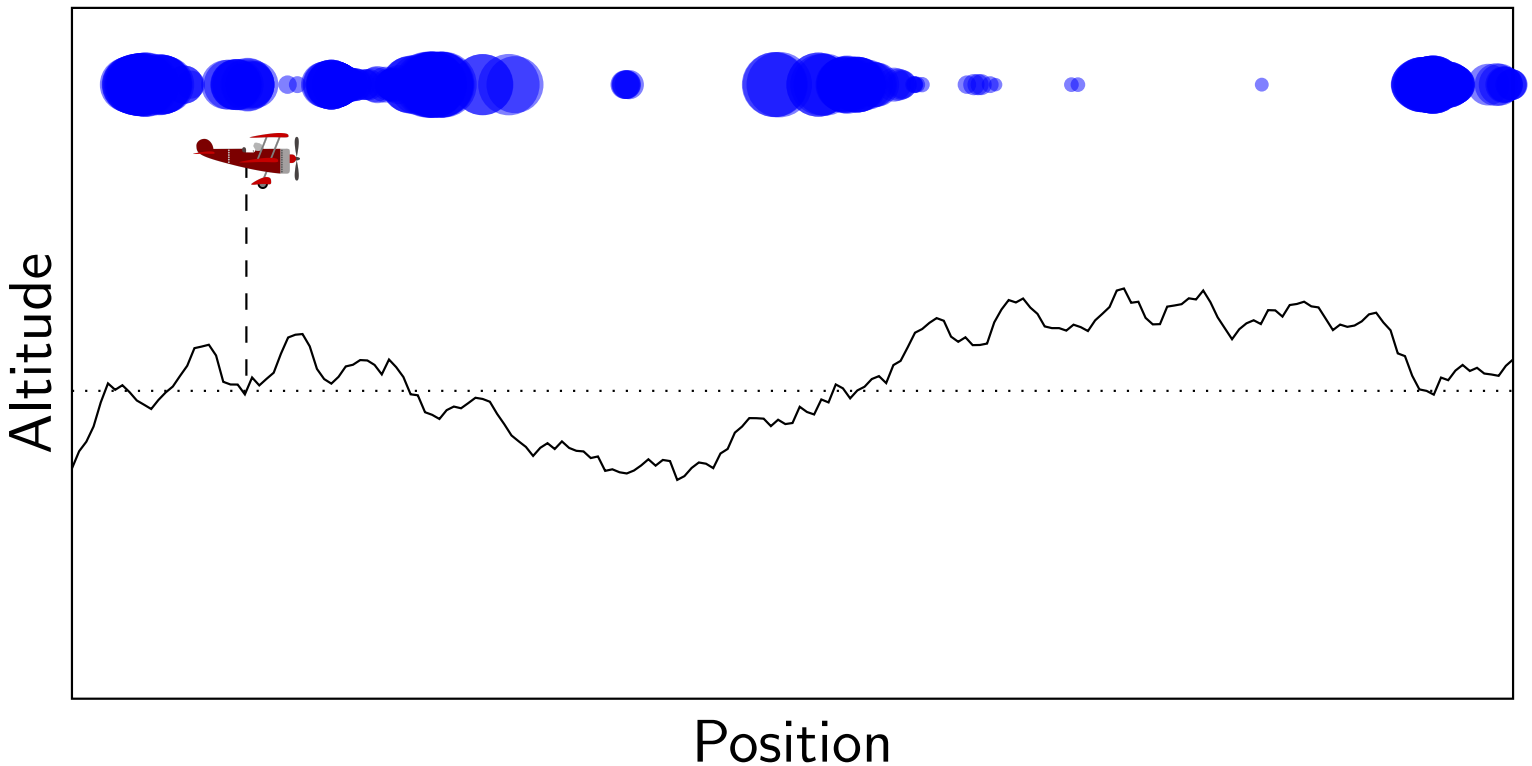

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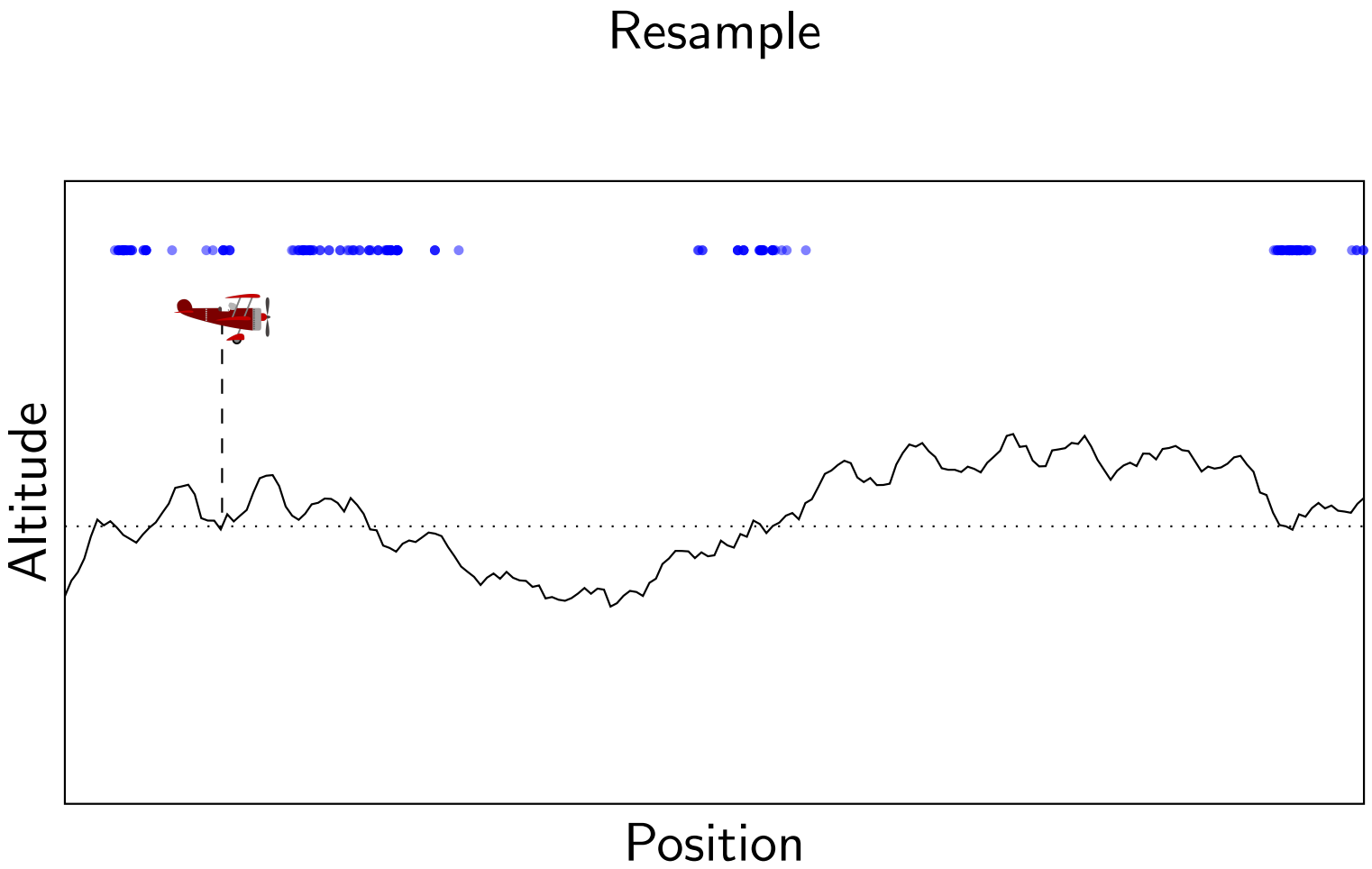
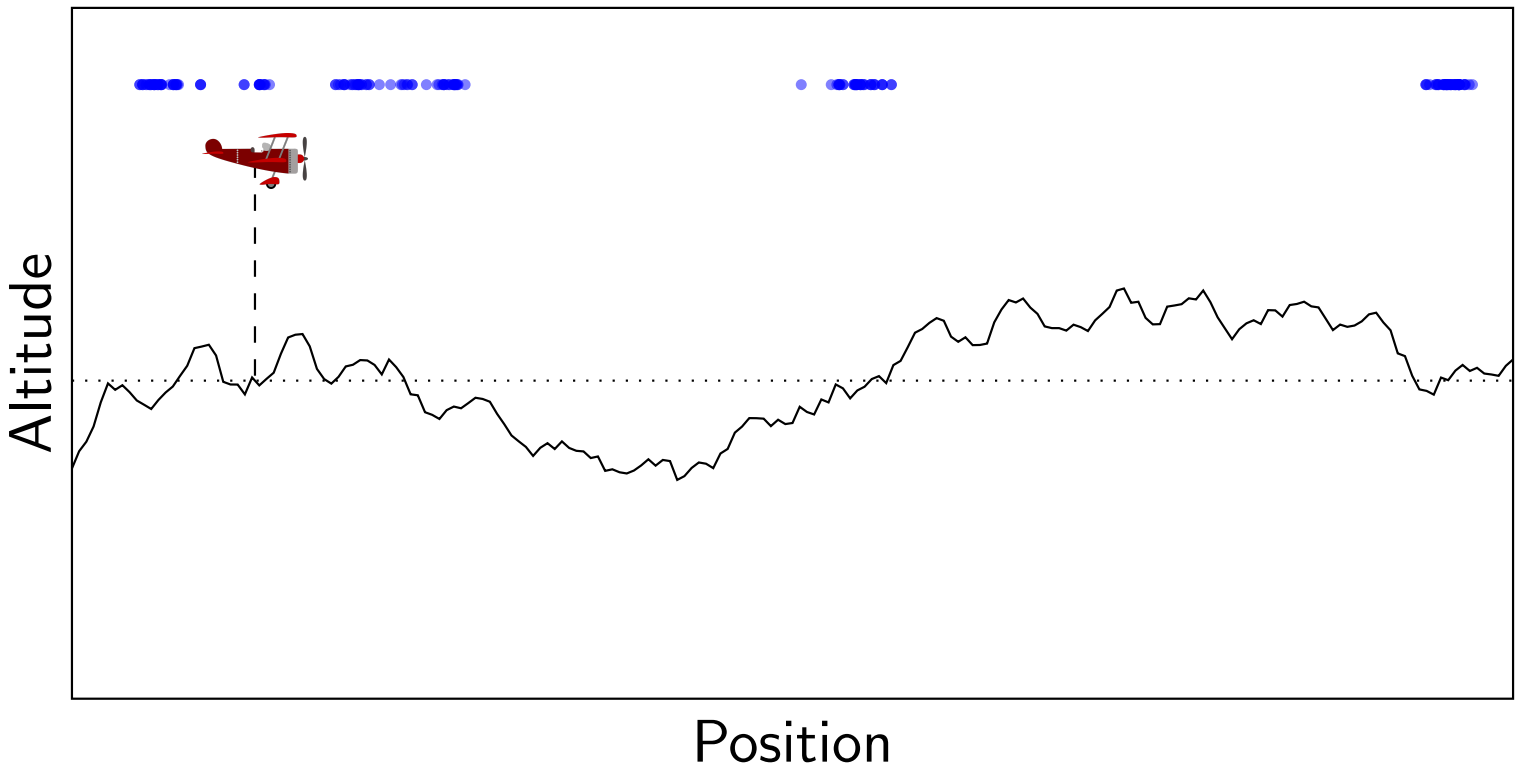


Sequential Monte Carlo inference

Propagate, weigh, resample



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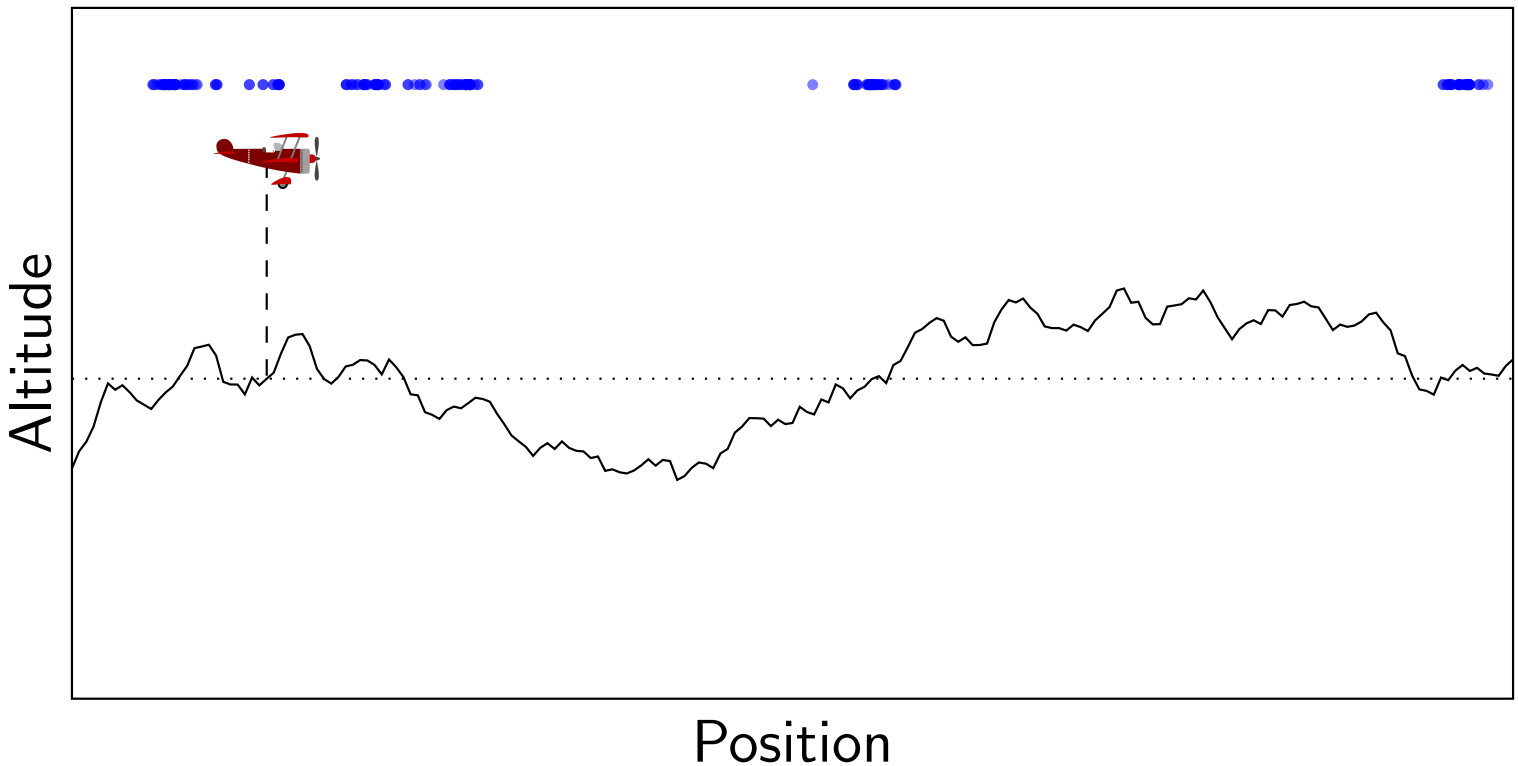

