openPMD Raytrace vs BeamPhysics

PANOSC WP5 meeting

Status update

Only in Raytrace

- nRays → what is it exactly?
  - type: (uintX) → is this enough?
- opticalPath: → what is this supposed to be? similar to latticeName in BeamPhysics?

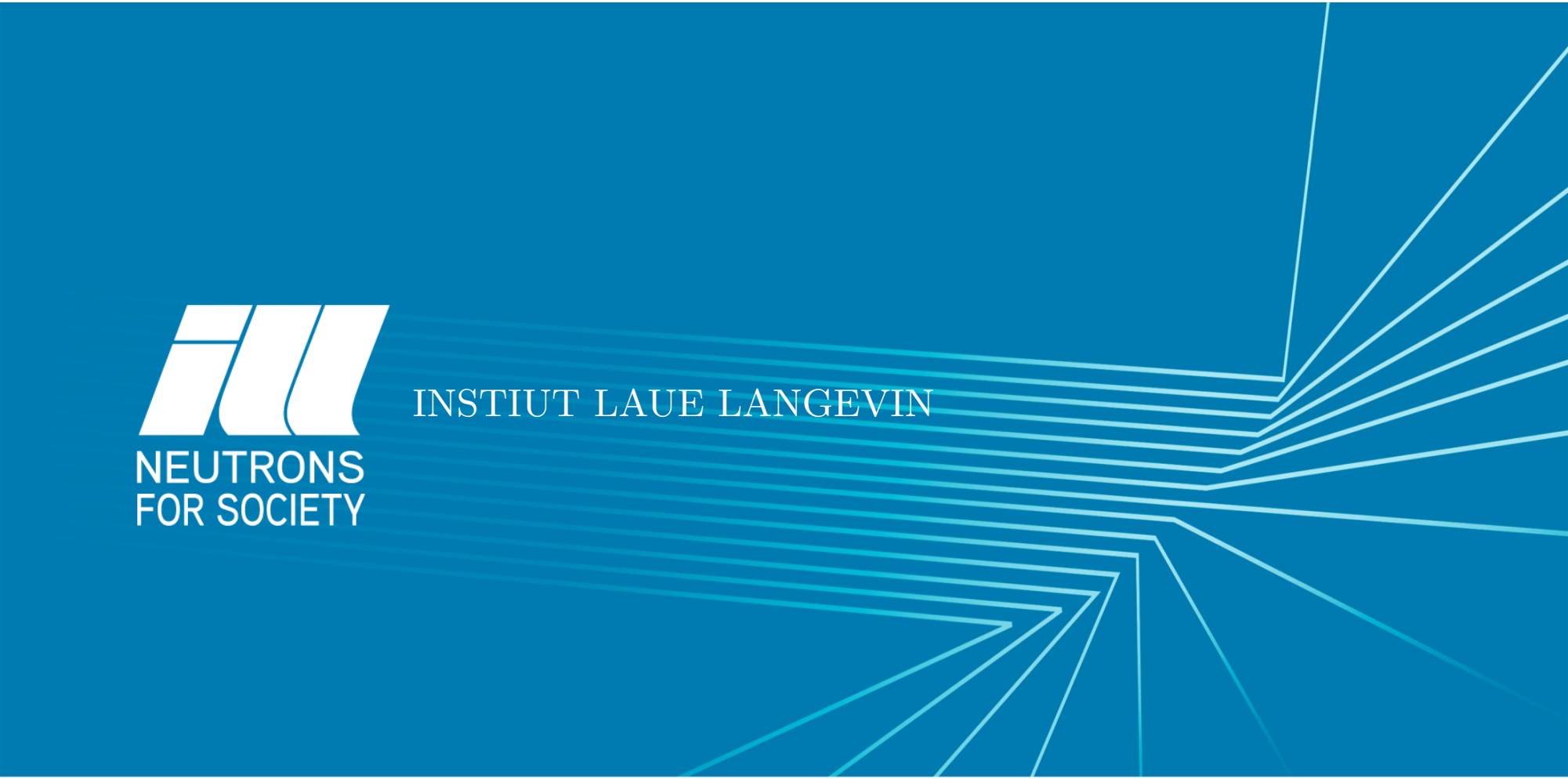
  type: array (string)
  description: The string representation of the beamline
- R: it seems a distance from the origin, what is the meaning of this?
- grazingAngle: cannot simply be calculated?
  - description: angle between y- axis and the photon direction
- intensity:
  - total is I_sPol + I_pPol, so can be removed
- wavevector: duplicate?
  - same info as direction + energy/wavelength
- stokesParams: again a combination of infos from I_sPol, I_pPol and phase

Only in BeamPhysics

- Particle Group $\rightarrow$ defines a beam bunch

In both but with different names/conventions

BeamPhysics	Raytrace	
position (x,y,z)	position (x,y,z)	OK
momentum (x,y,z)		
velocity (x,y,z) [units?]	direction (x,y,z) [m]	[m] ?
photonPolarizationAmplitude (x,y)	eFieldSPolarisation (x,y,z)	?
photonPolarizationPhase (x,y)	eFieldPPolarisation (x,y,z)	?
particleStatus (1=alive; others=dead)	deadAlive	
weight		
spin		
	phase	
	photonEnergy	
	wavelength	dup?
	wavevector (k,x,y,z)	dup?
	power	?
	R	?
pathLength		
	opticalPath	?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