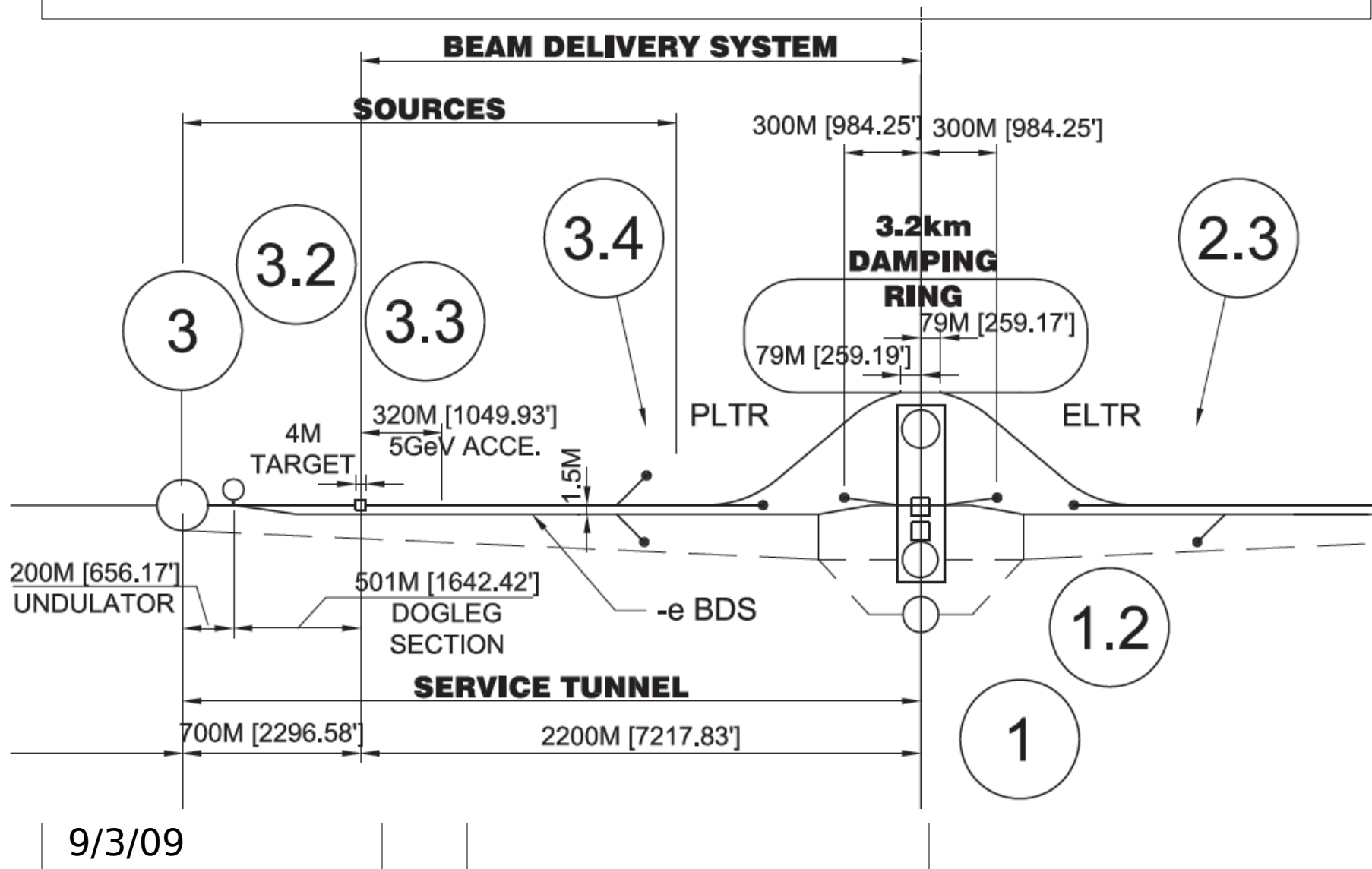
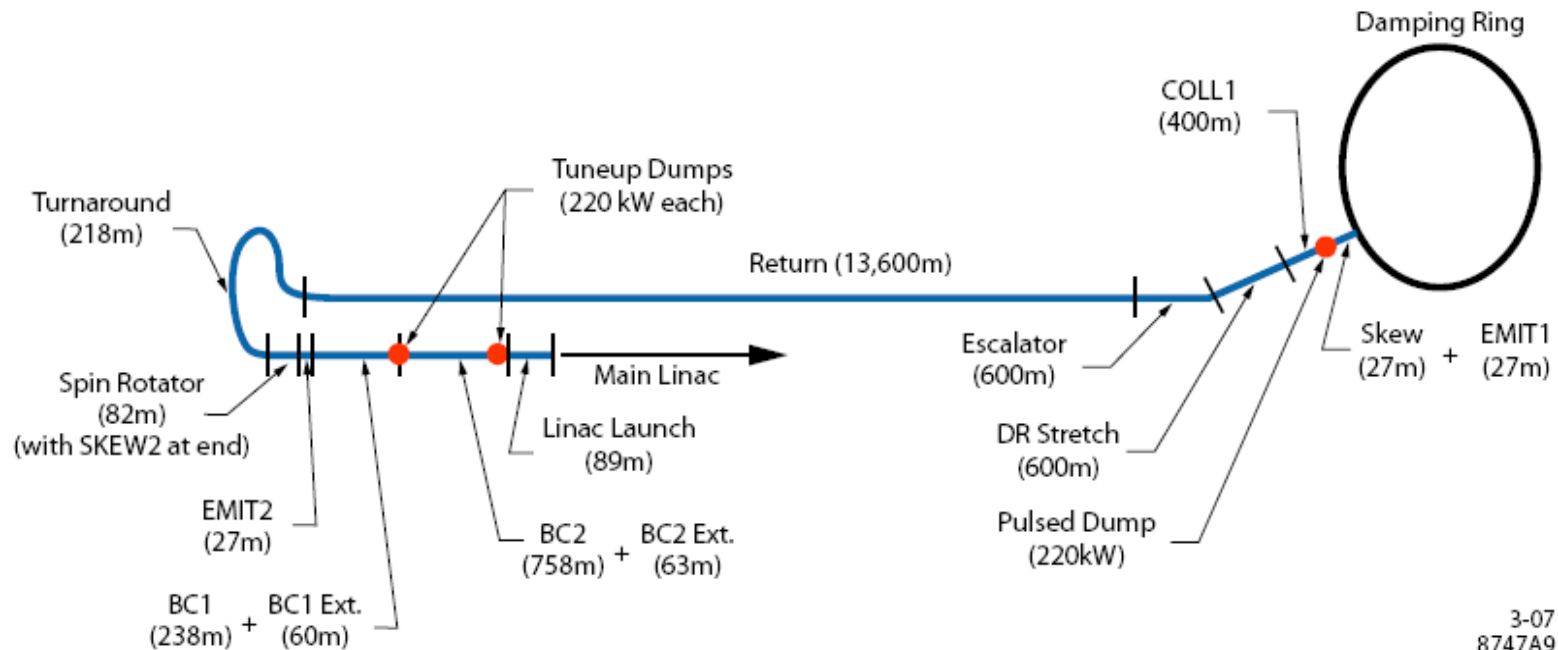