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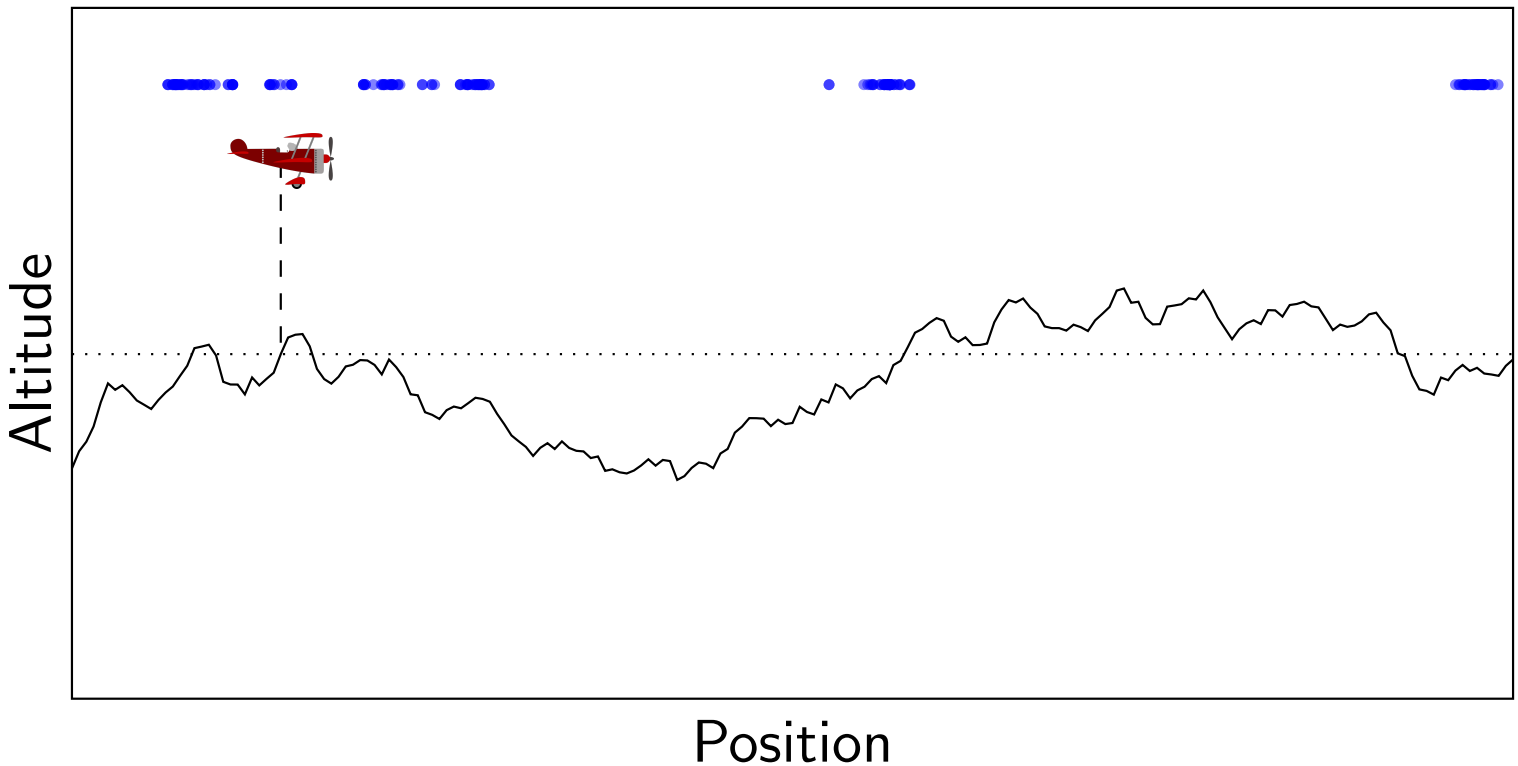

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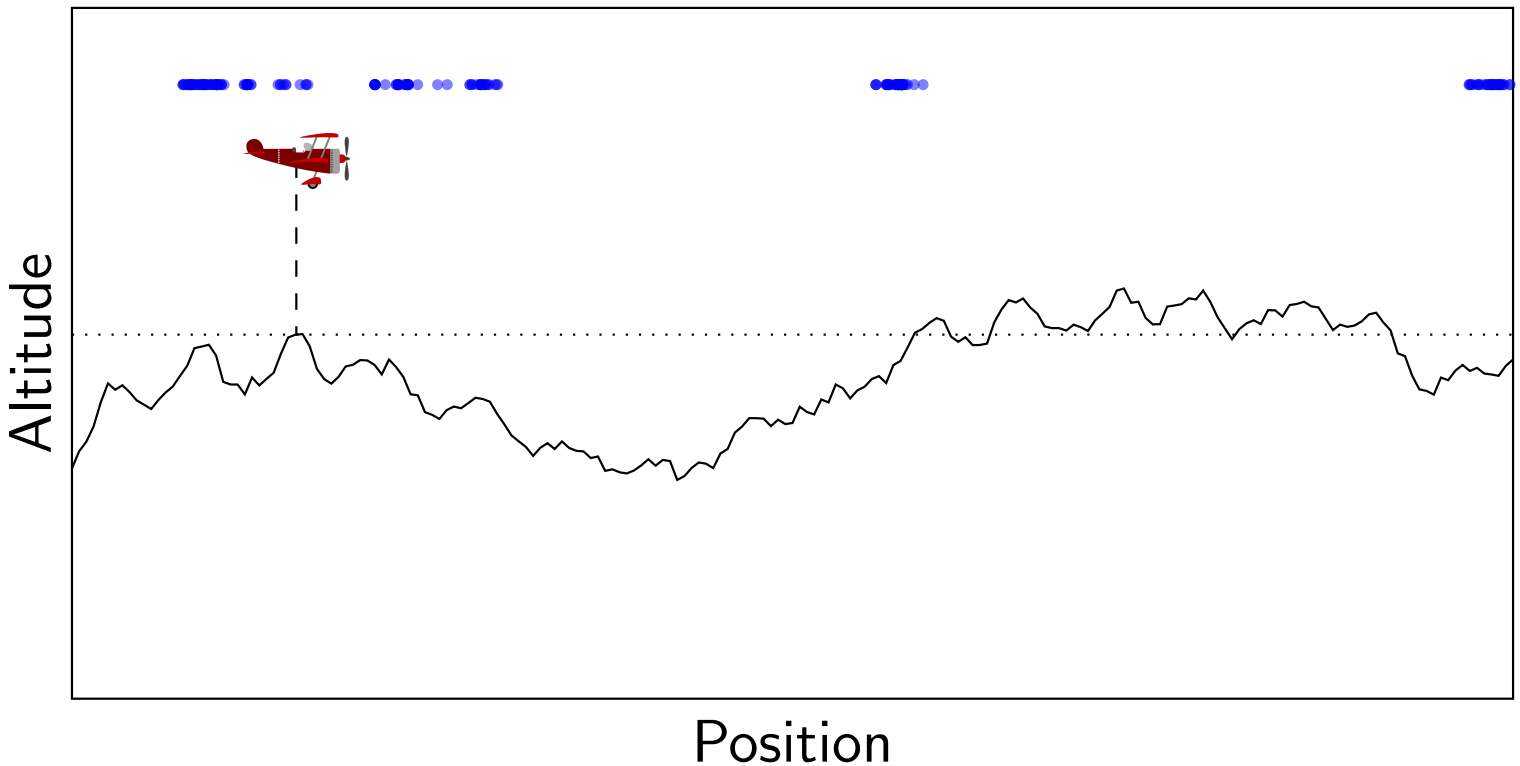

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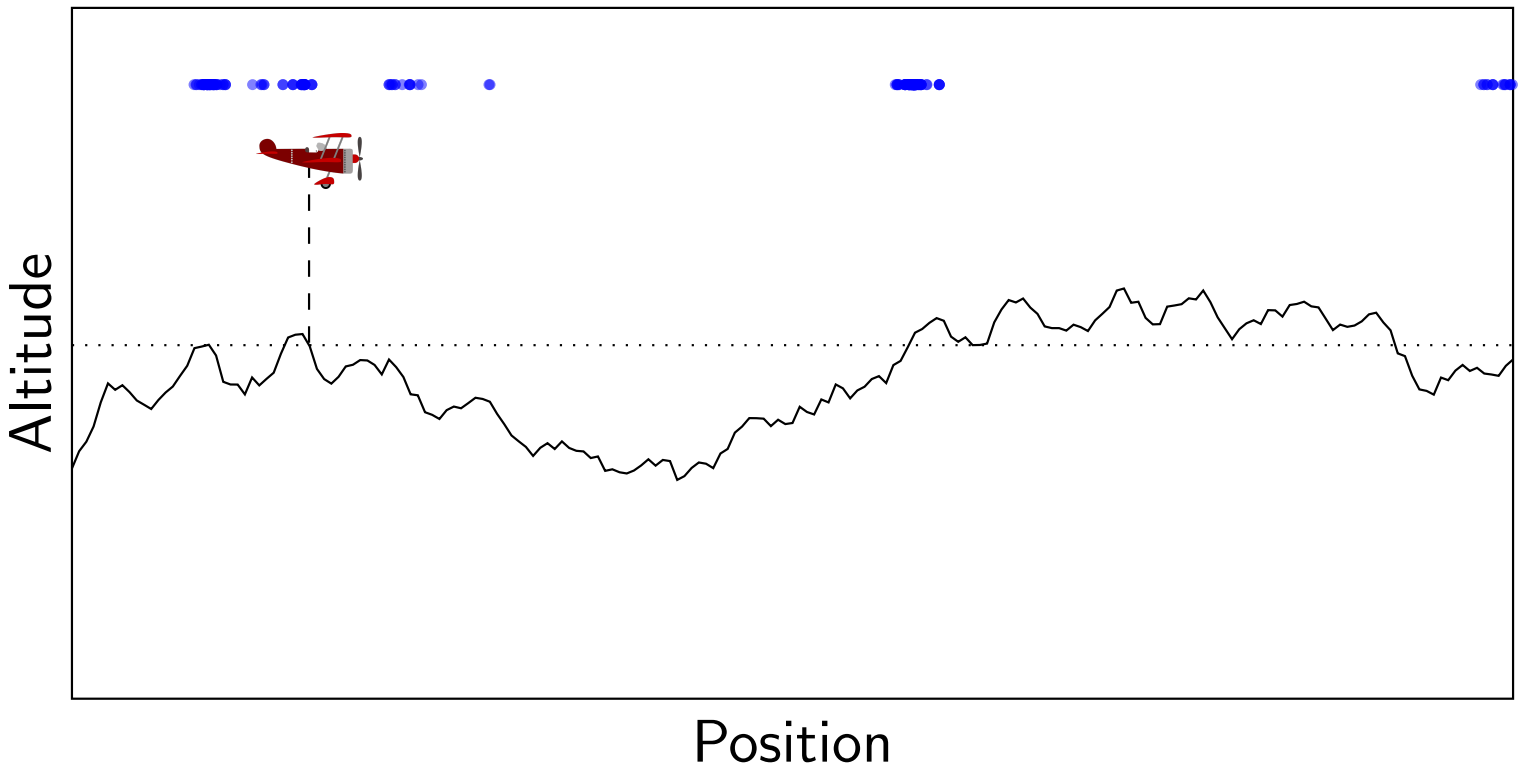

