Characterization of the MCFR fuel cycle options

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Fuel tap MCFR

Fuel salt removal from the core fuel tap

<table>
<thead>
<tr>
<th>Case nr.</th>
<th>Cycle time (EFPY)</th>
<th>Removal constant λ (1/s)</th>
<th>Share removed (%Y)</th>
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<td>14</td>
<td>69.60</td>
<td>6.29E+09</td>
<td>0.50</td>
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</table>

Simulated reprocessing cases

Evolution of FPs share for cycle time 143 EFPY

Critical core sizes

Conclusion: MCFRs are promising alternative to MSFRs, due to minimal scattering XS, they provide very hard neutron spectrum (fuel cycle performance), but they are also transparent for neutrons (bulky cores).