Corrigendum

M. SALVATORES, I. SLESSAREV, and A. TCHISTIAKOV, "Analysis of Nuclear Power Transmutation Potential at Equilibrium," *Nucl. Sci. Eng.*, **124**, 280 (1996).

Corrected versions of Tables II, III, and IV and Figs. 1 through 4 follow.

TABLE II

Normalized Toxicities of J Families T_J^{norm} at Equilibrium (in Sieverts per 1 g of a Family) and Normalized Equilibrium Masses δ_J for a Unit Feed Rate (the $\delta_{^{235}U}$ in standard LWR with $F = 10^{14}$ n/cm^2·s, was taken equal to 1); T_J^{norm} was Averaged on Short (10^2 to 10^4 yr) and Long (10^2 to 10^6 yr) Time Intervals (Negligible Losses Rates)

"Fathers" of Families	Thermal Reactors ($F = 10^{14}$ n/cm^2·s)			Fast Reactors ($F = 10^{15}$ n/cm^2·s)			Superthermal Spectrum ($F = 10^{16}$ n/cm^2·s)		
	δ_J	T_J^{norm} Short	T_J^{norm} Long	δ_J	T_J^{norm} Short	T_J^{norm} Long	δ_J	T_J^{norm} Short	T_J^{norm} Long
^{232}Th	4.8	21	4.6	4.73	38	11	0.036	41	3.8
^{231}Pa	1.23	5364	47	2.36	7583	31	0.003	3633	36
^{233}U	0.42	221	53	0.84	117	62	0.0015	168	23
^{235}U	1.0	372	19	1.68	92	19	0.013	173	2.5
^{238}U	16.0	97	1	6.59	841	5.7	0.071	274	3.5
^{237}Np	1.25	1436	71	2.62	318	65	0.002	1984	55
^{238}Pu	0.85	2120	77	1.5	751	86	0.004	4411	63
^{239}Pu	0.35	4851	46	1.48	4290	28	0.003	4610	58
^{240}Pu	0.77	5952	50	3.35	6025	22	0.012	4723	59
^{241}Pu	0.6	5834	62	1.86	4506	63	0.011	4661	62
^{242}Pu	1.67	5139	58	5.36	3106	56	0.042	5883	60
^{241}Am	1.06	3869	72	2.66	3826	67	0.022	6019	63
^{242m}Am	0.38	6222	60	1.65	5128	74	0.007	6125	62
^{243}Am	1.37	6277	55	4.46	6557	32	0.033	6120	61
^{242}Cm	0.89	2051	78	1.54	798	86	0.011	2626	86
^{244}Cm	1.12	6135	53	3.14	6264	19	0.031	6058	61
^{245}Cm	0.67	5942	101	1.14	7939	71	0.021	5876	97

TABLE III

Relative Inventory Mass Toxicities $\Delta_{r,\,LWR}$ at Equilibrium (Closed Fuel Cycles)*

Reactor and Fuel Types	$\Delta_{r,\,LWR}$ (Short/Long)
LWR (feed: 55% ^{235}U, 45% ^{238}U)	1/1
Fast reactor (feed: 100% ^{238}U)	4.6/1.6
Fast reactor (feed: 100% ^{232}Th)	0.15/2.2

*Fluxes: $F = 10^{14}$ n/cm^2·s in LWR; $F = 10^{15}$ n/cm^2·s in fast reactors.

