Tracking for TPC/DC
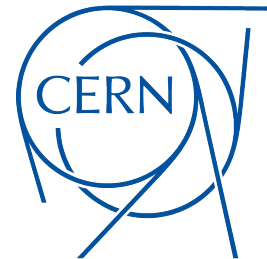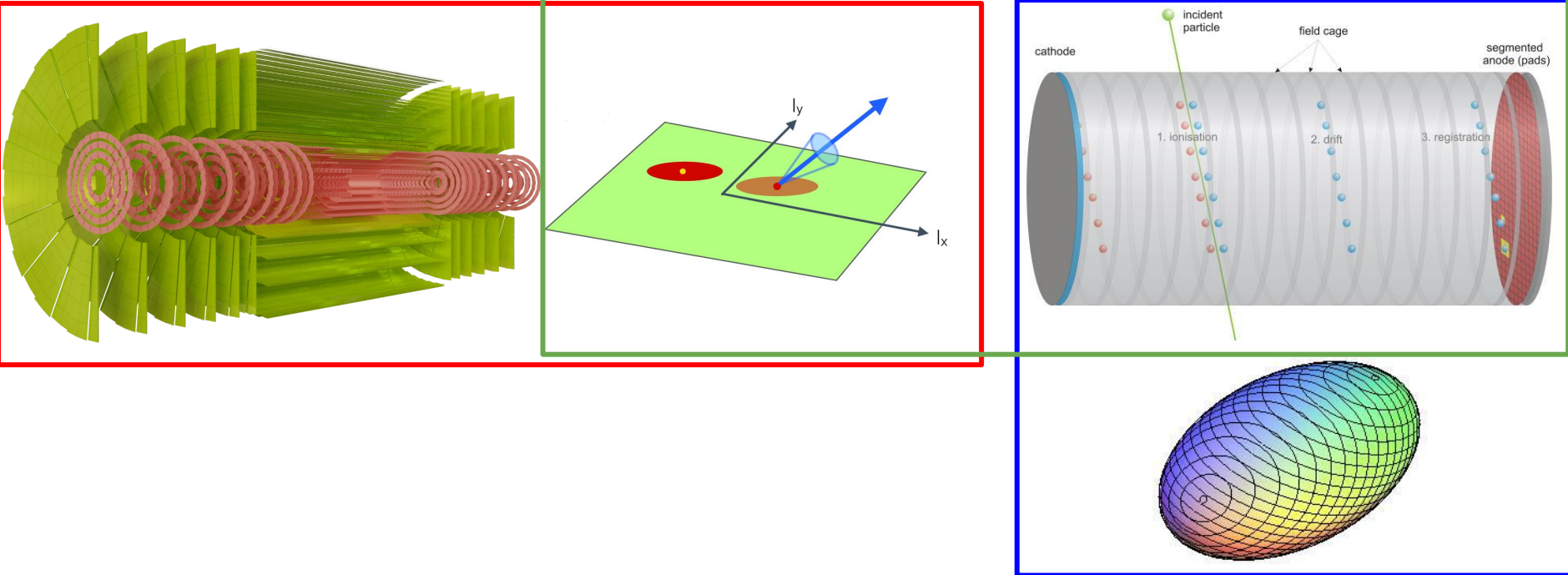
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Silicon detectors & TPCs/DCs

	Origin vs. registration of measurement	Measurement and track representation	Where can measurements be found?	Navigation
Silicon detector	Same place	Local	Sensitive surfaces	Surface to surface
TPC/DC (classical)	Displaced	Local by inserting custom surfaces	Custom surfaces	
TPC/DC (R&D)		Global	Everywhere inside a volume	Measurement to measurement

TODOs for new TPC/DC tracking concept

- Event data model (early stage WIP)
  - Describe a FreeMeasurement using FreeParameters
    - Measurement associated to volume (instead of surface)
    - Similar structure as the common bound measurement
  - Extensions of storage concept of these Measurements
- Track extrapolation (done)
  - Currently start and end parametrisations are local
    - Measurements were always bound to surfaces
  - Extension of the concept required to start and/or end globally
    - Generalisation of the maths
- (Combinatorial) Kalman filter
  - General formalism
  - Requires adaptions to handle variable dimensions
- Propagation interruption & measurement search
  - Silicon detectors: Stop on surface & start search
  - TPC/DC:
    - We enter the volume
      - Set of measurements available
      - Pre-selection required
    - We found a measurement
      - Where do we run the Kalman filter formalism?

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Rather orthogonal developments dominated by maths and code modifications