



# NNDC Web services

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# NNDC Portal

## National Nuclear Data Center

BROOKHAVEN  
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[Nuclear Structure and Decay Databases](#)  
[Nuclear Structure and Decay Tools](#)  
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[Publications](#)  
[Meetings](#)

CSEWG&USNDP November 6-9, 2006 New ENDF/B-VII beta3

[Site Index](#) - Search the NNDC:

<p><b>AMDC</b> Atomic Mass Data Center, <a href="#">Q-value Calculator</a></p> <p><b>CINDA</b> Computer Index of Nuclear (reaction) Data</p> <p><b>ENDF</b> Evaluated Nuclear (reaction) Data File</p> <p><b>NMMSS &amp; DoE NMIRDC</b> Safeguards &amp; inventory decay data standards</p> <p><b>Nuclear Wallet Cards for Homeland Security</b></p>	<p><b>Atlas of Neutron Resonances</b> Parameters &amp; thermal values</p> <p><b>CSEWG</b> Cross Section Evaluation Working Group</p> <p><b>ENSDF</b> Evaluated Nuclear Structure Data File</p> <p><b>NSR</b> Nuclear Science References</p> <p><b>NuDat</b> Nuclear structure &amp; decay Data</p>	<p><b>CapGam</b> Thermal Neutron Capture <math>\gamma</math>-rays</p> <p><b>CSISRS alias EXFOR</b> Nuclear reaction experimental data</p> <p><b>IRDF</b> International Reactor Dosimetry File</p> <p><b>Nuclear Data Sheets</b> Nuclear structure &amp; decay data journal</p> <p><b>USNDP</b> U.S. Nuclear Data Program</p>	<p><b>Chart of Nuclides</b> Basic properties of atomic nuclei</p> <p><b>Empire</b> Nuclear reaction model code</p> <p><b>MIRD</b> Medical Internal Radiation Dose</p> <p><b>Nuclear Wallet Cards</b> Ground &amp; isomeric states properties</p> <p><b>XUNDL</b> Experimental Un-evaluated Nuclear Data List</p>
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Links ordered alphabetically [Order by category](#)

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[Acknowledgments](#) - [Comments/Questions](#) - [Disclaimer](#)



# FY2006 Highlights I

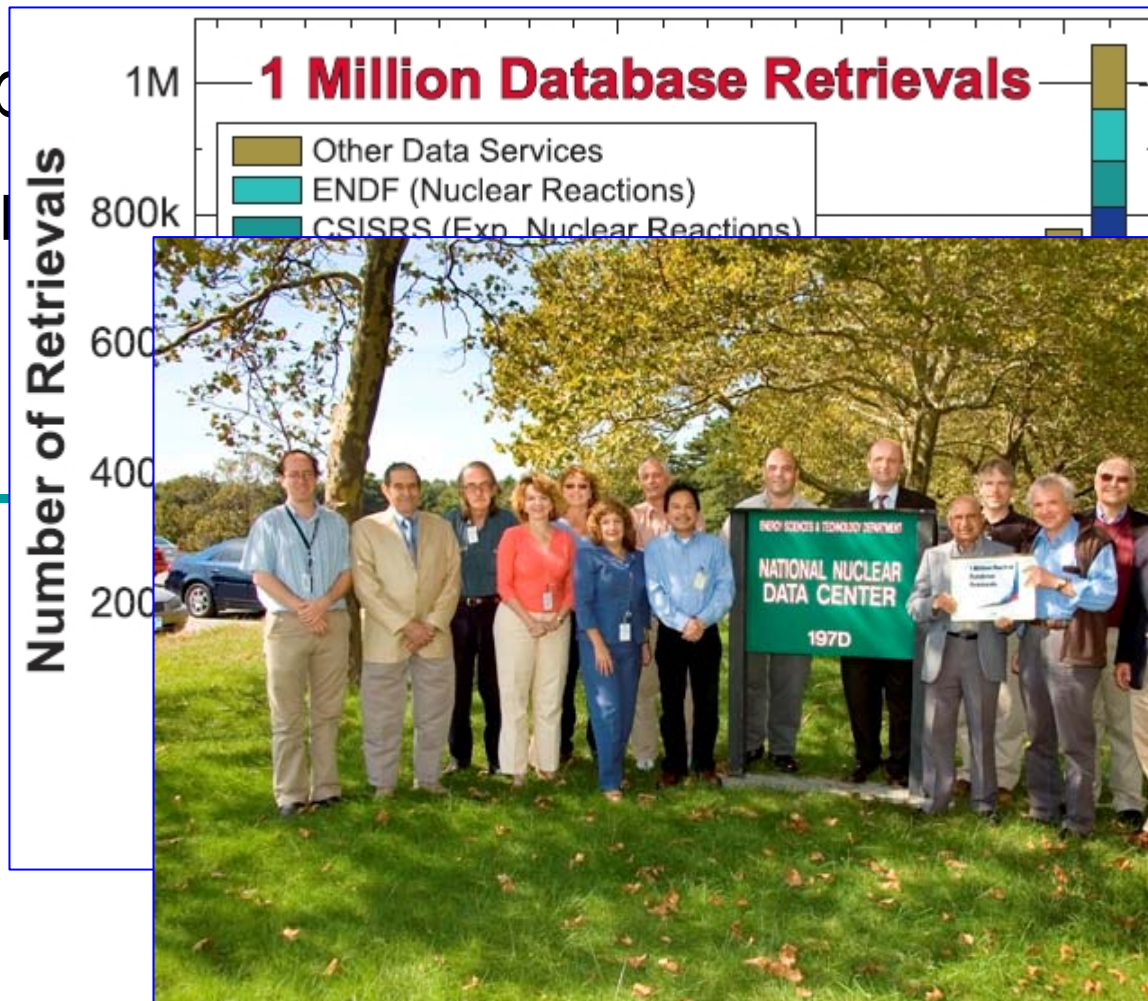
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- ❑ Electronic Proceedings of CSEWG & USNDP 2005
- ❑ Redesigned Web products: ENDF, CSISRS, CINDA & Thermal Capture  $\gamma$ -rays Web interfaces, Macromedia Flash
- ❑ New Web products: Brlcc, Chart of Nuclides, Atlas of Neutron Resonances,  $\beta\beta$ -decay