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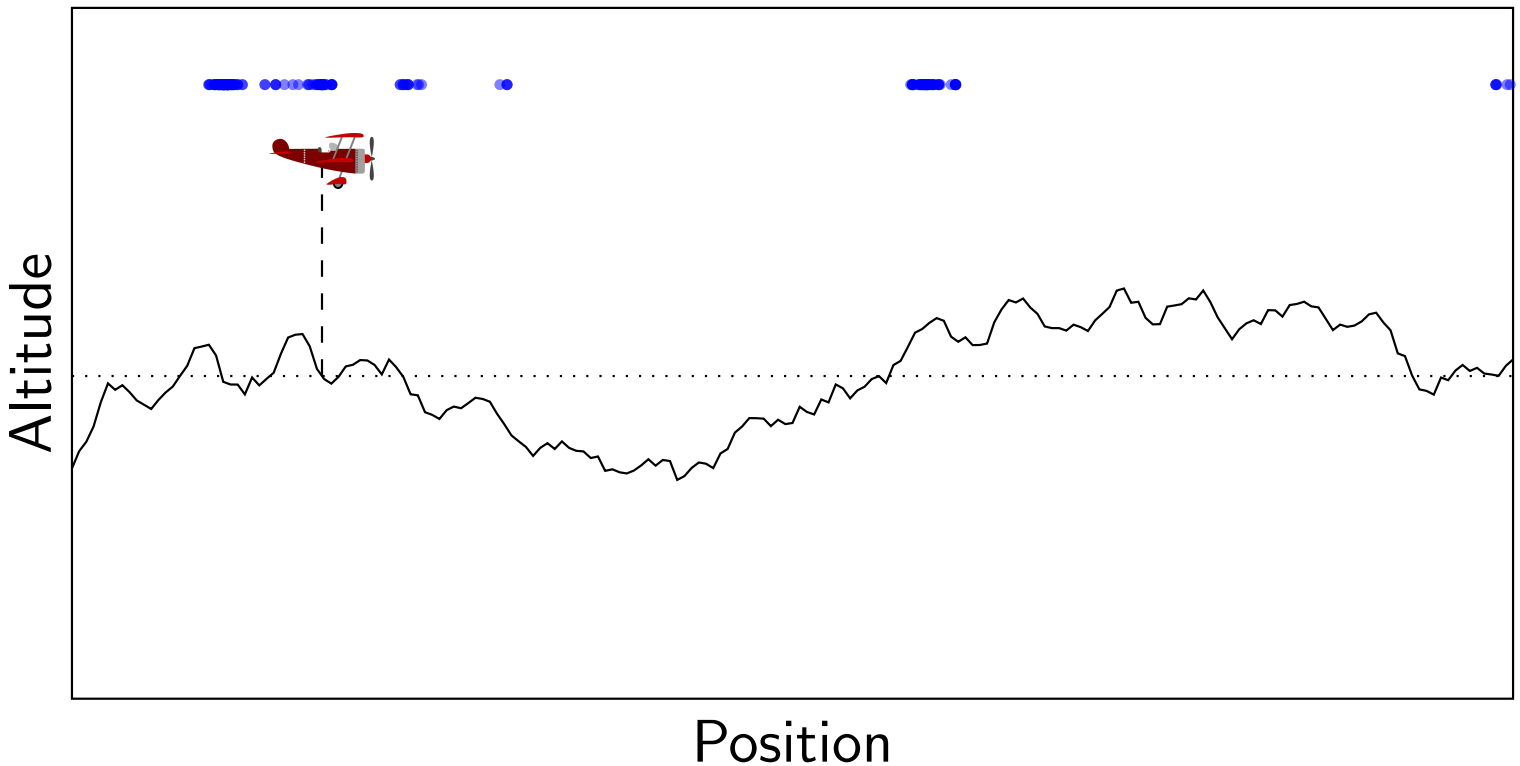
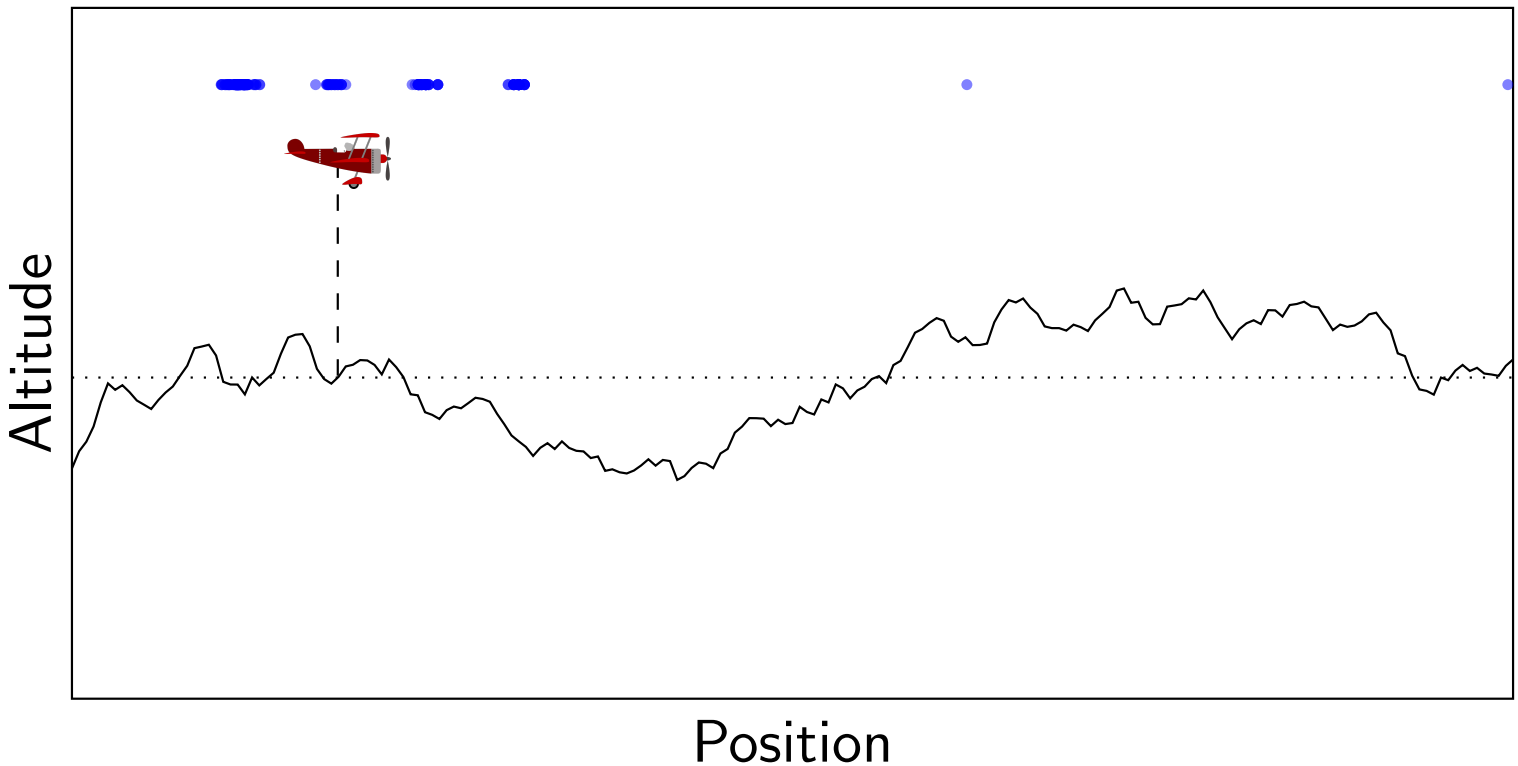