Configuration of the Central Area in SB2009



RTML configuration (RDR)



- Beam must follow 3 elevations: DR, ceiling, ML
- New design of single stage bunch compressor saves ~200 m (after turnaround) (...and in return line)

Possible RTML configuration

- RTML share DR-to-BDS tunnel with PLTR/ELTR lines.
- Tunnel curvature is defined by requirements for spin-rotator in PLTR/ELTR lines.
- Skew Correction and Diagnostics must be close to DRX
- Straight section ~100 m is used for solenoids. RTML will use straight section for
 - vertical dogleg to bring (~40m):
 - electrons from e- DR level (1.1m from the floor) to ceiling level (+3.2 m) and
 - Positrons from e+ DR level (1.1m+1.3m from the floor) to ceiling level (+2.1m).
 - Extraction line for tune-up/abort dump (if space will be available)

Possible RTML configuration (2)

- The bending arc between BDS and curved tunnel is place for RTML energy collimator
- In BDS tunnel RTML line is located on the ceil. Nevertheless the initial part ($\sim 1000\text{m}$) is quite dense area, containing:
 - Skew corrections
 - Beam diagnostics ($\sim 100\text{m?}$ from PT)
 - Beta-collimation section ($\sim 400\text{m?}$ from RDR)
 - ???

