Optics Status Update

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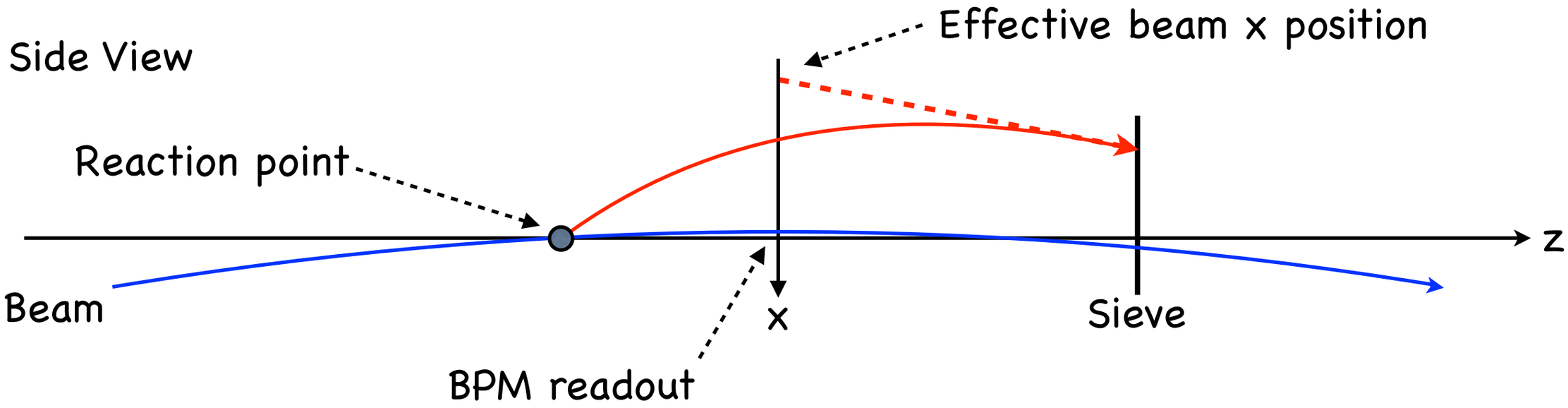
Optics Status

- Last time:
  - Calibration tool kit is almost finalized
  - Reconstruction script need to be updated with the simulation to calculate the kinematic variables
- Working on update the reconstruction script (finished)

Reconstruction

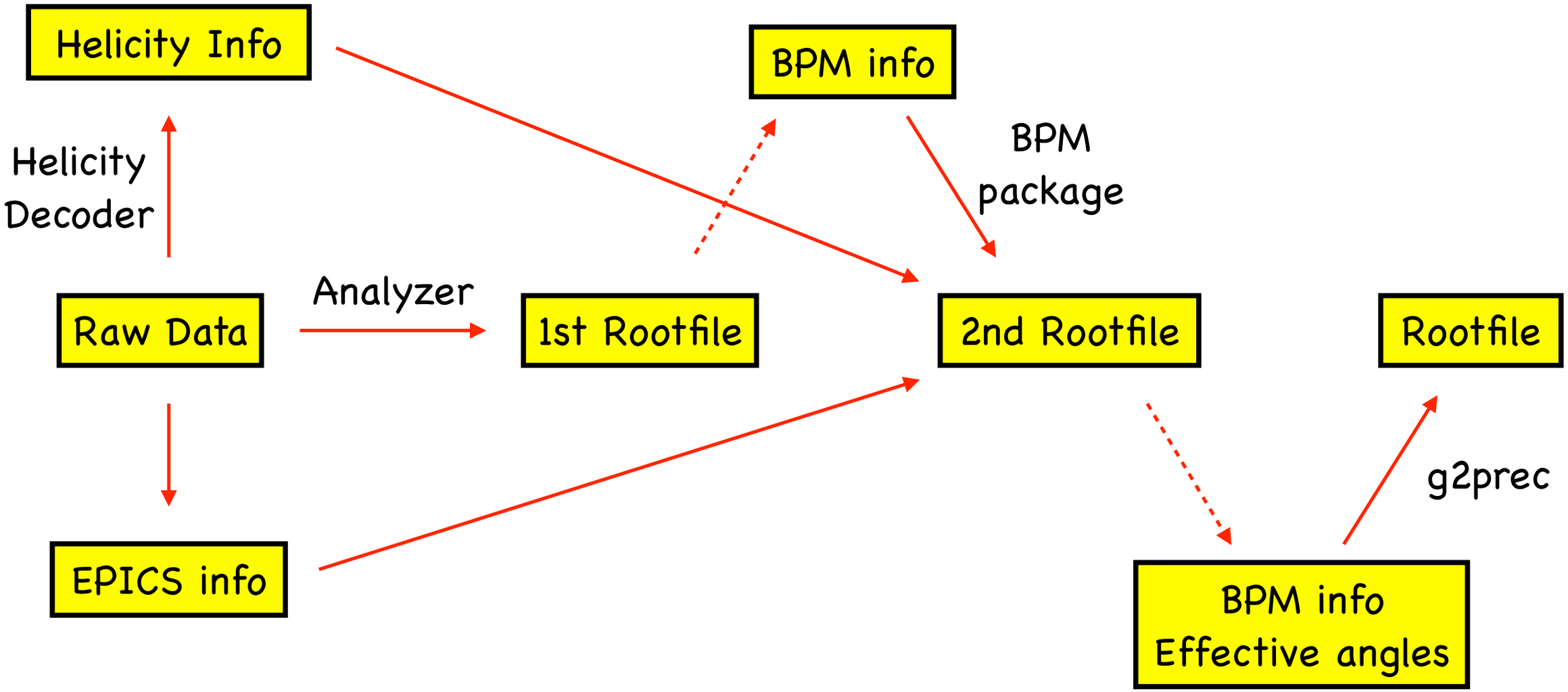
- Reconstruct the scattering angle:
  - Use the HRS transform matrix to get the effective target variables
  - Project the effective target variables to sieve slit
  - Use the field map to calculate the trajectory of the scattered electron, which will tell us the real scattering angle



Optics Status

- A small program called g2prec is written to do this work:
  - Read "L.gold.*" variables (effective angle) and "Lrb.tgt_0_*" variables (BPM) as input
  - Projection functions and drifting functions in the simulation are used to calculate the final reconstructed variables
  - Configured by database to deal with different kinematic settings
  - Insert "L.rec.*" variables back to the rootfile as the final reconstructed scattering angle and momentum

Structure of do_replay script



Optics Status

- TODO:
  - 9 different optics settings to go
  - study the uncertainties when doing the calibration