Current status of *ββ*-decay and *B(E2)* nuclear data projects

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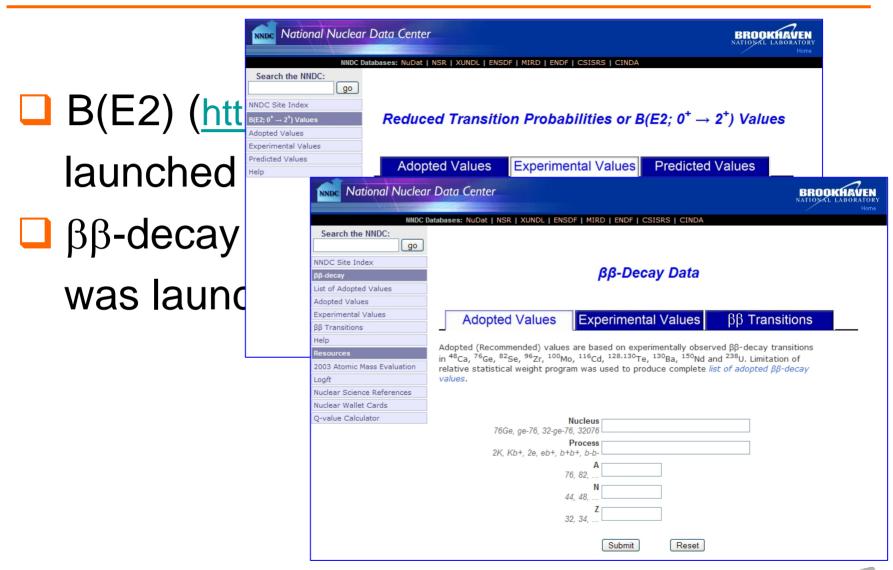
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Project Motivation

❑ Up-to-date $\beta\beta$-decay and B(E2) evaluation and compilation

❑ Web Access & Dissemination

❑ ENSDF evaluators & physicists need this information

❑ Utilization of my expertise in these subjects

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Current Status

□ **B(E2) (**<u>htt</u>
   launched

□ **ββ-decay**
   was launc

B(E2) Nuclear Data Project I

❑ Over 2,100 nuclear data retrievals during the first year

❑ Adopted values - 72.6%

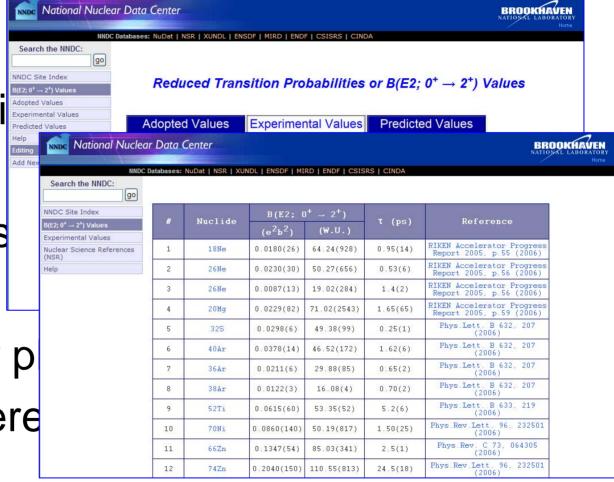❑ Experimental values - 21.6%

❑ Theoretical values - 5.8%

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B(E2) Nuclear Data Project II

❑ Project i

❑ Databas

❑ Nuclear p
   units were
   and ps

ββ-decay Data Project I

❑ Small scale (13 adopted & over 300 best experimental results)

❑ Typical ββ-decay measurement is 2-3 years

❑ Reliable source of data for ENSDF

❑ Particle physics implications: use half-life to produce limit on neutrino mass

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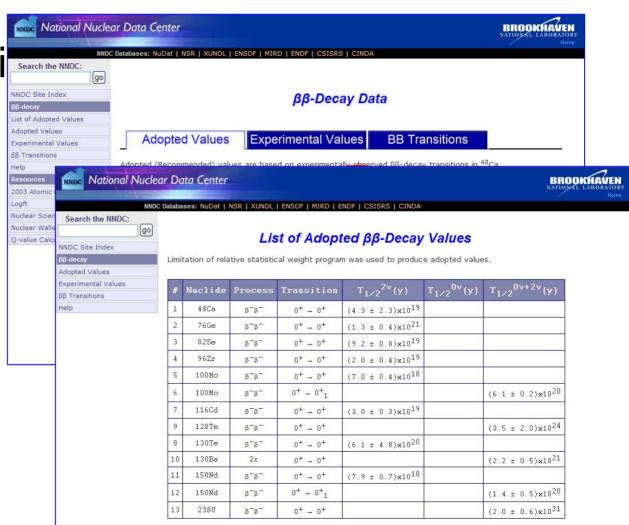
$\beta\beta$-decay Data Project II

❑ NSR-based product, DB is 95% complete

❑ Lweight was used to produce adopted values

❑ $\beta\beta$-decay transitions (AMDC+NWC) allow to expand the scope of from even-even to all known nuclei

❑ Database updates 3-4 times a year

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ββ-decay Data Project III

❑ Collaborati...

INR, Kiev

Conclusion & Outlook

❑ Diversification of NNDC products offering with horizontal evaluations

❑ Proactive response to research & ENSDF communities needs

❑ Integration of B(E2) & $\beta\beta$-decay data Web applications with NSR, AMDC and NWC

❑ 2008-2009: Produce B(E2) & $\beta\beta$-decay evaluations for publication

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