

# Simulation & Geometry Update

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- Done:
  - **AP:** Automatic Excel survey generation – model passed to JP for checking
  - **AP:** Models updated
    - Main baseline design: **V4.4**
    - Alternative baseline design: **V5.4**
- Ongoing:
  - Update model components to match naming convention (SharePoint ✓)
  - CAD conversion testing
  - **AP:** GPT optimisation of capture section - gdfsolve
    - Model: LhARA capture section + drift (RF / wall). Kept ideal beam for testing.
    - Sensitive to choice of variable limits, constraint values, tolerances, etc
      - No solution – no output
    - Optimisation tests with space charge ongoing
      - Possible solution found for GL1 field: 1.4387 -> 1.466
      - Checking (optics, GL voltage, etc ....)
    - Lesson: DO NOT call your batch script gdfsolve.bat – infinite loop.
- Todo:
  - Identify locations for non-beam transport systems + add to model