

WG on Explaining hot PP topics to a lay audience

Spin

How to introduce?

- As an intrinsic property of particles
electric charge, mass, spin
- From macroscopic analogon
angular momentum

Spin

How to introduce?

- As an intrinsic property of particles
electric charge, mass, spin
 - From macroscopic analogon
angular momentum
-
- public may find it hard to relate to abstract concepts
 - understanding properties of "point particle" always difficult
 - link to symmetries (fermion, boson)

Spin

Central concepts

- particle picture
 - ▶ rotating billiard balls
- wave picture
 - ▶ how to visualise/understand spin of single wave-packet?

Spin

Central concepts

- particle picture
 - ▶ rotating billiard balls
- wave picture
 - ▶ how to visualise/understand spin of single wave-packet?

Start from effects

- interaction with magnetic field
 - ▶ Stern-Gerlach
 - ▶ show animations
- fermion vs. boson
 - ▶ laser
- angular distribution of colliding **rotating** billiard balls

Spin

Central concepts

- particle picture
 - ▶ rotating billiard balls
- wave picture
 - ▶ how to visualise/understand spin of single wave-packet?

Start from effects

- interaction with magnetic field
 - ▶ Stern-Gerlach
 - ▶ show animations
- fermion vs. boson
 - ▶ laser
- angular distribution of colliding **rotating** billiard balls
- works also for charge, mass

Spin

Demystify spin

It works in "everyday" world

- MRI
- spintronics
- laser
- ...