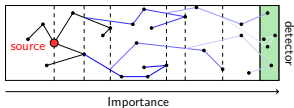


Variance Reduction in TRIPOLI-4

AMS

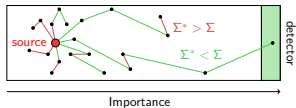
Adaptive Multi-level **Splitting**



- Real collisions
- Guarantee to **reach the detector**
- Function $\mathcal{I}(x)$ to rank the particles

Exponential transform

Modified laws of physics



$$\Sigma^*(\mathbf{P}) = \Sigma(\mathbf{P}) - \frac{\vec{\nabla} \mathcal{I}(\mathbf{P})}{\|\vec{\nabla} \mathcal{I}(\mathbf{P})\|} \cdot \Omega(\mathbf{P})$$