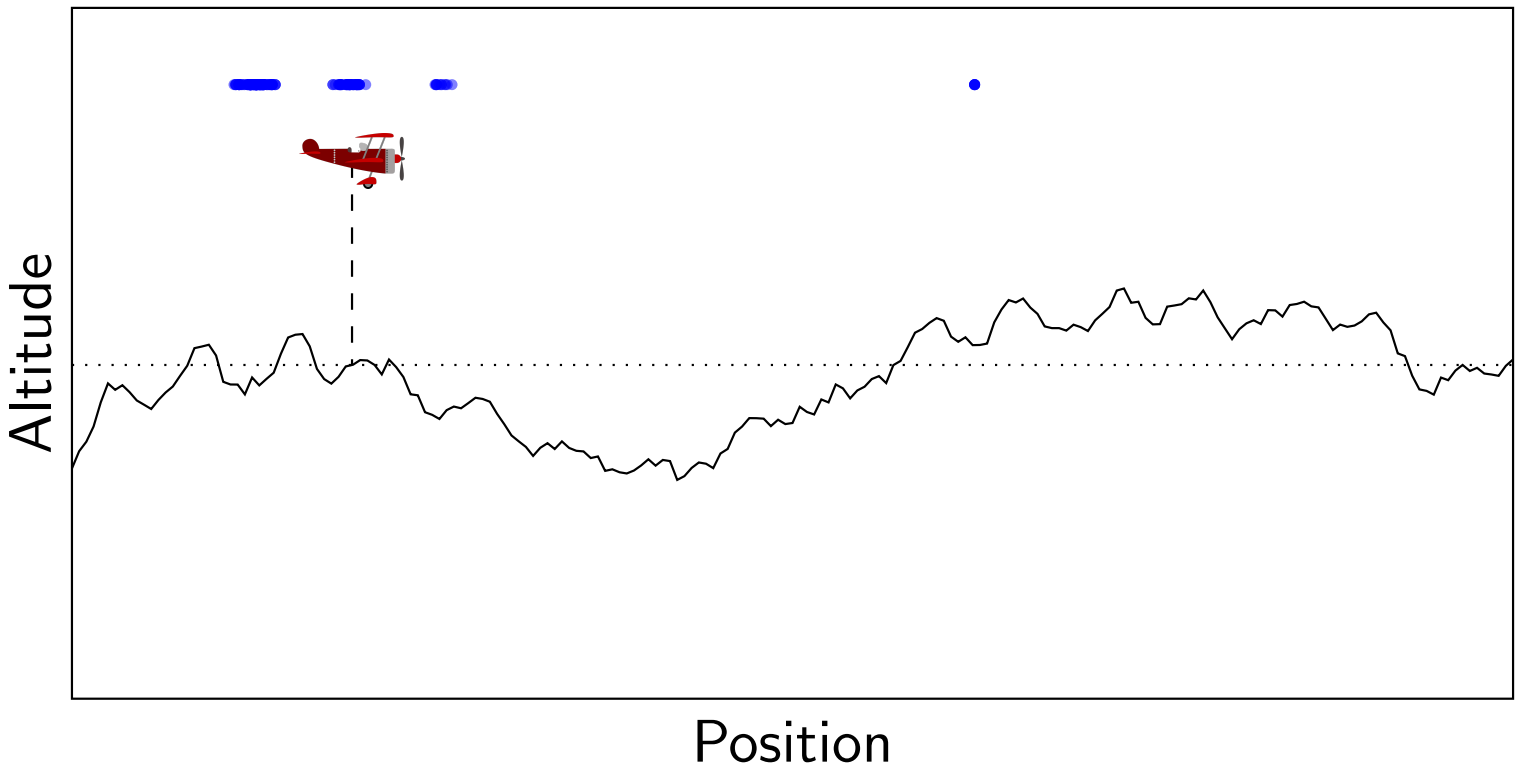
Sequential Monte Carlo inference

Propagate, weigh, resample



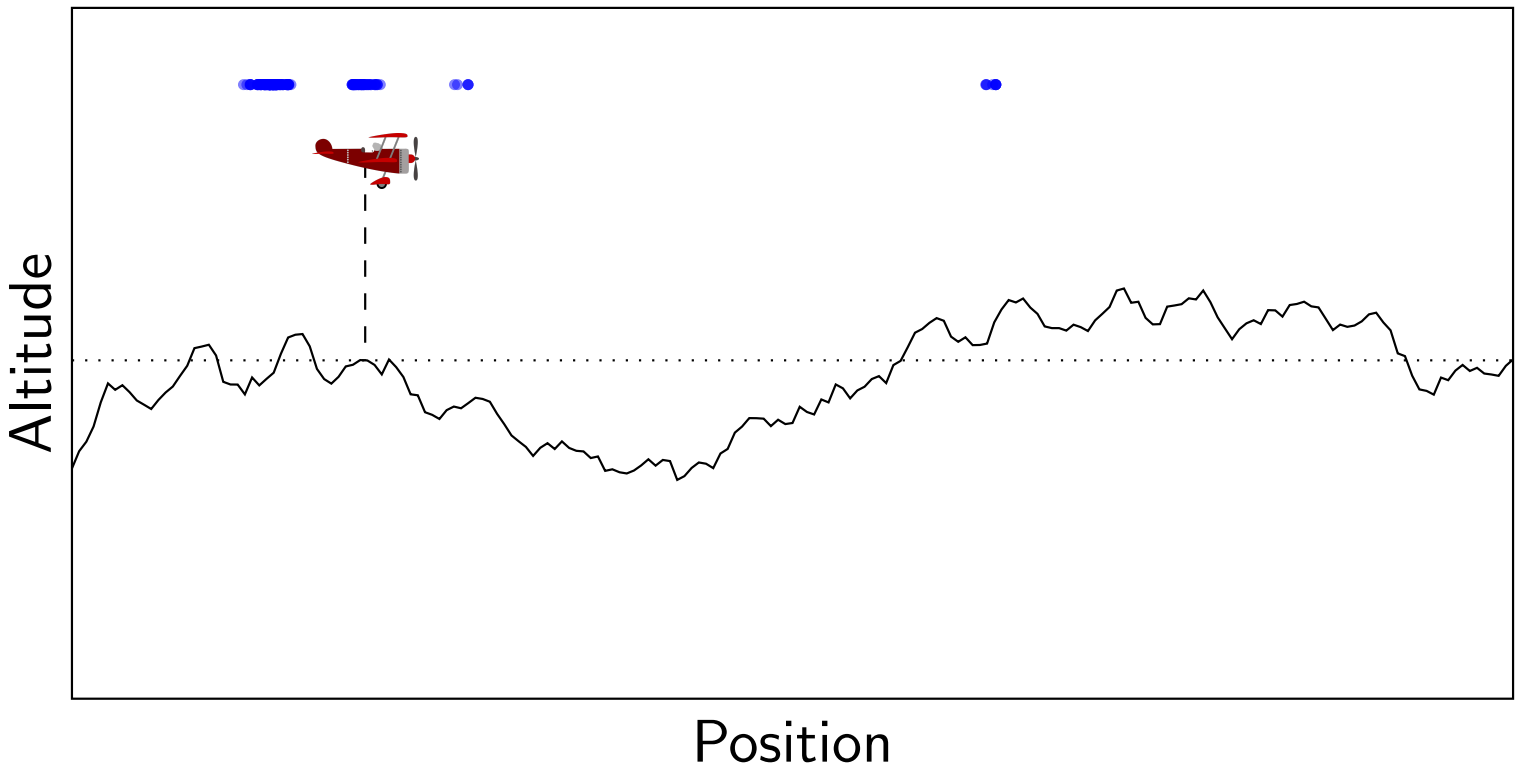
Sequential Monte Carlo inference

Propagate, weigh, resample



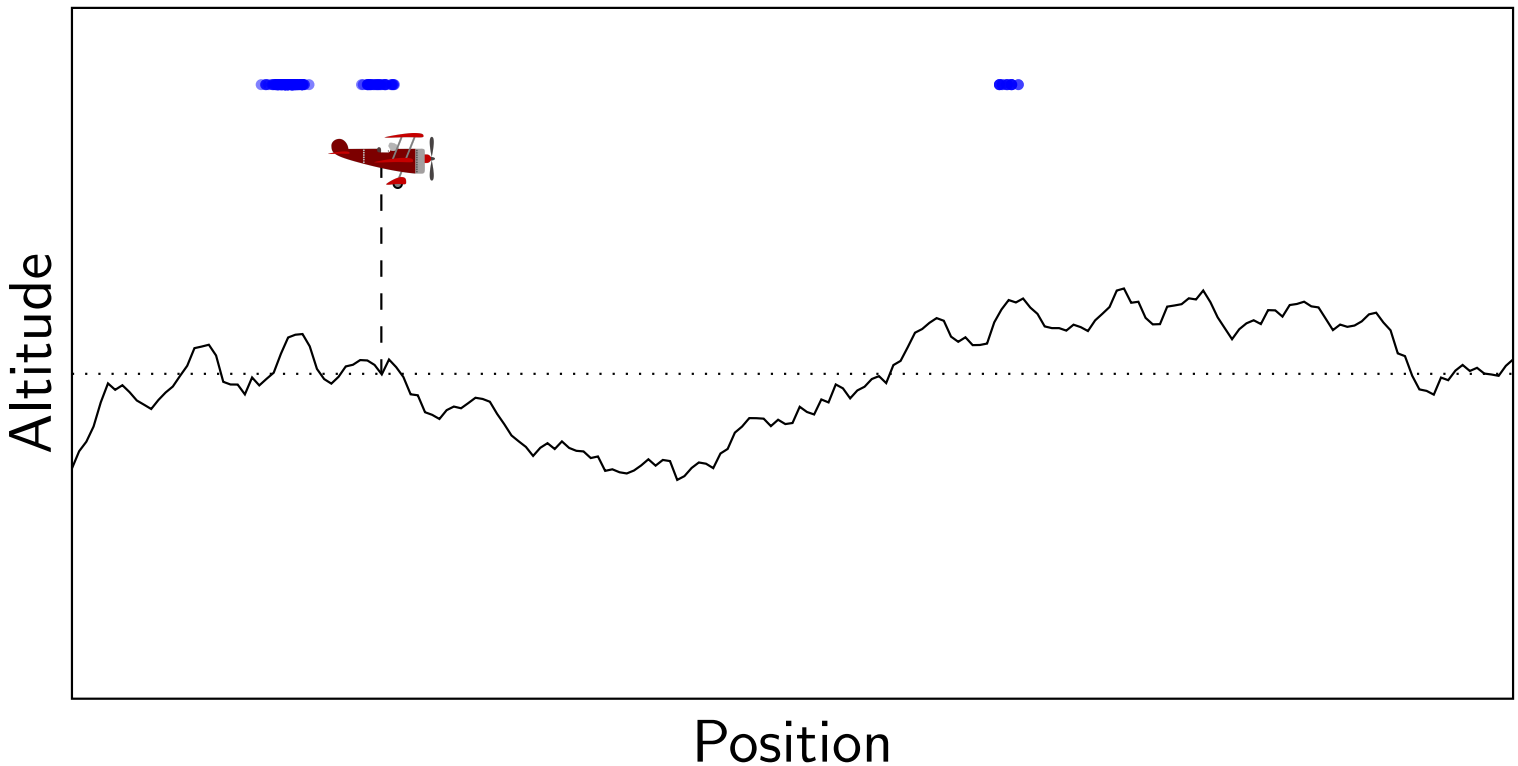
Sequential Monte Carlo inference

Propagate, weigh, resample



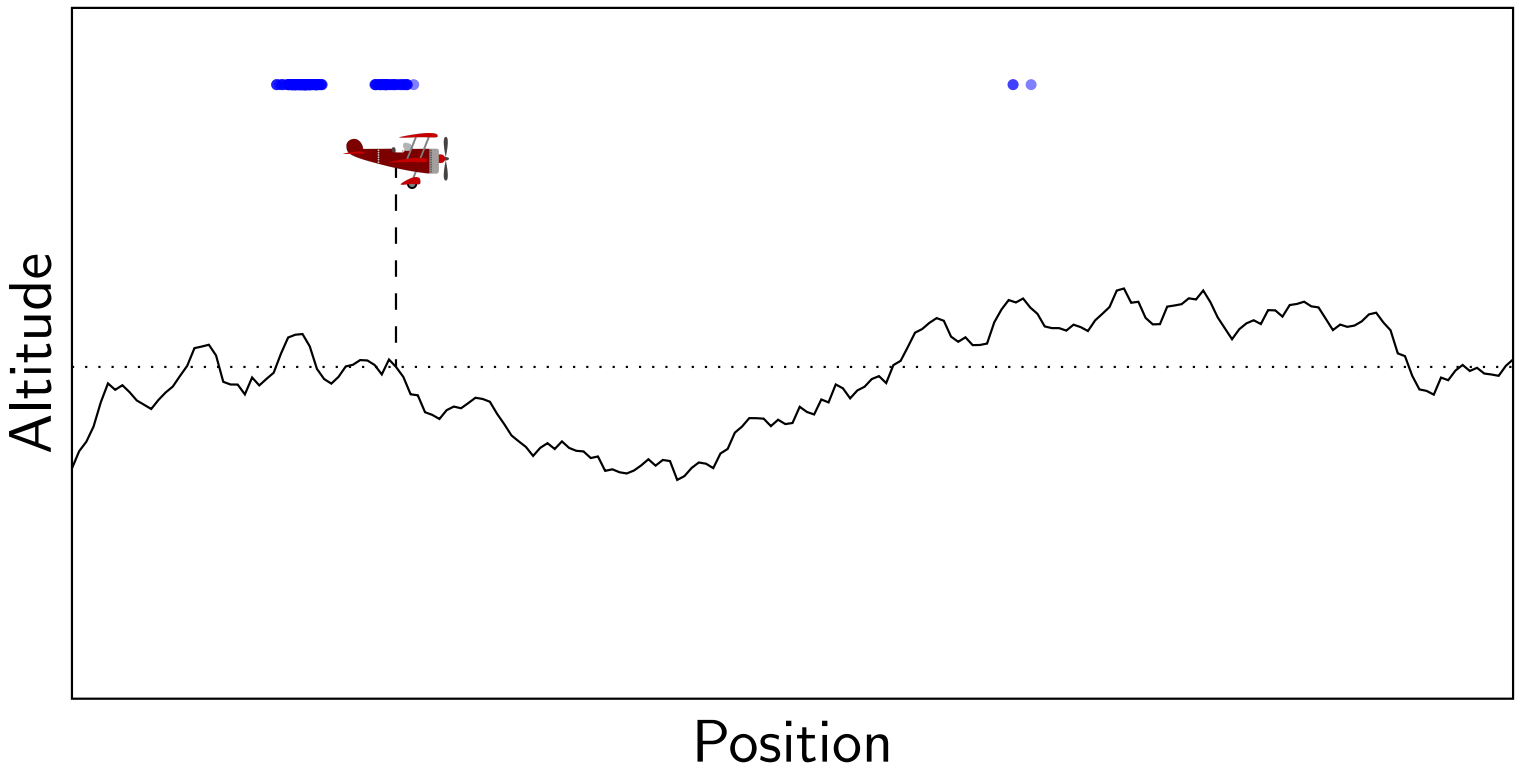
Sequential Monte Carlo inference

Propagate, weigh, resample