# FY2006 Highlights II

- User response
- 41% improvement
- Article in Vol. 60 -




# Improved Web Interfaces

- Nuclear
- CSISRS
- Thermal


The screenshot displays the National Nuclear Data Center (NNDC) website interface. At the top, there are banners for the **Evaluated Nuclear Data File (ENDF)** (Database Version of February 16, 2006) and **Experimental Nuclear Reaction Data (EXFOR / CSISRS)**. Below these is the **Computer Index of Nuclear Reaction Data (CINDA)**. The main header identifies the site as the **National Nuclear Data Center** at **BROOKHAVEN NATIONAL LABORATORY**. A navigation menu includes links for **Search the NNDC**, **Site Index**, **Thermal Neutron Capture  $\gamma$ 's (CapGam)**, **About CapGam**, **CapGam by Energy**, **CapGam by Target**, **Resources**, **ENSDF**, **Nuclear Data Sheets**, **Networks**, **USNDP**, and **NSDD**. The **Thermal Neutron Capture  $\gamma$ 's (CapGam)** section is highlighted, showing it was last updated on June 9, 2006. A **Chart of Nuclides** is displayed with various database labels overlaid: **NSR**, **XUNDL**, **ENSDF**, **NuDat**, **Databases**, **MIRD**, **CSISRS**, **ENDF**, **Evaluated Nuclear (reaction) Data File**, **Chart of Nuclides**, **Atlas of n Resonances**, **Empire**, **Nuclear Wallet Cards**, **Tools and Publications**, **Nuclear Data Sheets**, **Networks**, **CSEWG**, and **USNDP**. The text below the chart states: "The energy and photon capture are presented organized by Z, A and indicated in each cell gamma energies give strongest transition." and "All data are taken from evaluated nuclear data maintained by the International Atomic Energy Agency (IAEA) and published in the *Nuclear Data on File*." It also mentions "This research was supported by the Office of Energy Research and Development."

# New Web Products I

- Brlcc
- Coeffi
- Chart



National Nuclear Data Center



BROOKHAVEN  
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Home

NNDC Databases: NuDat | NSR | XUNDL | ENSDF | MIRD | ENDF | CS1SRS | CINDA

Search the NNDC:

Additional Resources

[Help](#)


[BrIcc \(ANU, Canberra\)](#)

[BrIcc stand-alone program package](#)

**BrIcc 2.0a**

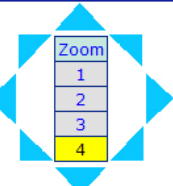
**Band-Raman Internal Conversion Coefficients**

sion



**Chart of Nuclides**

Click on a nucleus for information



Zoom  
1  
2  
3  
4

Find a Nucleus:

Color code	Tooltips
Half-life	On
Decay Mode	Off

> 10+15 s
  10-01 s  
 10+10 s
  10-02 s  
 10+07 s
  10-03 s  
 10+05 s
  10-04 s  
 10+04 s
  10-05 s  
 10+03 s
  10-06 s  
 10+02 s
  10-07 s  
 10+01 s
  10-15 s  
 10+00 s
  < 10-15 s  
 unknown

Search options:

[Levels and Gammas](#)

