First Results from IR7 simulation

Radiation levels in the regions UJ76/RR73/RR77

Case study: No Absorbers

Katerina Tsoulou, AB/ATB

43th Collimation WG Meeting, 20/09/04
UJ76 - 1 MeV neutron eq. flux (cm\(^{-2}/y\))

Not enough statistics to derive concrete conclusions for the exact radiation levels!

\(\rightarrow\) Good estimation for the order of magnitude of the fluxes expected at the place of LHC electronics.
UJ76 - Dose (Gy/y)

estimation for the AIR regions only !!!

LOOK ONLY HERE
RR73 - 1 MeV neutron eq. flux (cm$^{-2}$/y)
RR73 - Dose (Gy/y)

estimation for the AIR regions only !!!
RR77 - 1MeVeq flux (cm^{-2}/y)
RR73/77 - Particle Spectra & Mean Particle Flux

<table>
<thead>
<tr>
<th></th>
<th>Mean values at both levels (cm$^{-2}$/y)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1MeV eq.</td>
</tr>
<tr>
<td>UJ76</td>
<td>1.8 E+09</td>
</tr>
<tr>
<td>RR73/77</td>
<td>1.7 E+10</td>
</tr>
</tbody>
</table>
Conclusions

- RR73/77 appear to be an order of magnitude hotter regions than UJ76

- We seem to have ~100 times more hadrons >20 MeV than the RRs in Point 1/5 (after special shielding!)


- Waiting for the ‘WithAbsorbers’ results...

- and better statistics!