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IAEA/NDS priorities in the EXFOR compilation

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Our priorities are related with our data development programs and in May 2001 include:

1. Nuclear data for reaction cross section standards:

^{1}H(n,n) – σ_{el}, $d\sigma_{el}/d\theta$, polarization, 1 keV – 150 MeV, ^{1}H(n,total)

^{3}He(n,p) - σ_{np}, $d\sigma_{np}/d\theta_{n}$, thermal to 1 MeV

^{6}Li(n,t) - σ_{nt}, $d\sigma_{nt}/d\theta_{t}$, thermal to 2 MeV; ^{6}Li(n,total), ^{6}Li(n,n) - σ_{nn}, $d\sigma_{nn}/d\theta_{n}$, polarization, thermal to 2 MeV; ^{4}He(t,n) - σ_{tn}, $d\sigma_{tn}/d\theta_{n}$, threshold to 5 Mev above the threshold; ^{4}He(t,t) - σ_{tt}, $d\sigma_{tt}/d\theta_{t}$, polarization data, to 5 MeV above the ^{4}He(t,n) threshold

^{10}B(n,α) - $\sigma_{n\alpha}$, $d\sigma_{n\alpha}/d\theta_{\alpha}$,; ^{10}B(n,$\alpha_1\gamma$) - $\sigma_{n\alpha1}$, $d\sigma_{n\alpha1}/d\theta_{\alpha1}$; ^{10}B(n,total), ^{10}B(n,n) - σ_{nn}, $d\sigma_{nn}/d\theta_{n}$, polarization; thermal to 250? KeV; ^{7}Li(α,α) - $\sigma_{\alpha\alpha}$, $d\sigma_{\alpha\alpha}/d\theta_{\alpha}$; ^{7}Li($\alpha$,$\alpha_1$) - $\sigma_{\alpha\alpha1}$, $d\sigma_{\alpha\alpha1}/d\theta_{\alpha1}$;

C(n,n) – σ_{tot}, σ_{el}, $d\sigma_{el}/d\theta$, polarization, thermal to 1.8 MeV

^{197}Au(n,γ) – $\sigma_{n\gamma}$, thermal, 0.2 to 2.5 MeV

^{235}U(n,f) – σ_{nf}, thermal, 0.15 to 20 MeV

^{238}U(n,f) – σ_{nf}, threshold to 20 MeV

^{235}U(n,f) – σ_{nf}, thermal, 0.15 to 20 MeV

These cross sections averaged on any well defined spectra in the energy of interest

Any ratio measurements between these cross sections

For high-energy standards:

^{209}Bi(n,f), ^{235}U(n,f), ^{238}U(n,f) – threshold to 1 GeV

Any ratio measurements between these cross sections

2. Nuclear data for nuclides of Th-U fuel cycle:

(n,γ), (n,f), (n,2n) cross sections, $<\nu_p>$, $<\nu_d>$ and fission product yields for ^{232}Th, ^{231,233}Pa, ^{232,233,234,236}U in energy range up to 20 MeV

3. For international reactor dosimetry library IRDF-2002 project:

LI6 (N,A) H3, LI7 (N,T) HE4, B10 (N,A) LI7, C12 (N,2N) C11, O16 (N,2N) O15, LI6 (N,T)HE3, B10 (N,A) LI6, F19 (N,2N) F18, NA23(N,2N) NA22, NA23 (N,G) NA24, MG24 (N,P) NA24, AL27 (N,P) MG27, A27 (N,A) NA24, P31 (N,P) SI31, S32 (N,P) P32, SC45 (N,G) SC46, T0 (N,X) SC46, TI0 (N,X) SC47, TI0 (N,X) SC48, TI46 (N,2N) TI45, TI46 (N,P) SC46, TI47 (N,NP) SC46, TI47 (N,P) SC47, TI48 (N,NP) SC47, TI48 (N,P) SC48, TI49 (N,NP) SC48, V0 (N,A) SC48, V51 (N,A) SC48, CR50 (N,G) CR51, CR52 (N,2N) CR51, MN55 (N,2N) MN54, MN55 (N,G) MN56, FE54 (N,2N) FE53, FE54 (N,A) CR51, FE54 (N,P) MN54, FE56 (N,P) MN56, FE57 (N,NP) MN56, FE58 (N,G) FE59, CO59 (N,2N) CO58, CO59(N,G) CO60, CO59 (N,A) MN56, NI58 (N,2N) NI57, NI58 (N,P) CO58, NI60 (N,P) CO60, CU63 (N,2N) CU62, CU63 (N,G) CU64, CU63 (N,A) CO60, CU65 (N,2N) CU64, ZN64 (N,P) CU64, AS75(N,2N)AS74, Y89 (N,2N) Y88, ZR90 (N,2N) ZR89, NB93 (N,2N) NB92, NB93 (N,N') NB93M, NB93 (N,G) NB94, RH103 (N,N') RH103M, AG109 (N,G) AG110M, IN115 (N,2N) IN114M, IN115 (N,N') IN115M, IN115 (N,G) IN116M, I127 (N,2N) I126, LA139 (N,G) LA140, PR141 (N,2N) PR140, EU151 (N,G) EU152, DY164(N,G)DY165, TM169 (N,2N) TM168, TA181 (N,G) TA182, W186 (N,G) W187, AU197 (N,2N) AU196, AU197 (N,G) AU198, HG199 (N,N') HG199M, PB204 (N,N') PB204M, TH232 (N,F) FP, TH232 (N,G) TH233, U235 (N,F) FP, U238 (N,F) FP, U238 (N,G) U239, NP237 (N,F) FP, PU239 (N,F) FP, AM241 (N,F) FP in energy range from threshold up to 20 MeV.

These cross sections averaged on thermal neutron and thermal neutron induced ^{235}U and ^{252}Cf spontaneous fission neutron spectra.

4. Nuclear data for analysis of prompt gamma rays induced by slow neutron capture (PGAA):

Thermal capture cross sections (microscopic and maxwellian spectrum averaged) for all stable isotopes and elements, partial gamma-production cross sections after thermal neutron capture, number of gamma-quanta for given gamma-line per 100 neutron captured, gamma spectra after thermal neutron capture.