

## **Resolution Demonstration**

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A simple demonstration of why you need small probes to investigate small scale structure.

You need

1 swiss roll tin i.e. flat baking tray

1 bun tin i.e. the sort of baking tin you make fairy cakes in

1 football or similar sized ball

1 ping pong ball

Invite one member of the audience to be a particle detector. Put the swiss roll tin on the table and throw the football and then the ping pong ball at it so that they bounce off and can be caught by the “detector”

Repeat with the bun tin. In the latter case you should get some interesting scattering.

Point out that the base of the swiss roll tin is an uninteresting object without structure. The bun tin has structure but behaves like the swiss roll tin until you use a probe small enough to investigate its structure.