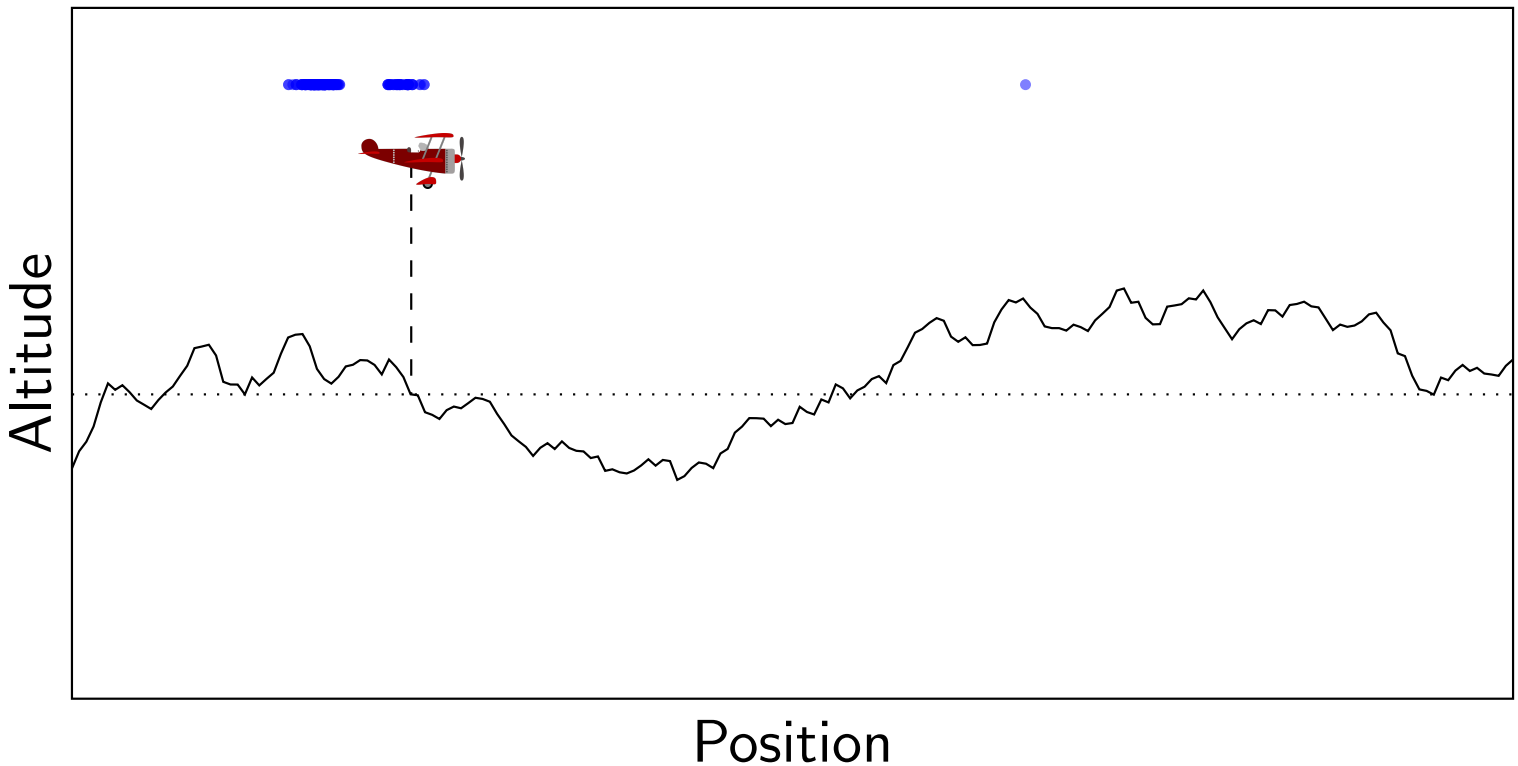
Sequential Monte Carlo inference

Propagate, weigh, resample



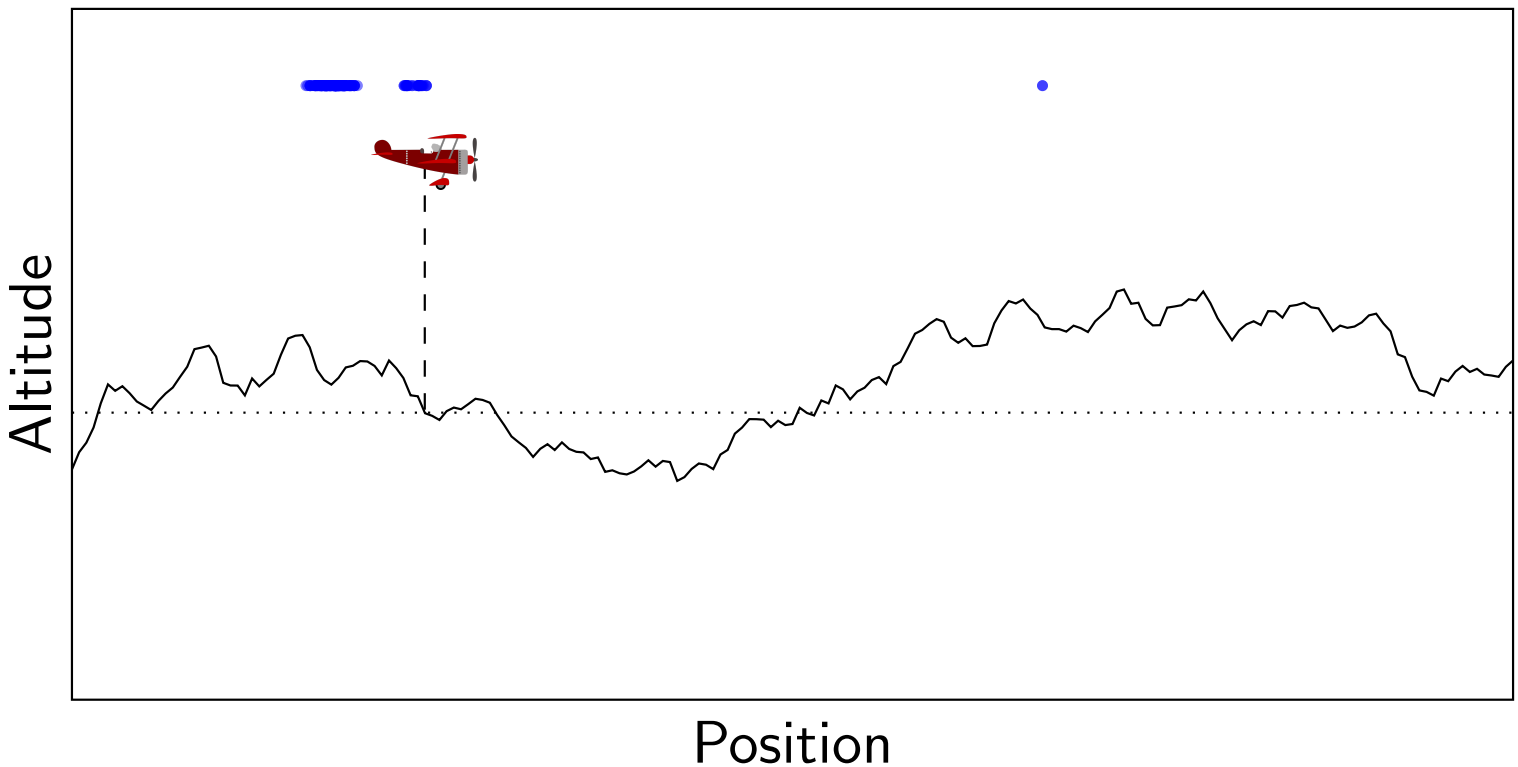
Sequential Monte Carlo inference

Propagate, weigh, resample



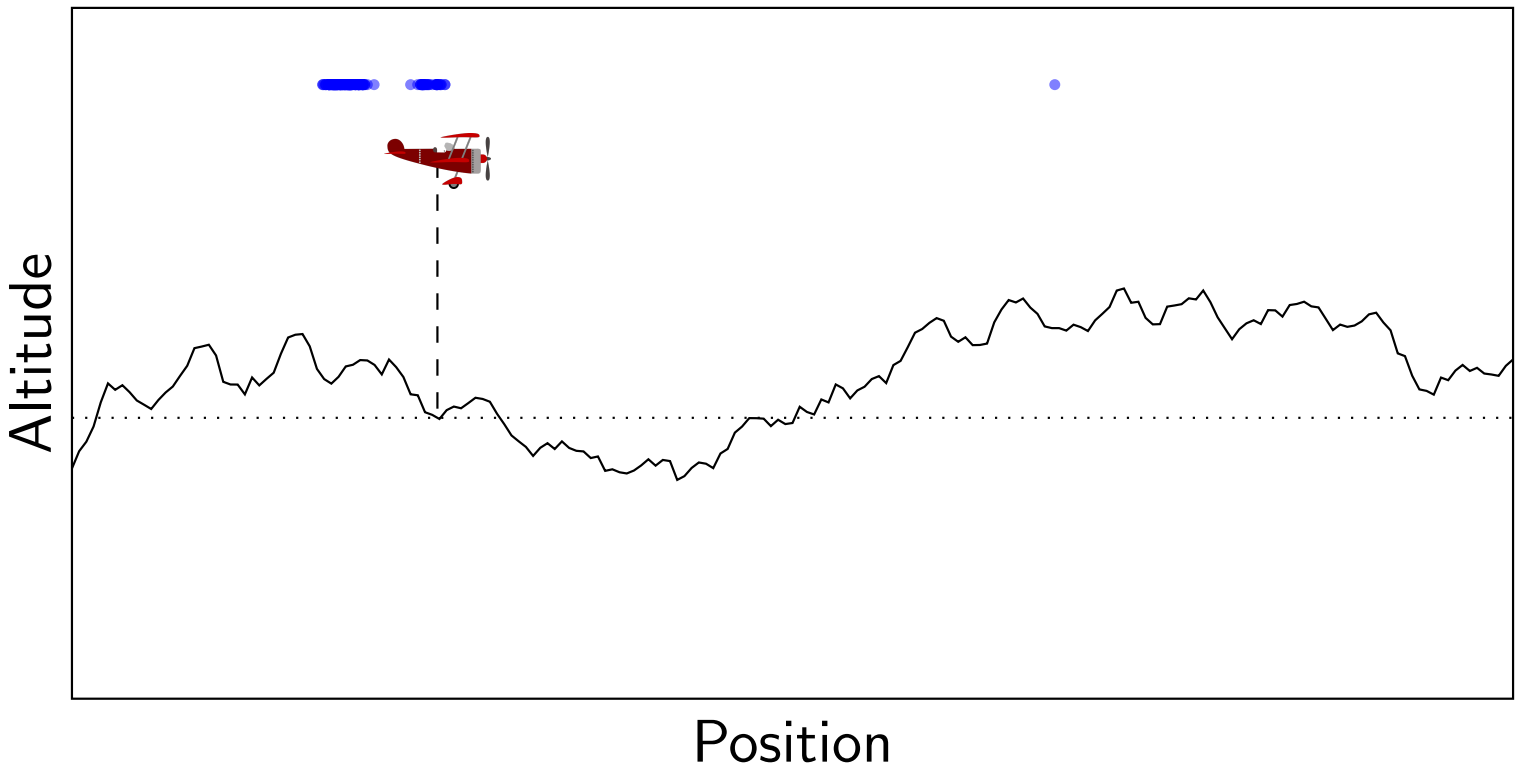
Sequential Monte Carlo inference

Propagate, weigh, resample



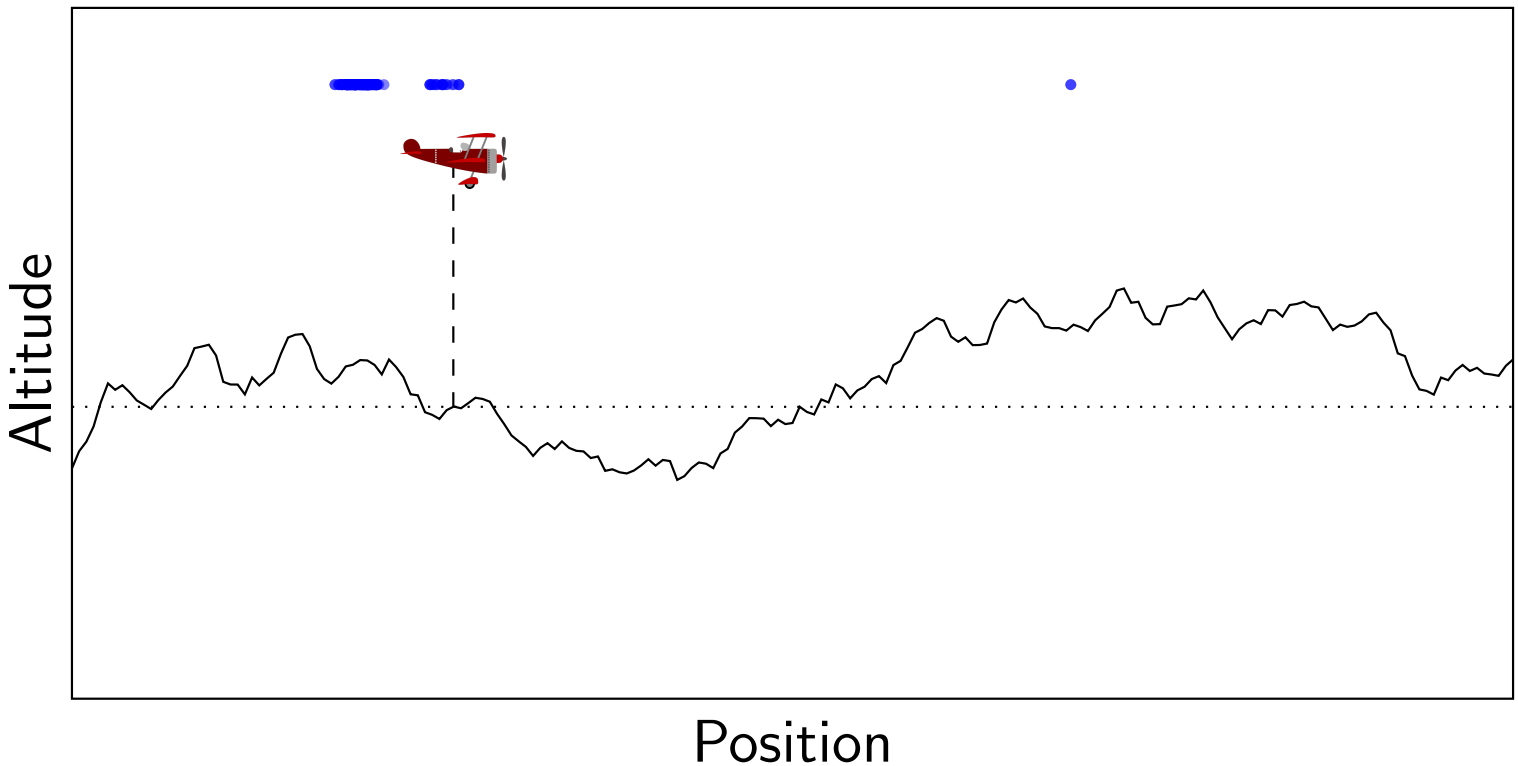
Sequential Monte Carlo inference

Propagate, weigh, resample



