# TRACKER SPILL SCHEMA

spill:

- mc
  - /spill/mc/*array item*/hits:
    - channel_id
      - fiber_number
      - plane_number
      - station_number
      - tracker_number
      - type
    - charge
    - energy
    - energy_deposited
    - hit_position
    - mass
    - momentum
    - pid
    - time

      track_id

- digits
  - *array item*: an array of events
    - *array item*: an array of digits for each event.
  - spill/digits/*array item*/*array item*
    - channel_id: Stores information on the location of the digit in terms of tracker parameters: tracker number, station number, plane number, channel.
    - tdc_counts: The tracker tdc count.
    - adc_counts: The tracker adc count.
    - time: The time of the hit (from simulation).
    - mc_position: Stores the true Monte Carlo position of the hit which generated this digit.
    - true_mom: Stores the true Monte Carlo momentum of the particle which generated this digit.
    - number_photoelectrons: The number of photoelectrons computed from the energy deposited by a hit.
  - spill/digits/*array item*/*array item*/channel_id:
    - channel_number: The tracker channel number of the hit.

        * fiber_number: Legacy from the hit which generated this digit: stores the fibre number where the hit took place. This is used to compute the channel number, when making the bundle of 7 fibres.
        * plane_number
        * station_number
        * tracker_number
        * Type

- spacepoints
  - *array item*: an array of events
    * *array item*: an array of spacepoints for each event.
  - spill/spacepoints/*array item*/*array item*
    * channels: Stores the channel and plane number of the digits used for this space-point.
    * chi2: Evaluates the goodness of the space-point.
    * mc_mom: true Monte Carlo momentum of the hit closest to the computed position of the space-point.
    * mc_pos: true Monte Carlo position of the closest hit.
    * npe: number of photoelectrons for this space-point.
    * pos_Error: resolution in x,y and z.
    * position: the position computed for this space-point.
    * station
    * tracker
    * timeRes
    * time_error
  - spill/spacepoints/*array item*/*array item*/channels
    * array item: contains an element for each channel excited. Will contain 3 or 2 elements (space-points are either triplets or duplets).
  - spill/spacepoints/*array item*/*array item*/channels/*array item*
    * channel_number
    * plane_number
  - spill/spacepoints/*array item*/*array item*/mc_mom
    * x
    * y
    * z
  - spill/spacepoints/*array item*/*array item*/mc_pos
    * x
    * y
    * z
  - spill/spacepoints/*array item*/*array item*/pos_Error
    * x
    * y

    * z
- spill/spacepoints/*array item*/*array item*/position
    * x
    * y
    * z