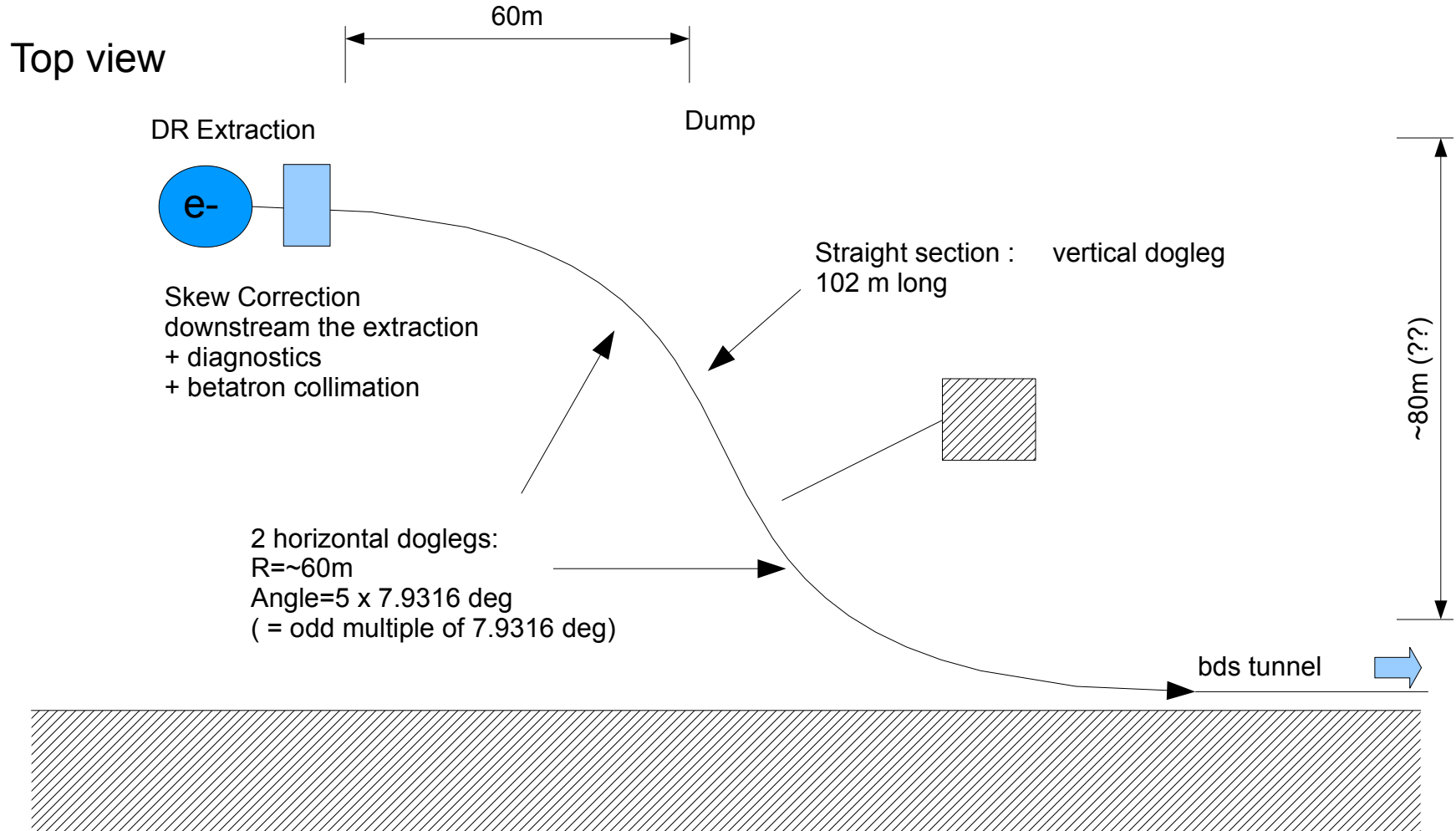
Additional info for discussion

- Illustrations
 - 3D configuration of proposed lattice
 - Possible length and requirements for V-dogleg (example of dogleg before turnaround)
 - Required length of extraction line, including beamline components and additional for extraction line itself (~25-30 m extra tunnel). Elevation of positron and electron extraction lines are different (if extraction is located before V-dogleg)
 - Lattice for straight part of GETAWAY lattice with diagnostics and beta-collimations sections (from RDR lattice 2007b)
 - Short description of diagnostics (what is here) and collimation section (from PT RTM Lpage)
 - Where we assume regular return line starts