TABLE IV

TMP of Different Nuclear Power Designs (Closed Fuel Cycles, Equilibrium State)*

	LWRs		Fast Reactors			Fast Spectrum ADSs			
Special feature	---	Burner	Breeder	Burner	Breeder	CAPRA	Breeder	---	Breeder	Burner
Fuel cycle	Mixed oxide	Plutonium oxide	Thorium oxide	Plutonium oxide	Uranium-plutonium oxide	Uranium-plutonium oxide	Uranium-plutonium oxide	Thorium-^{235}U oxide	Thorium oxide	Plutonium oxide
Feed fuel	^{235}U–55% ^{238}U–45%	^{239}Pu	^{232}Th	^{239}Pu	^{238}U	^{239}Pu–40% ^{238}U–60%	^{238}U	^{232}Th–55% ^{235}U–45%	^{232}Th	^{239}Pu
k_{eff}	1	1	1	1	1	1	0.97	0.97	0.9	0.95
B (percent of heavy atoms)	5	5	15	15	15	15	15	15	15	15
TMP = G	0	0.42	0.1	1.15	0.32	0.66	0.4	0.4	0.4	1.3
TMP = FWT										
S/L										
LOS_{Cm} = 1%	2.4E−2[a]/3.2E−2	1.03/6.2E−1	4.5E−4/1.1E−2	9.3E−2/5E−2	1.8E−2/1E−2	2.8E−2/1.6E−2	1.8E−2/1E−2	9.6E−4/2.7E−2	4.5E−4/1.1E−2	9.3E−2/5E−2
LOS_{Cm} = 100%	2.4E−1/6.6E−2	1.31E+1/2.6	4.6E−4/1.1E−2	1.4E−1/9E−2	2.6E−2/1.7E−2	4E−2/2.7E−2	2.6E−2/1.7E−2	1.1E−3/2.7E−2	4.6E−4/1.1E−2	1.4E−1/9E−2
TMP_s										
S/L										
LOS_{Cm} = 1%	−0.5/−0.5	−0.4/−0.2	−0.35/−0.35	+1.2/+1.2	−0.03/−0.025	+0.5/+0.5	+0.1/+0.1	+0.1/+0.1	+0.1/+0.1	+1.4/+1.4

*All FWT and TMP values normalized on the reference case. For the reference reactor (the standard LWR): $G = 0$, FWT = 1, $TMP_s = -1$.
[a]Read as 2.4×10^{-2}.