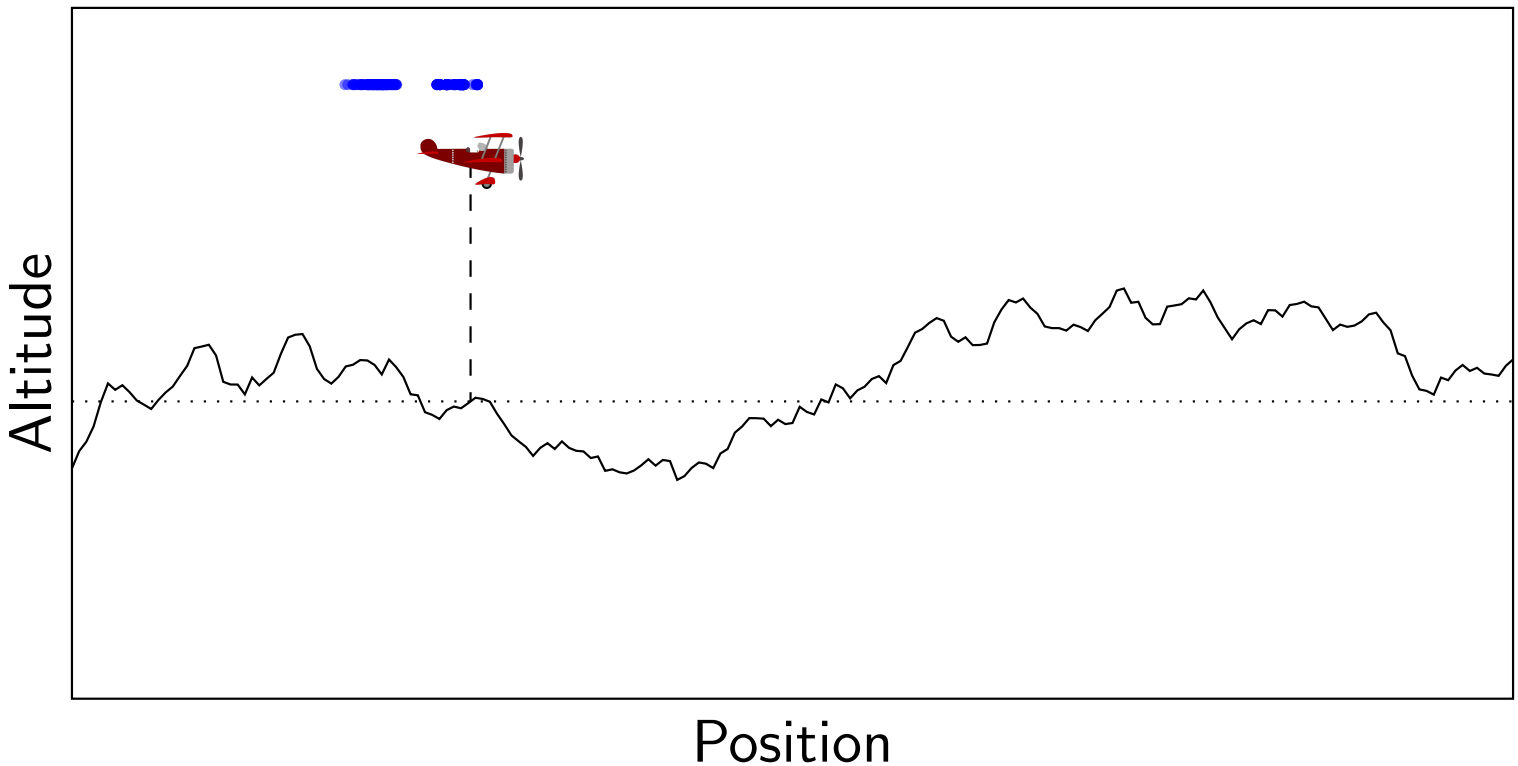
Sequential Monte Carlo inference

Propagate, weigh, resample



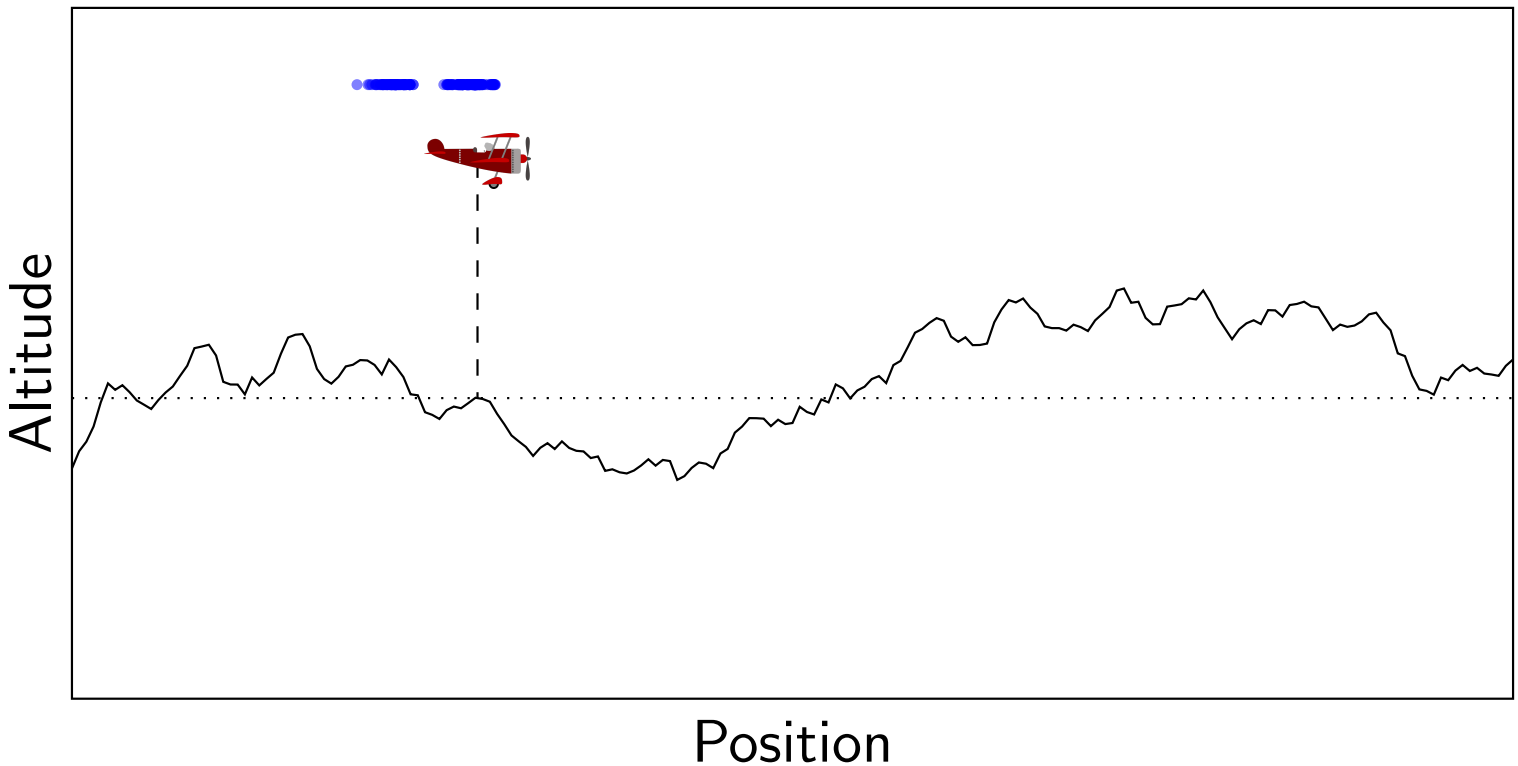
Sequential Monte Carlo inference

Propagate, weigh, resample



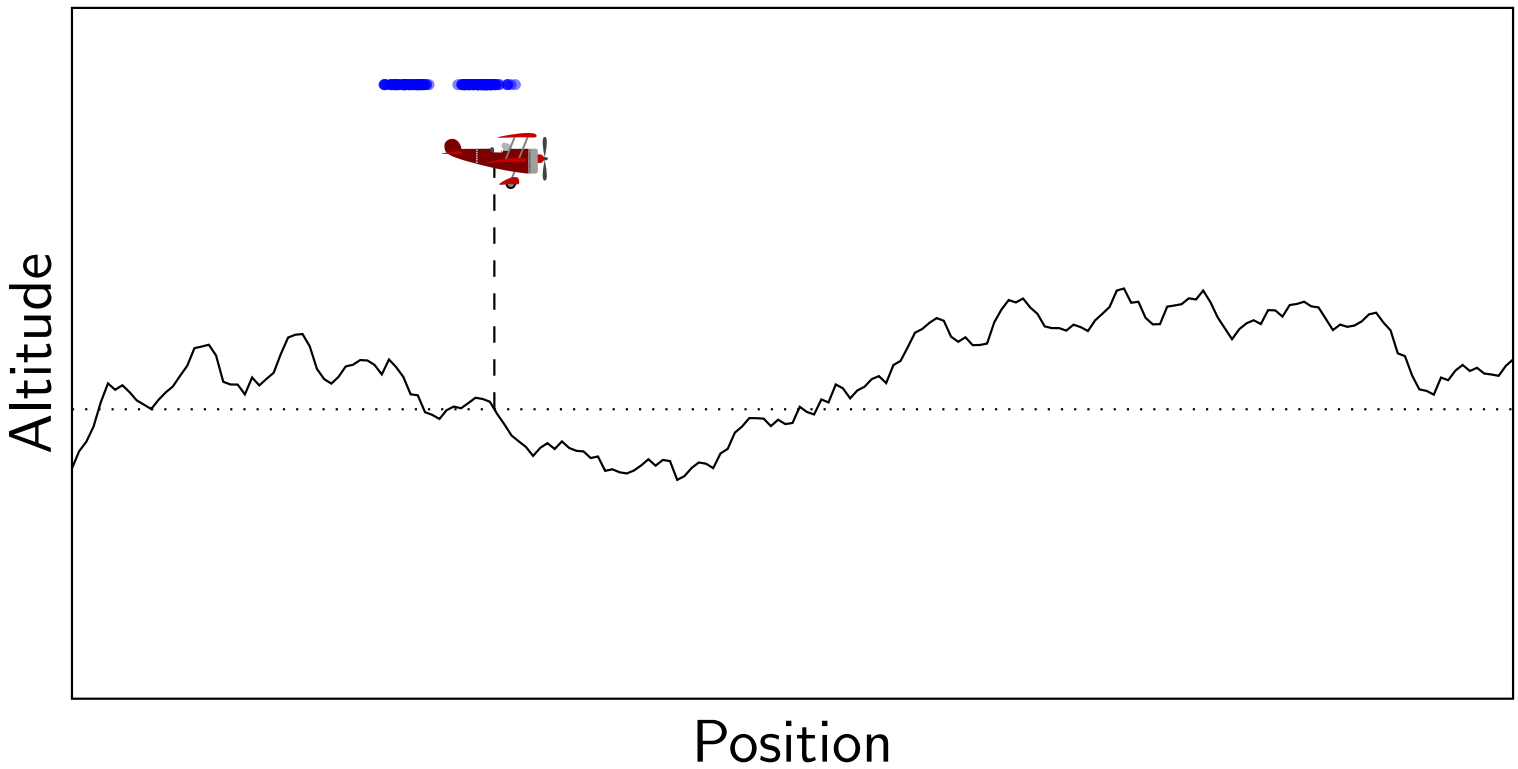
Sequential Monte Carlo inference

Propagate, weigh, resample



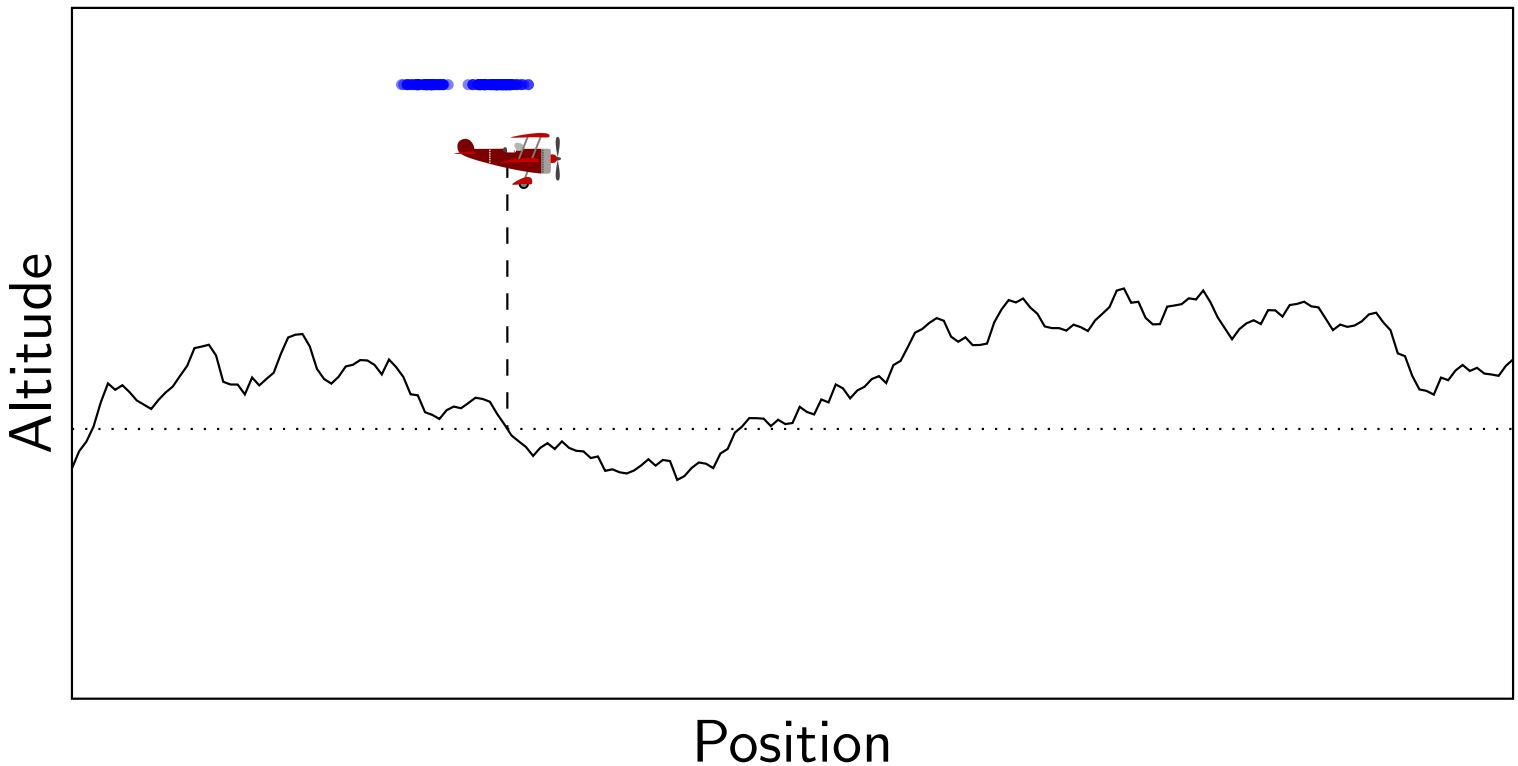
Sequential Monte Carlo inference

Propagate, weigh, resample



