Chicane simulation update

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Front end phone meeting
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Latest update

• Working on integration of the chicane with the rest of the channel
• Alexey is back from USPAS and actively helping me with the process: we have the full front end in G4beamline now, still need to fix some discrepancies:
  – ACCEL element (model 10): first cell of the buncher suggests a 24 m length, all the others have the same parameter set to 21 m.
  – We used non-zero thickness walls in RF while keeping the overall length the same as in ICOOL, could be the source of discrepancy.
  – There is no equivalent to model 10 in G4beamline, => RF parameters are taken from the ICOOL RF diagnostic file, => not the best way for the optimization down the road. Looking for a solution.
• Preliminary run with 1000 particles:

<table>
<thead>
<tr>
<th></th>
<th>ICOOL</th>
<th>G4beamline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before buncher</td>
<td>488</td>
<td>541</td>
</tr>
<tr>
<td>After buncher</td>
<td>462</td>
<td>407</td>
</tr>
<tr>
<td>After rotator</td>
<td>456</td>
<td>356</td>
</tr>
</tbody>
</table>