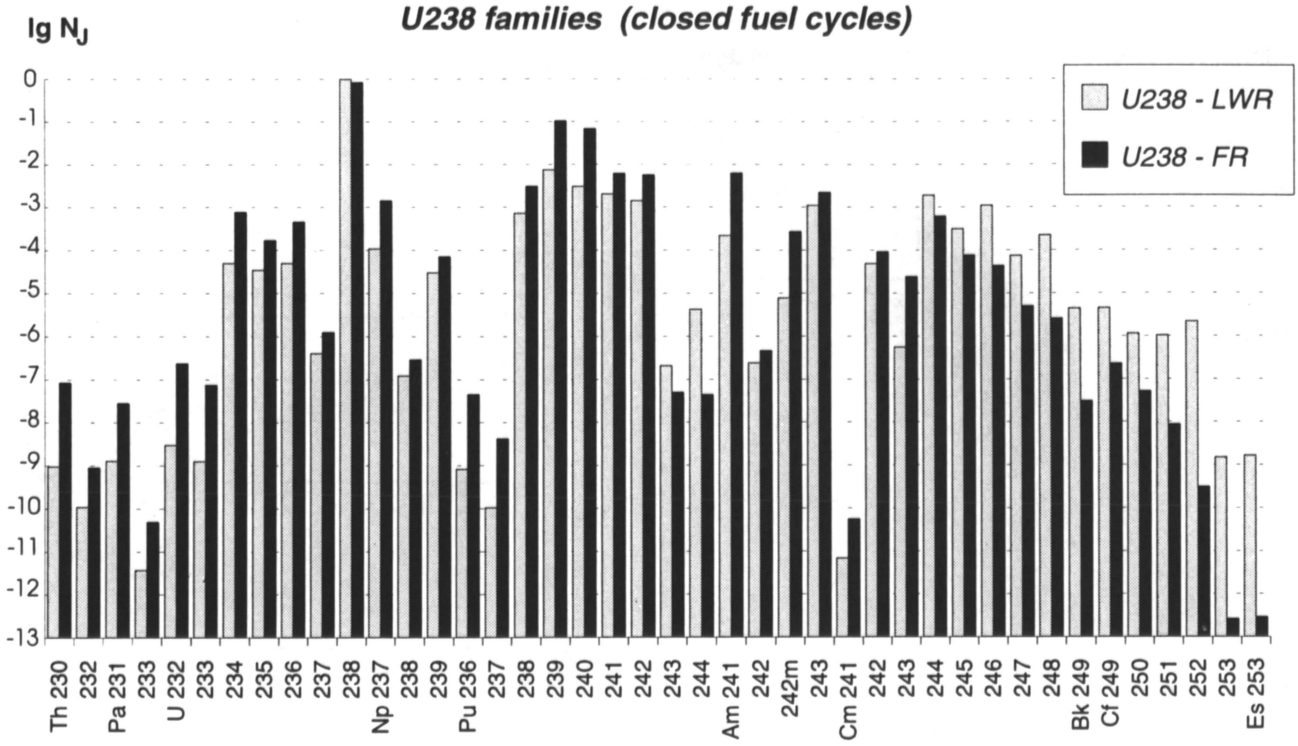

Fig. 1. The ^{238}U family normalized concentrations $N_J\left(\sum_J N_J = 1\right)$ at equilibrium when irradiated in two different spectrum types.