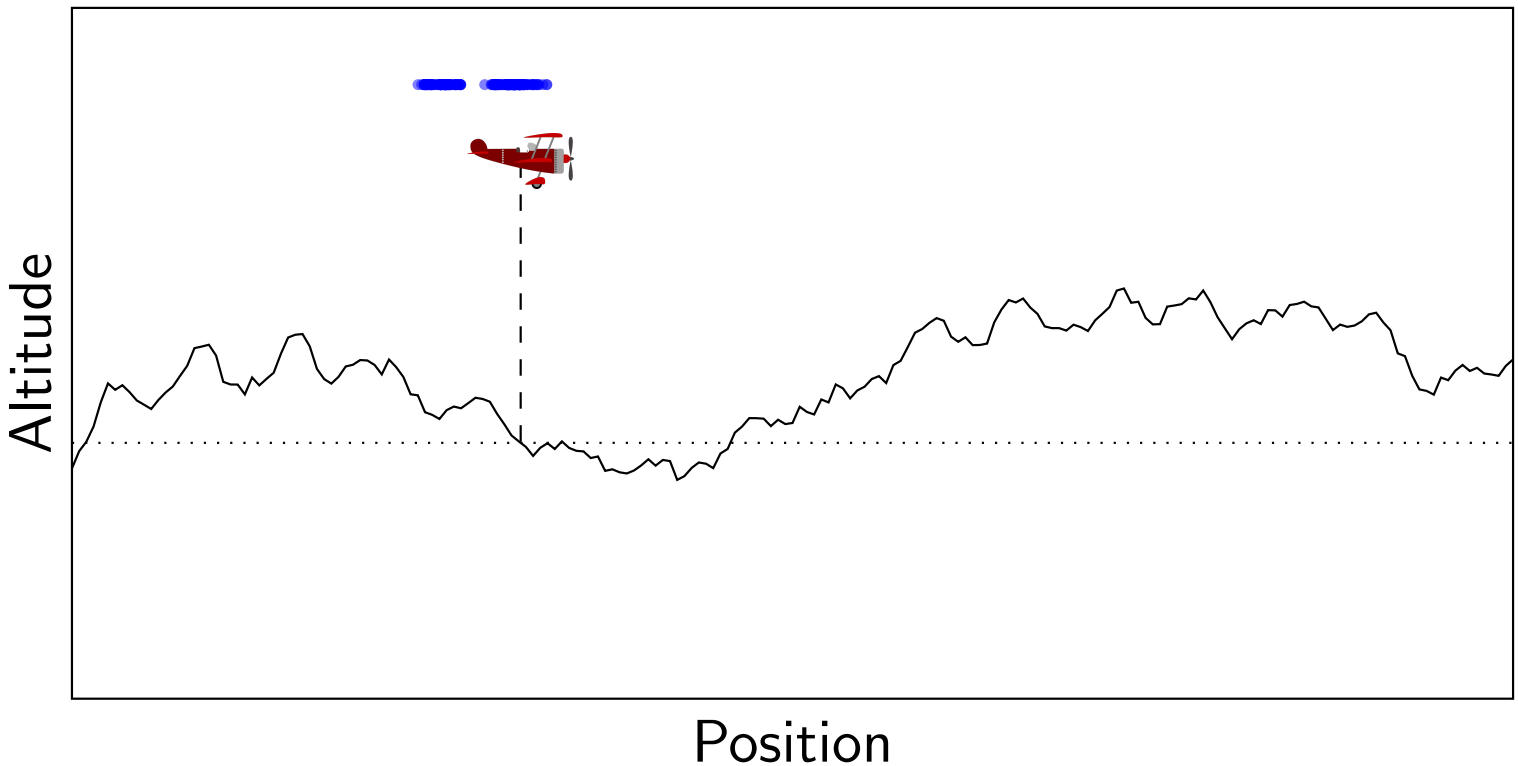
Sequential Monte Carlo inference

Propagate, weigh, resample



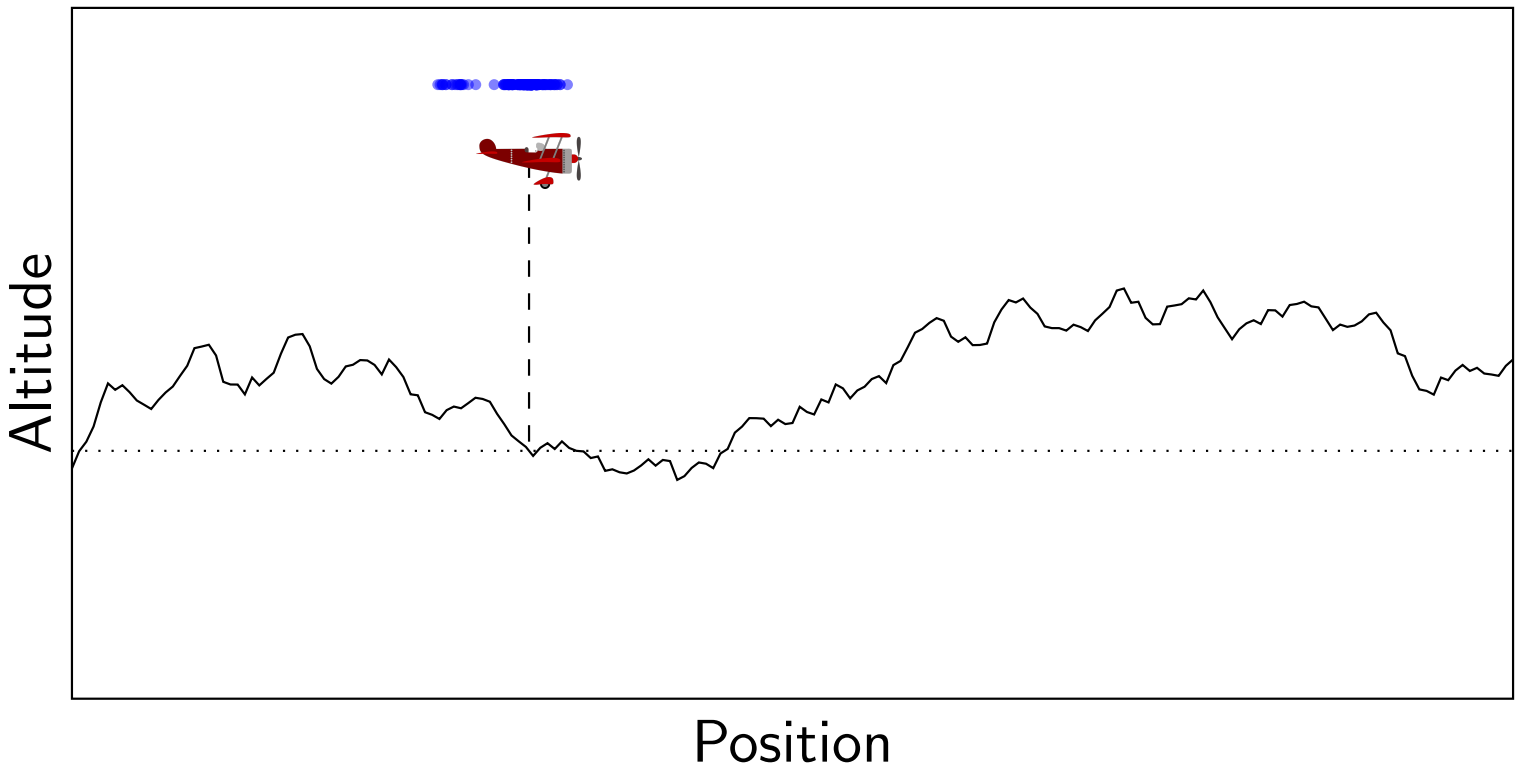
Sequential Monte Carlo inference

Propagate, weigh, resample



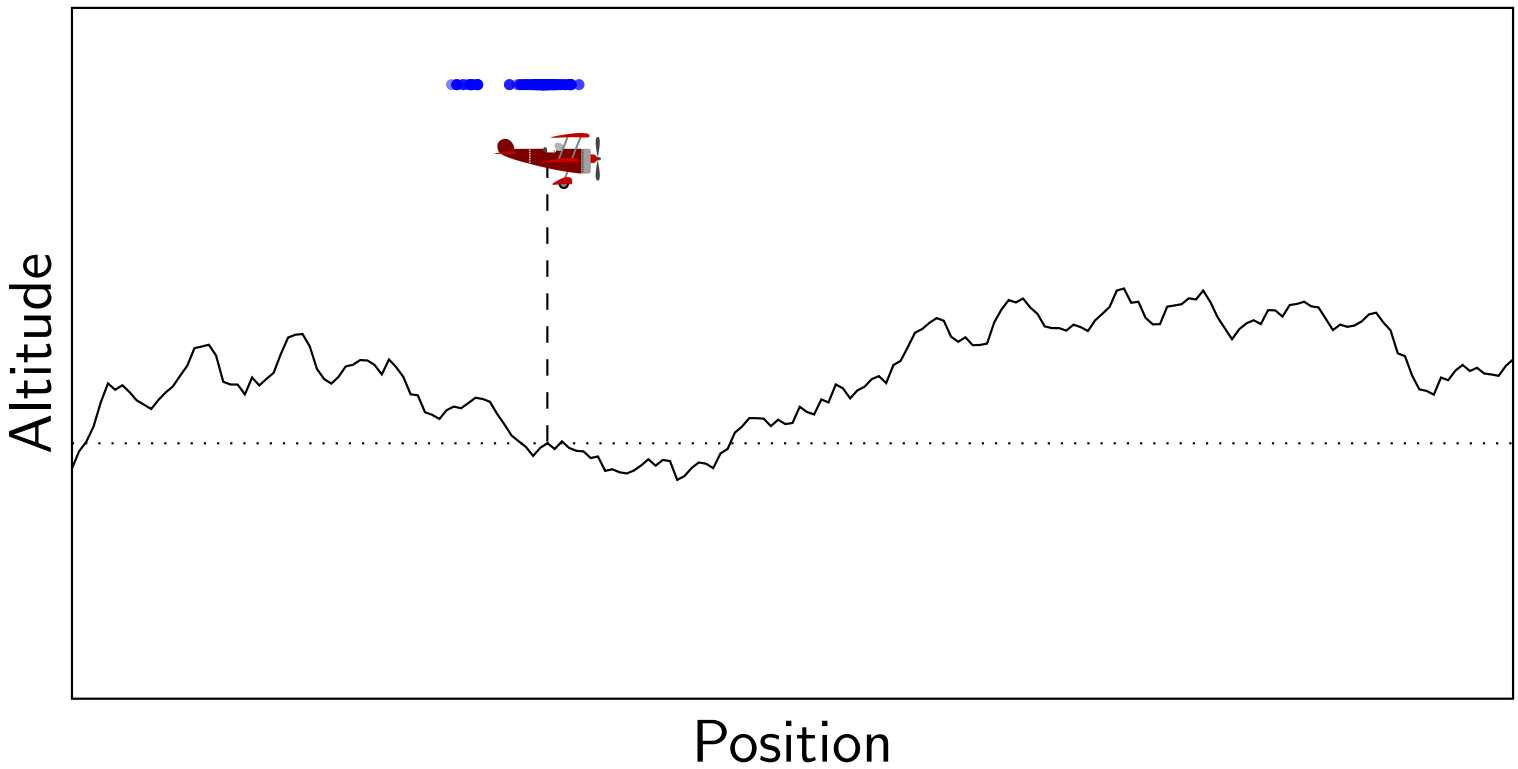
Sequential Monte Carlo inference

Propagate, weigh, resample



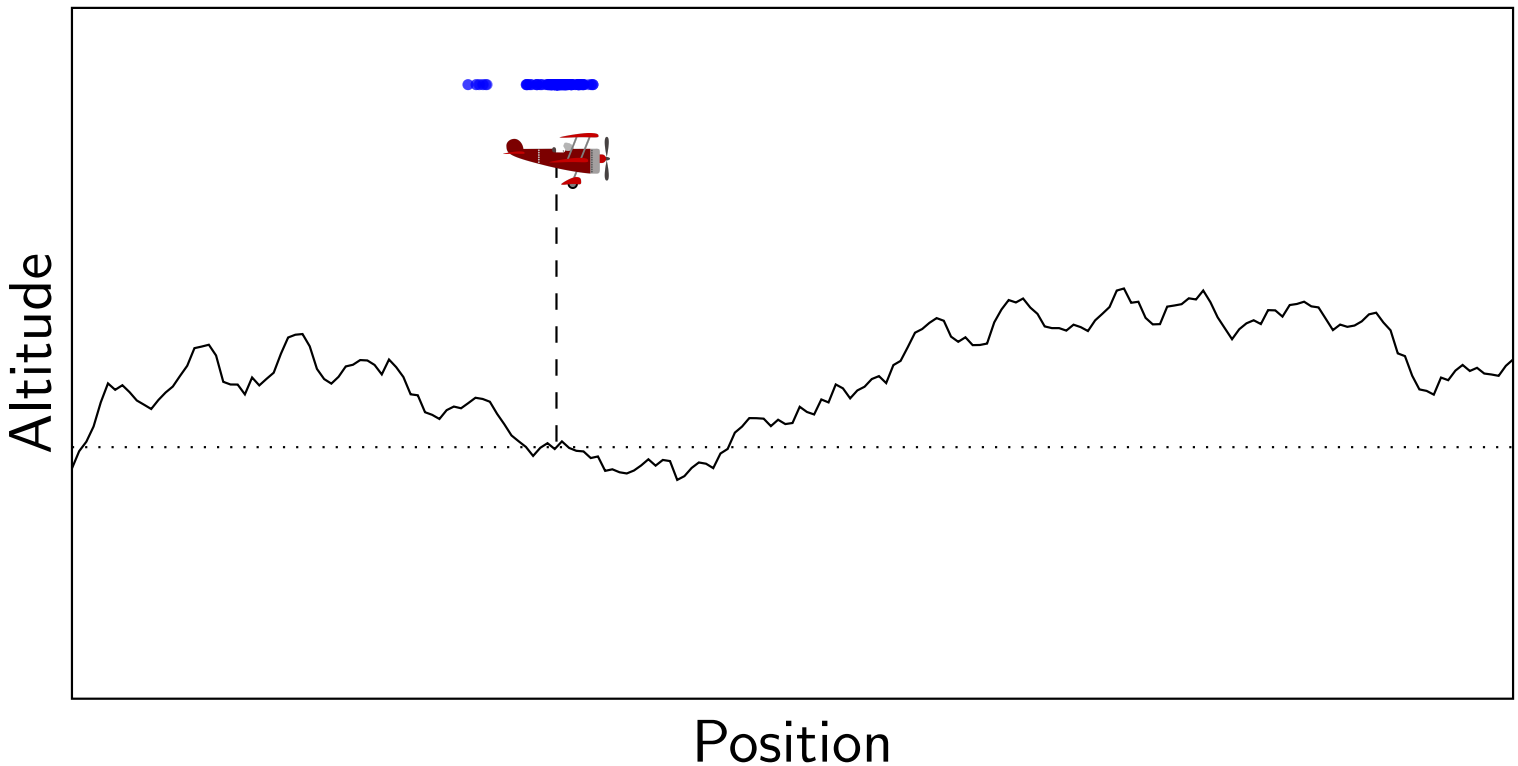
Sequential Monte Carlo inference

Propagate, weigh, resample



