Cross section generation in deterministic calculations for corrective factor evaluation

(1) INL
For all calculations homogeneous compositions were used in zero dimensions with critical buckling search for core regions and leakage terms (DB^2) from core as source for non core regions. The calculation is performed in P1 consistent approximation with a 1968 group energy structure and flux and currents are used to collapse to the 33 energy group level.

(2) JAEA
 For all calculations homogeneous compositions were used in zero dimensions with critical buckling search for core regions and zero buckling without external neutron source* for non-core regions.
 The calculation was performed in P1 inconsistent approximation with a 102,111-group energy structure (111-group above 52keV and 102,000-group below 52keV) and cross-sections were once collapsed into the VITAMIN-like 175-group structure (111-group above 52keV and 64-group below 52keV).
 Subsequently, flux and current** of core region were used to collapse to the 33 energy group level.
 To check the sensitivity to the flux and current used for collapsing to the 33 group level, other scheme was tried. The calculation was performed in P1 inconsistent approximation with a 102,111-group energy structure (111-group above 52keV and 102,000-group below 52keV) and flux and current of each region were used to collapse to the 33 energy group level. However, the effect was not observed due to the change of the flux and current for collapsing.

*: Fictional neutron source (fission spectrum or single energy of 52keV) is applied for non-fuel regions

**: Current was obtained by using the TIBERE method as $J = \dfrac{\phi}{3\Sigma_{tr}}$, which was used for

collapsing the P1 components.