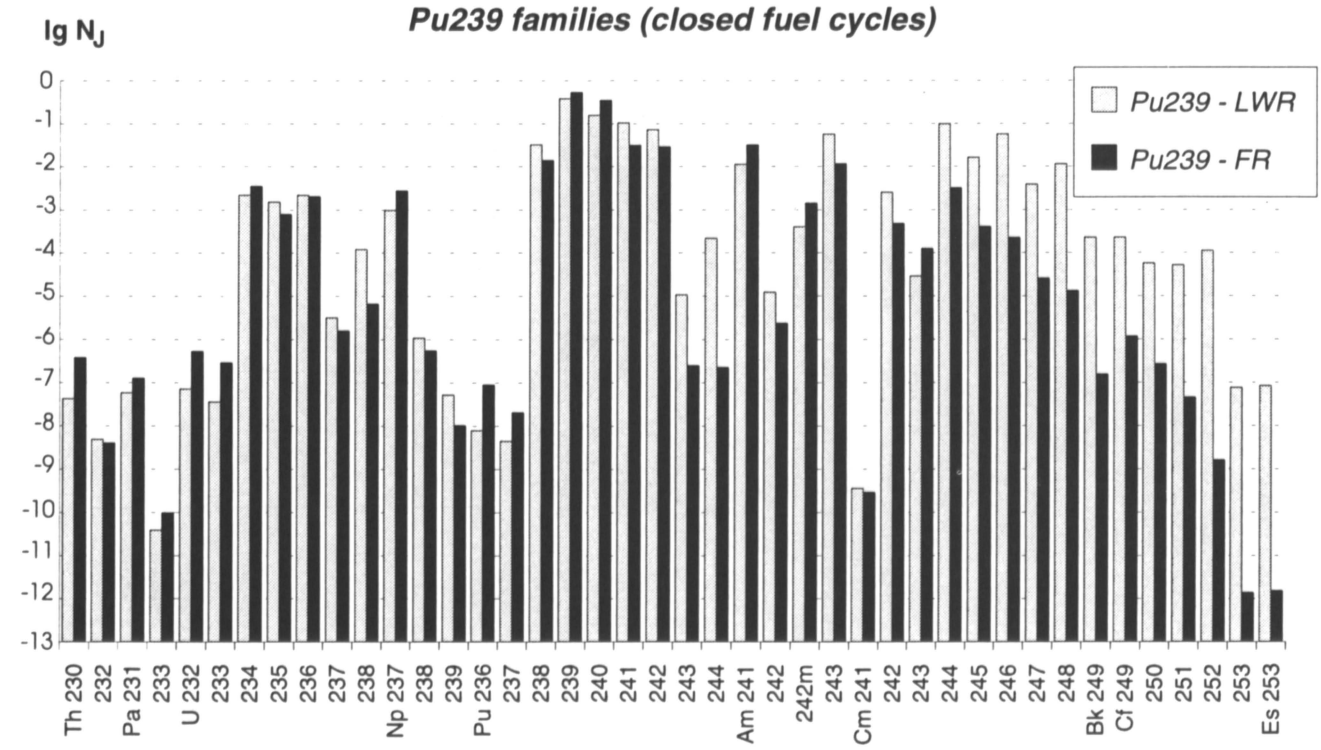

Fig. 2. The ^{239}Pu family normalized concentrations $N_J\left(\sum_J N_J = 1\right)$ at equilibrium when irradiated in two different spectrum types.

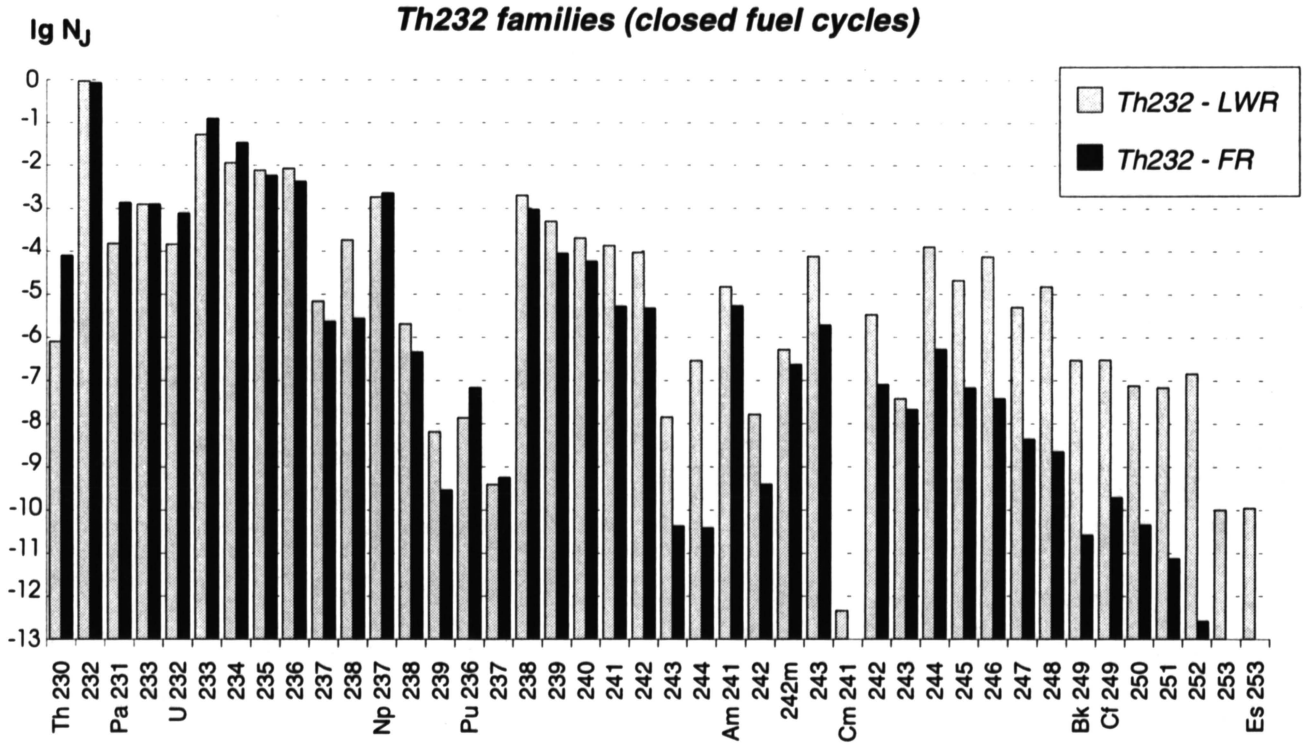

Fig. 3. The ^{232}Th family normalized concentrations $N_J\left(\sum_J N_J = 1\right)$ at equilibrium when irradiated in two different spectrum types.