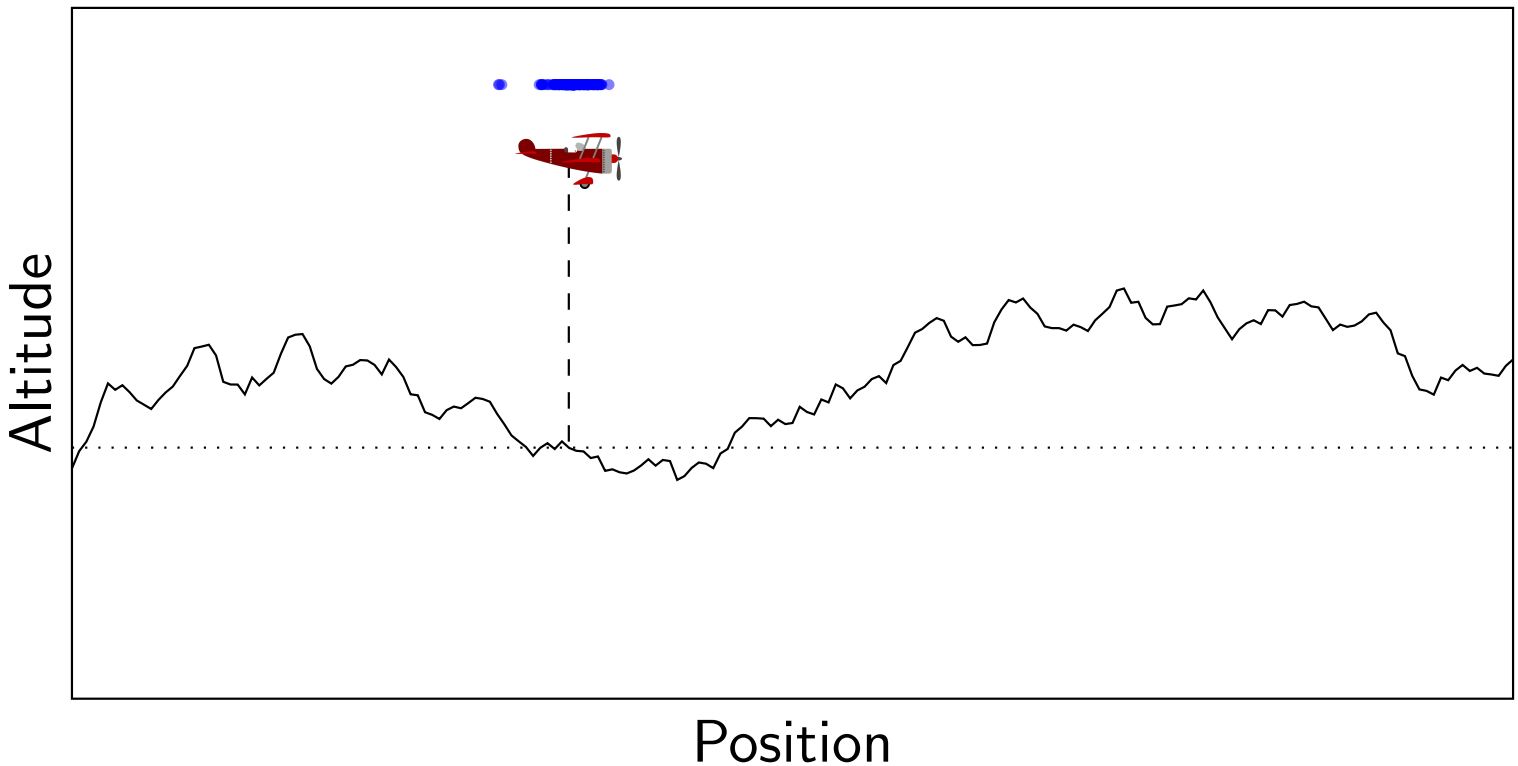
Sequential Monte Carlo inference

Propagate, weigh, resample



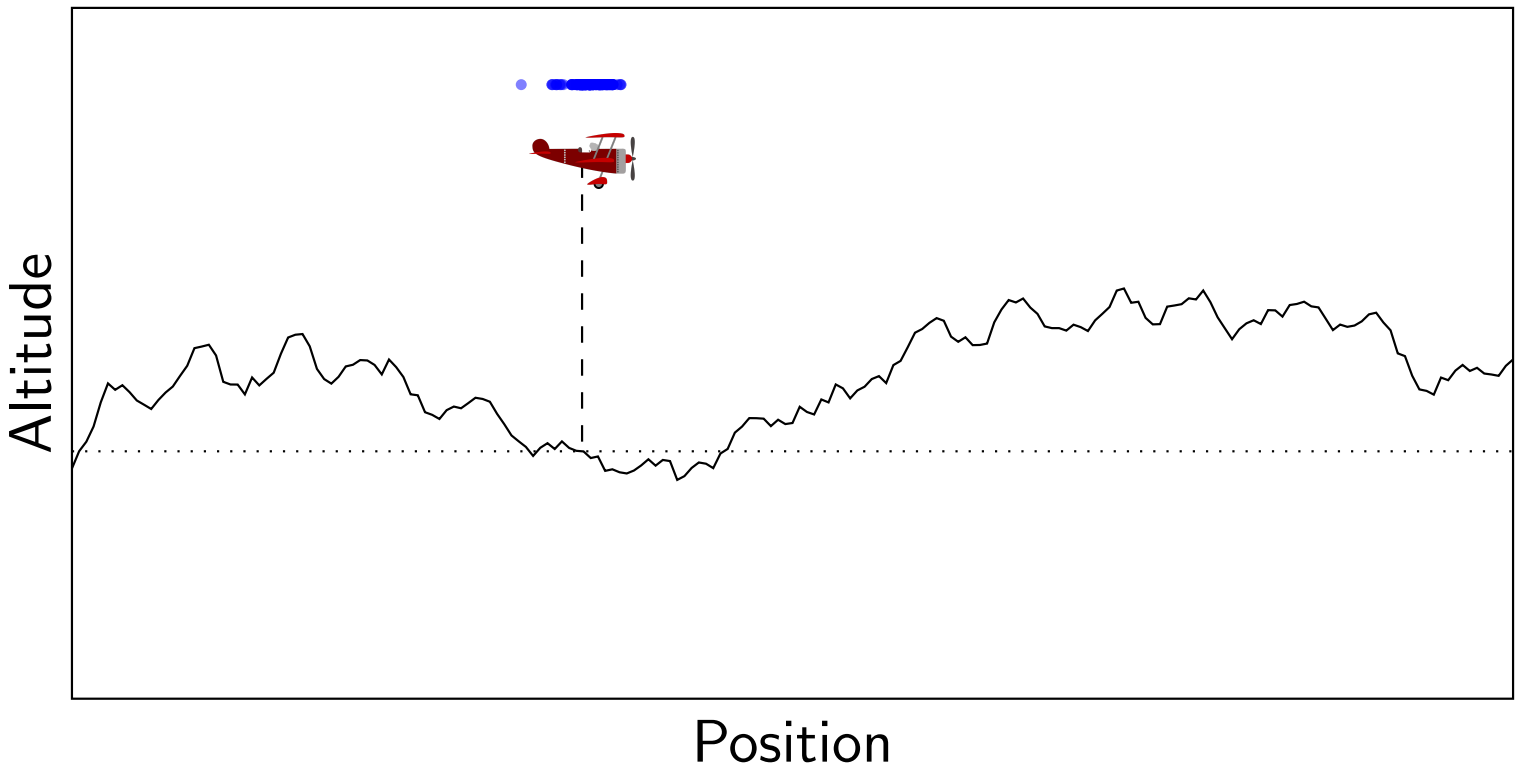
Sequential Monte Carlo inference

Propagate, weigh, resample



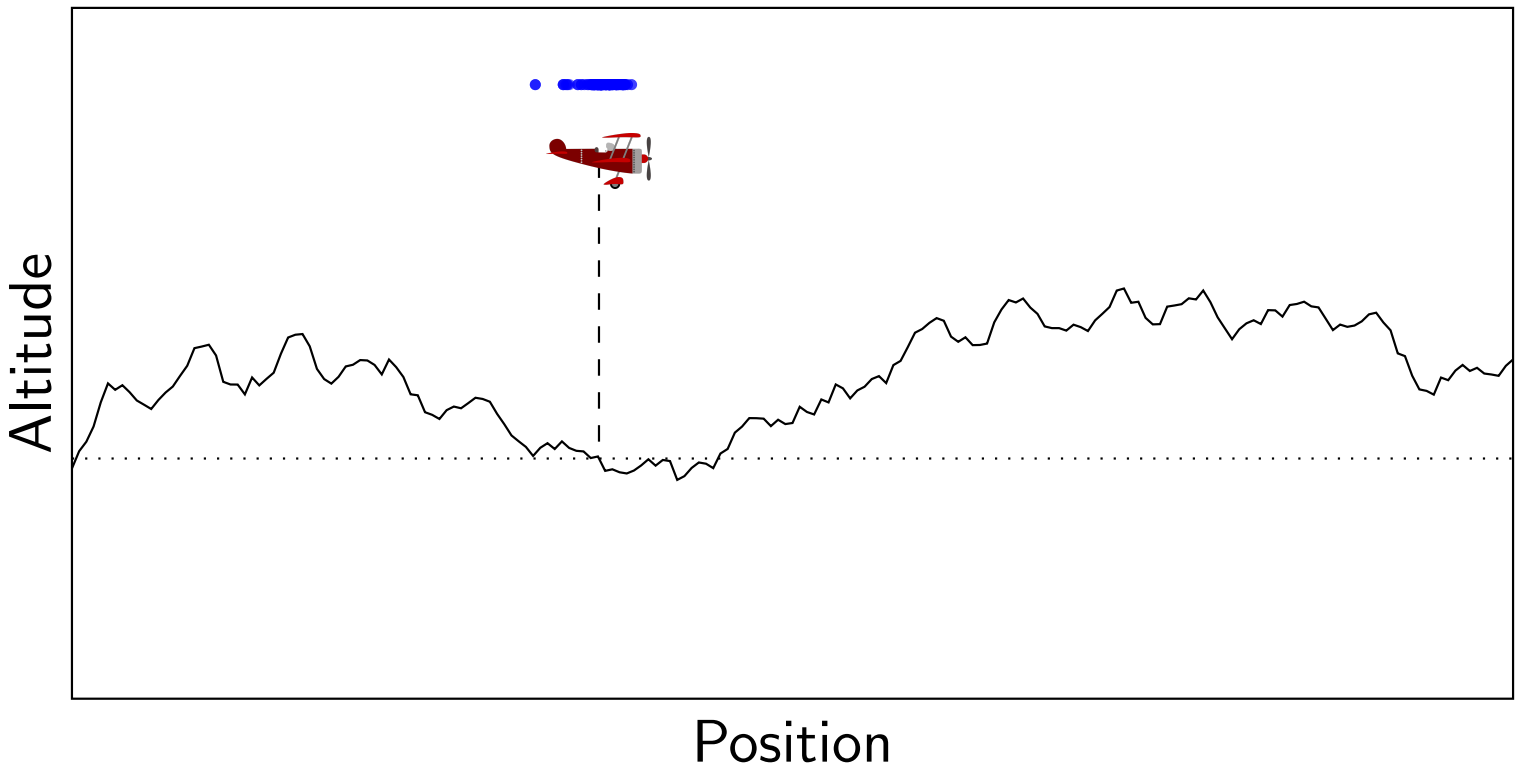
Sequential Monte Carlo inference

Propagate, weigh, resample



Sequential Monte Carlo inference

Propagate, weigh, resample



Sequential Monte Carlo inference

Propagate, weigh, resample