Questions

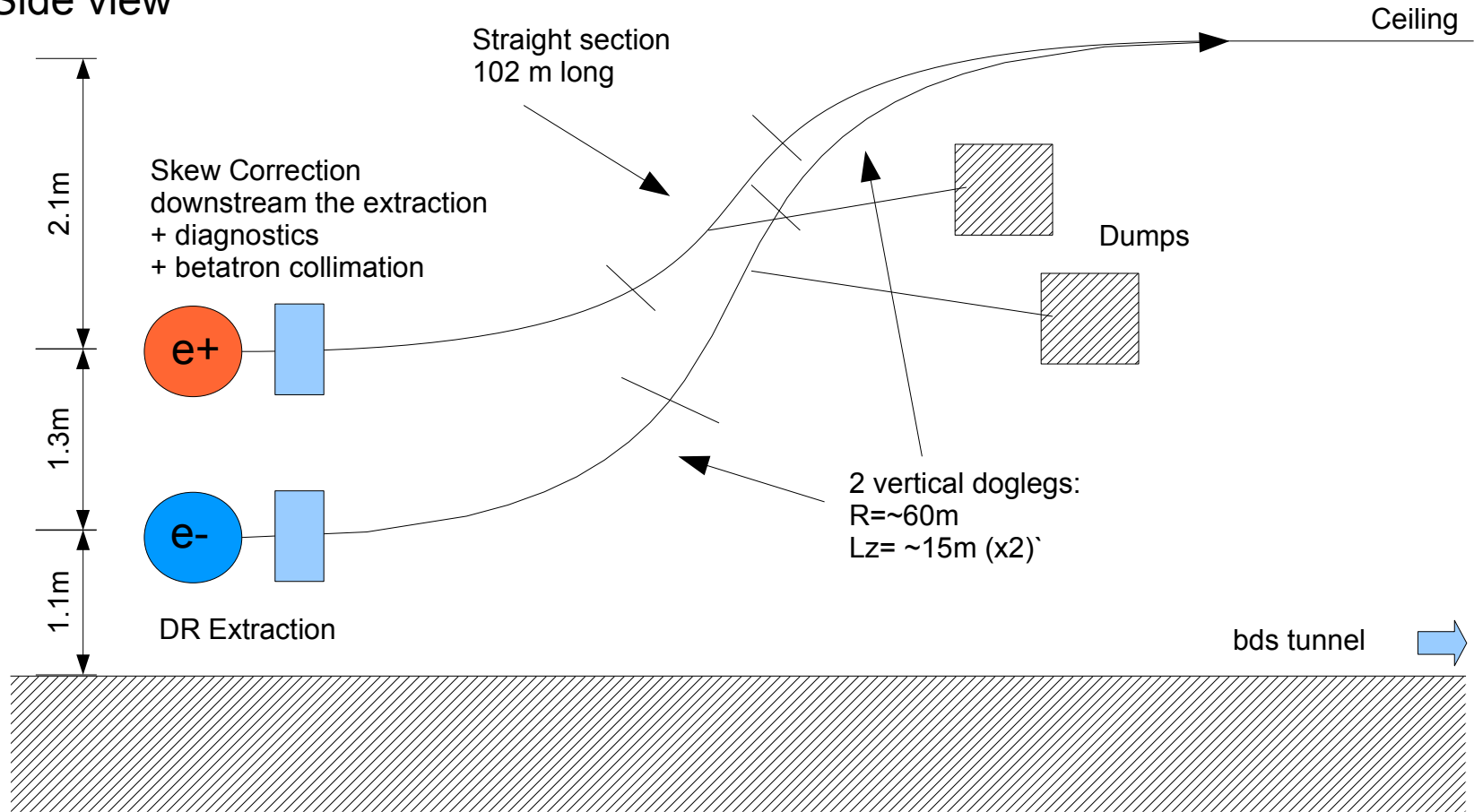
- We assume that extraction and injection in DR is located in the same place along DR, (separated vertically)
- Vertical separation of the electron and positron rings in tunnel ?
- How much space along DR tunnel is available for RTML extraction line before arc (PLTR/ELTR tunnel)?
- ???

RTML Central Area



RTML Central Area

Side view



9/3/09

Turnaround Layout

Turnaround:

- R vertical = 60 m
- R horizontal = 30 m

Spin Rotator