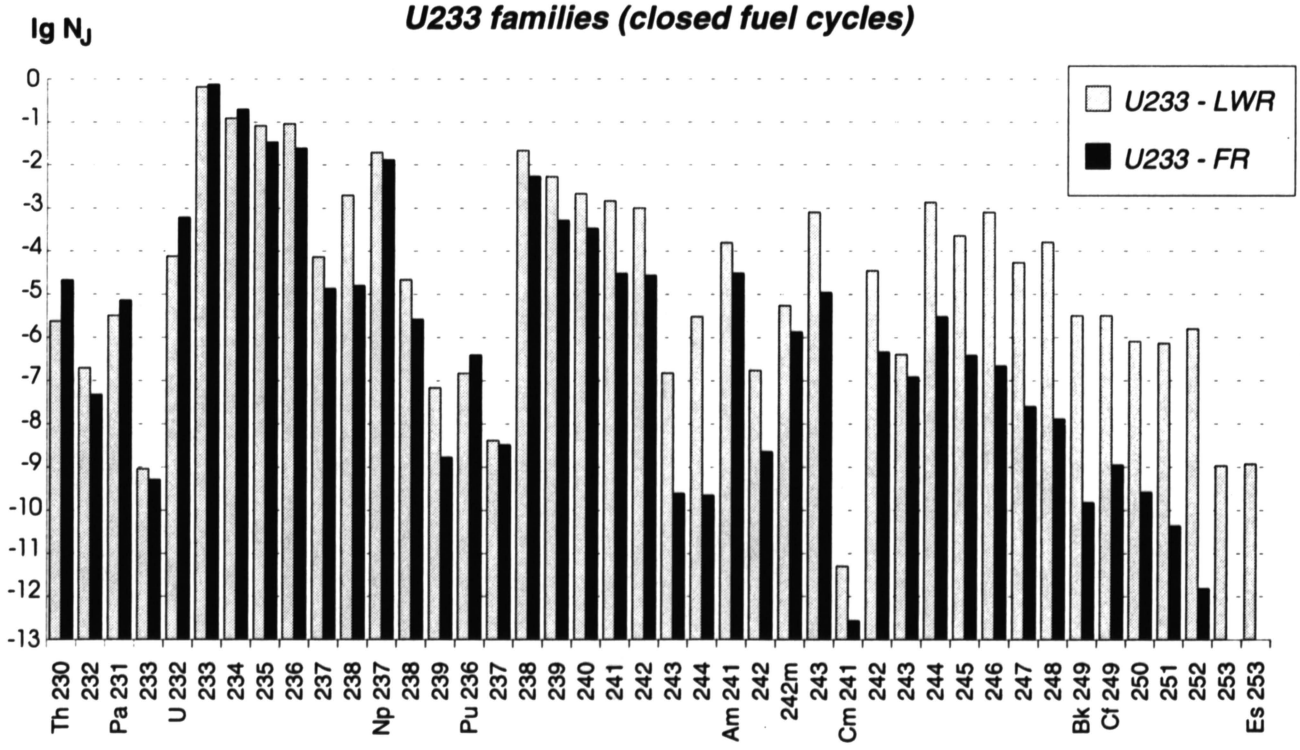

Fig. 4. The ^{233}U family normalized concentrations $N_J\left(\sum_J N_J = 1\right)$ at equilibrium when irradiated in two different spectrum types.