I am sending you a list of activities you can offer to the international working group for nuclear data evaluation (WPEC, Secretariat - Emmeric Dupont), the Russian member of which is T.V. Golashvili, Director of the Head Scientific and Methodological Data Center (HSMDC) in the field of utilization of atomic energy affiliated to Research Nuclear University MEPhI and attributed to the State Service of Standard Reference Data (SSSRD):

1) The needs in nuclear-physical data to be evaluated for nuclear science and technology. When analyzing the needs in nuclear-physical data we have received the desired needs while there were no experiments. Therefore there is a need to carry out experiments of the data as follows (see appendix 2 – experimental data list).
2) The basic nuclear-physical characteristics required for use in nuclear facilities including the evaluated nuclear data. This is the evaluated data on the nuclide mass, mass excess, magnetic and quadrupole moments of nuclei ground states, the nuclei half-life, the percentage of stable isotope in natural mixture of isotopes of a chemical element, decay modes and branching ratios, modes and average values of energy radiations, the energies of prominent gamma-rays and yields thereof, activation cross sections in the thermal point for stable nuclei. Values of many characteristics are given with mean-square uncertainties (standard deviations). See enclosure.
3) Nuclear Data Reference Book (4th edition, revised) comprising the evaluated nuclear data. It is released at the national and international levels. This reference Book is the winner of All-Russian Competition among the educational and reference books on nuclear power held by Rosatom in 2009. Nuclide Guide-3 (3-rd edition, revised) in 3 languages (Russian, English, Chinese) was issued also.
4) Wall-type nuclear-physical charts developed on the basis of these guides at the national and international levels.
5) National Standard under development comprising required criteria taking into account in evaluation of standard reference data.

Enclosed:
1 - A list of nuclear-physical characteristics – 5 pp.
2 - A list of experimental data – 4 pp.
HSMDC Director, Atomic Energy SSSRD, Scientific Head, Interdepartmental Standard Reference Data Qualification Commission, Chairman Professor Golashvili T.V.

Summary Request_list.pdf by Golashvili:

1. Standards for detector calibration (67Ga, 111In, 129I, 153Sm, 155Eu, 170Tm, 228Th decay chain, 234mPa, 241Am). Each comes with a comment and the required method of measurement.
2. Actinide decay data (233Th, 231Pa, 233Pa, 235U, 236U, 237U, 236Np, 237 Np, 238Np, 236Pu, 242mAm, 243Am, 243Cm, 246Cm, 248Cm). Each with required quantity, achieved accuracy and request for improvement (but not quantified how much).
3. Radionuclides for activation in reactor neutron fluence (59Fe, 72Ga, 94Nb, 111mCd, 115mIn, 116m1,m2In, 165Dy, 199mHg and 204mPb). P(g) is needed better than 1%.
4. Nuclei far from stability (nuclear science: nuclear physics and astrophysics; 80,81Y, 80-83Zr, 82-86Nb, 84-87Mo)
5. Nuclear isomers for applications (decay schemes of 178m1,2Hf, 180mHf, 180mTa, 177mLu)

RADIONUCLIDES AND DECAY DATA FOR EXPERIMENTAL IMPROVEMENT

1. Standards for detector calibration.

Nuclide	Comments	Methods
^{67}Ga	The evaluation is based on the value of the absolute emission probability of conversion electrons from the gamma transition of 93.3 keV $P(ec_{1,0})=0.325(4)$. It is obtained from the two discrepant measurement results of 0.3206(23) and 0.329(4). Further measurements of this key value are required.	4π(LS)e, X-γ coincidences
^{111}In	More accurate measurements of gamma-ray energies are recommended.	Ge detectors, curved-crystal spectrometers
^{129}I	The 2nd unique forbidden β^--transition to the $1/2^+$ground state of ^{129}Xe was not observed. The experimental limit on this β^- branch intensity was obtained in 1954. Its refinement is required as the evaluation of the $P\gamma$ (39.58 keV) depends on this value.	β-γ anti-coincidences Precise measurement of ICC (α_K)
^{153}Sm	Significant uncertainties exist in the detail and accuracy of the proposed decay scheme. Therefore, γ-ray measurements are recommended to help resolve these issues, particularly with respect to the lower-energy transitions (< 100 keV).	Ge, Si(Li) detectors, β-γ coincidences
^{155}Eu	Weak overlapping of the two most accurate measurement results of the key value for the evaluation of ^{155}Eu decay data [$P\gamma$ (86.548 keV) = 0.305(3) and 0.311(4)] does not allow to obtain a good accuracy for the absolute X- and gamma-ray emission probabilities. Further measurements are merited to aid in making $P\gamma$ (86.548 keV) more precise.	Ge, Si(Li) detectors, β-γ coincidences
^{170}Tm	Discrepancy of the half-life measurement results obtained before 1970 does not allow to give a reliable recommended value for the ^{170}Tm half-life and requires new additional measurement of this half-life.	High isotopic purification, ionisation camera