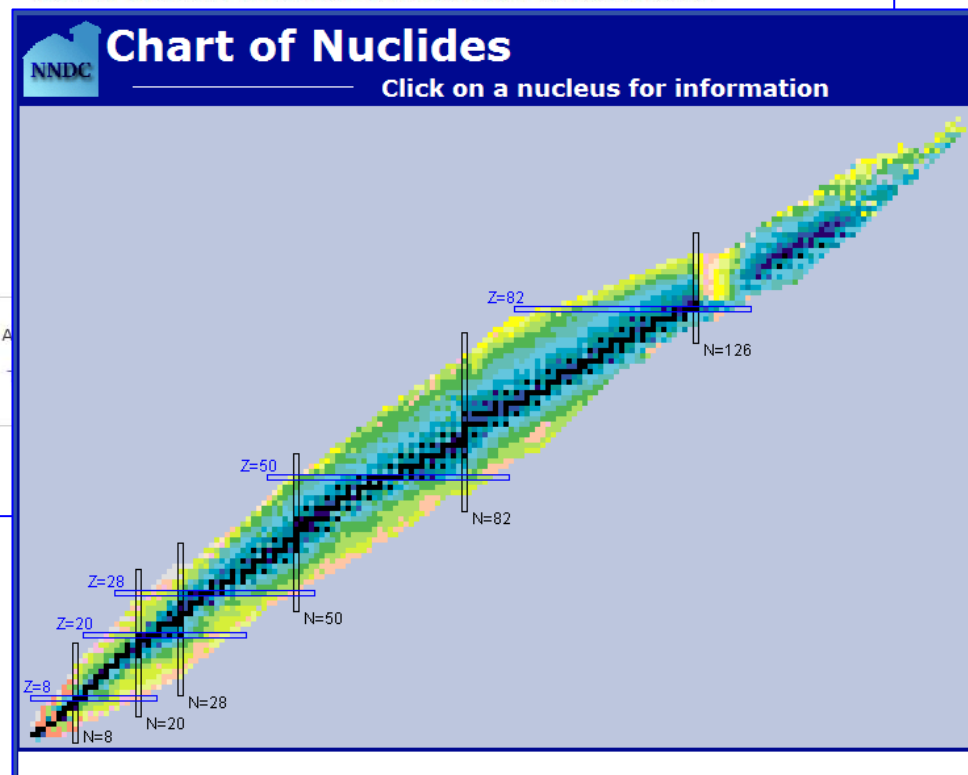
[Nuclear Wallet Cards](#)

[Decay Radiation](#)

[Help - Glossary](#)

Database Manager and Web Programming: Alejandro Sonzogni, NNDC, Brookhaven National Laboratory, [sonzogni@bnl.gov](mailto:sonzogni@bnl.gov)

Data Source: National Nuclear Data Center, Brookhaven National Laboratory



# New Web Products II

- Atlas of Neutron Resonances
- $\beta\beta$ -decay

The screenshot shows the top of the National Nuclear Data Center website. The header includes the NNDc logo and the Brookhaven National Laboratory logo. Below the header, there is a navigation bar with links to various databases: ENDF, CSISRS, CINDA, NuDat, NSR, XUNDL, ENSDF, and MIRD. A search box is present with the text "Search the NNDC:" and a "go" button. The main content area features the title "Atlas of Neutron Resonances" in green, followed by the author's name "S.F. Mughabghab".

The screenshot shows the "beta-decay" section of the National Nuclear Data Center website. The header is similar to the previous screenshot, but the navigation bar includes links to NuDat, NSR, XUNDL, ENSDF, MIRD, ENDF, CSISRS, and CINDA. A search box is also present. The main content area is titled "beta-Declay Data" in blue. Below the title, there are three tabs: "Adopted Values", "Experimental Values", and "beta-beta Transitions". The "Adopted Values" tab is selected. The text below the tabs reads: "Adopted (Recommended) values are based on experimentally observed beta-decay transitions in <sup>48</sup>Ca, <sup>76</sup>Ge, <sup>82</sup>Se, <sup>96</sup>Zr, <sup>100</sup>Mo, <sup>116</sup>Cd, <sup>128,130</sup>Te, <sup>130</sup>Ba, <sup>150</sup>Nd and <sup>238</sup>U. Limitation of relative statistical weight program was used to produce complete list of adopted beta-decay values." Below this text, there are input fields for "Nucleus" (with the example "76Ge, ge-76, 32-ge-76, 32076"), "Process" (with the example "2K, Kb+, 2e, eb+, b+b+, b-b-"), "A" (with the example "76, 82, ..."), "N" (with the example "44, 48, ..."), and "Z" (with the example "32, 34, ..."). There are "Submit" and "Reset" buttons at the bottom.

# Conclusion & Outlook

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- ❑ Good Results in FY 2006  
( >1 Million Retrievals)
- ❑ Sigma: New ENDF Web Interface
- ❑ Other products upgrades