Nuclide	Comments	Methods
^{228}Th decay chain	^{224}Ra decay: P_γ(240.986 keV) of 0.0412 (4) was derived from the relatively large number of direct γ-ray measurements. However, α-particle measurements and their adoption in decay scheme calculations gave P_γ(240.986 keV) of 0.0390 (3). While the γ-ray measurements were assumed to be more reliable in the evaluation, further α-particle and γ-ray studies are required to resolve this significant discrepancy between the two spectroscopic techniques.	α-γ coincidences α-spectrometry γ-spectrometry
^{234m}Pa	Recommended P_γ(1001 keV) of 0.00832 (10) was based on a series of extensive measurements in 1980/90s. However, three of these studies gave significantly higher values (by ~10%, at approximately 0.0091) than the other six measurements. Further studies are merited to aid in the resolution of this discrepancy.	β-γ coincidences
^{241}Am	There are some gamma-transitions scarcely studied and expected but not certainly observed: 27,03; 54,1; 95,0 keV. This leads to the not very good intensity balance for some levels. Further measurements of gamma-ray and conversion electron emission probabilities are required for these gamma transitions.	Ge, Si(Li) detectors α-e coincidences

2. Actinide decay data

Nuclide	Data type [a]	Accuracy achieved (%)	Comments
^{233}Th	P(β), P(γ)	~10	More precise P(β), P(γ) measurements are required
^{231}Pa	P(α), P(γ)	2-5	More precise P(α), P(γ) measurements are required
^{233}Pa	P(β)	~10	More precise P(β) measurements are required
^{235}U	P(α) P(γ)	5-12 1	More precise P(α), P(γ) (<120 keV) measurements are required
^{236}U	P(α) P(γ)	5-15 10	More precise P(α), P(γ) measurements are required
^{237}U	P(γ)	2-3	More precise P(γ) measurements for the main transitions are required

Nuclide	Data type [a]	Accuracy achieved (%)	Comments
^{236}Np	$T_{1/2}$ P(β)	10 -	P(β) and more precise $T_{1/2}$ measurements are required
^{237}Np	P(α) P(γ)	20 1-2	More precise P(α), P(γ), P(LX), P(e) measurements are required
^{238}Np	P(γ)	5	More precise P(γ) measurements are required
^{236}Pu	P(α) P(γ)	1-3 30	More precise P(α), P(γ) measurements are required
^{242m}Am	P(LX)	-	P(LX) measurements are required
^{243}Am	P(LX)	-	P(LX) measurements are required
^{243}Cm	P(LX)	-	P(LX) measurements are required
^{245}Cm	P(LX) P(γ)	- 10	P(LX) and more precise P(γ) measurements are required
^{246}Cm	$T_{1/2}$ P(LX) P(γ)	2 - ~10	P(LX) and more precise $T_{1/2}$, P(γ) measurements are required
^{248}Cm	P(LX) P(γ)	- ~5	P(LX) and more precise P(γ) measurements are required

[a] P(α), P(β), P(γ), P(LX) – alpha-particle, beta-particle, gamma-ray, X-ray emission probability, respectively; $T_{1/2}$ – total half-life.

3. Radionuclides important for activation measurements of reactor neutron fluencies.

The precise (<~1%) P(γ) measurements are required for the following radionuclides:
^{59}Fe, ^{72}Ga, ^{94}Nb, ^{111m}Cd, ^{115m}In, ^{116m1,m2}In, ^{165}Dy, ^{199m}Hg, ^{204m}Pb.

4. Nuclei far from stability line, important for nuclear physics and astrophysics.

Complex nuclear equipment is required for obtaining these nuclei and measurements of their decay data: accelerator, on-line electromagnetic mass-separator and different spectrometric apparatus. The following nuclei are of great interest for nuclear physics and astrophysics: **^{80}Y, ^{81}Y, $^{80-83}$Zr, $^{82-86}$Nb, $^{84-87}$Mo.**

5. Nuclear isomers important for applications.

The additional experimental investigations of decay schemes, particularly, high energetic levels (~ 2MeV) are required for **^{178m1,2}Hf, ^{180m}Hf, ^{180m}Ta,** ^{177m}Lu.