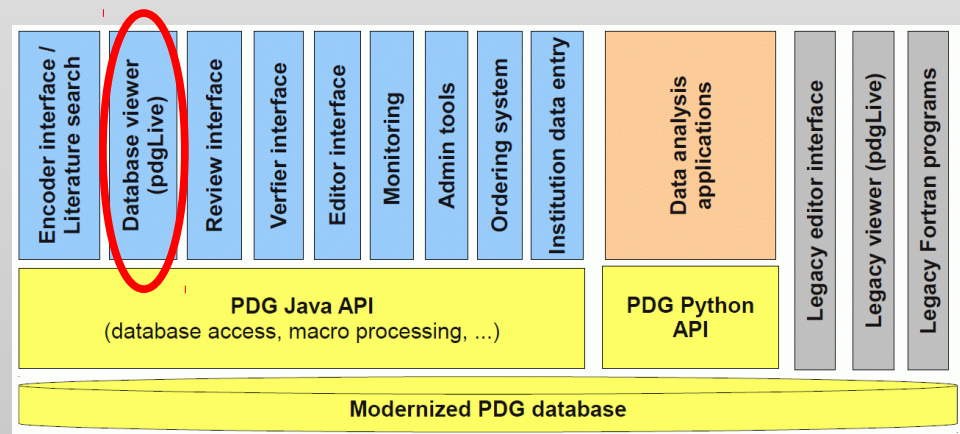
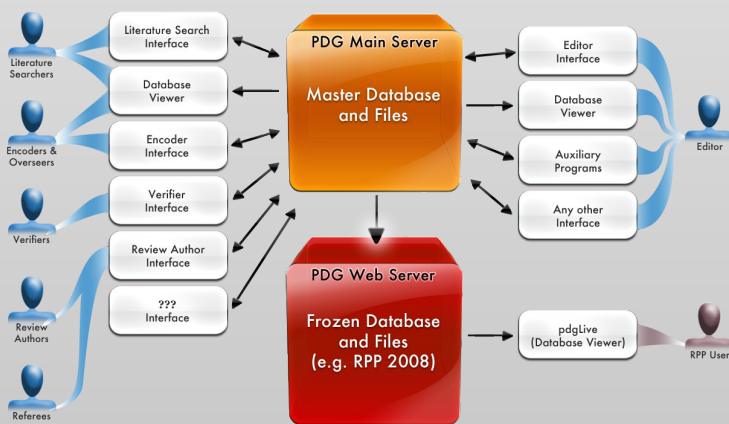


Update on Cross-Linking with PDG

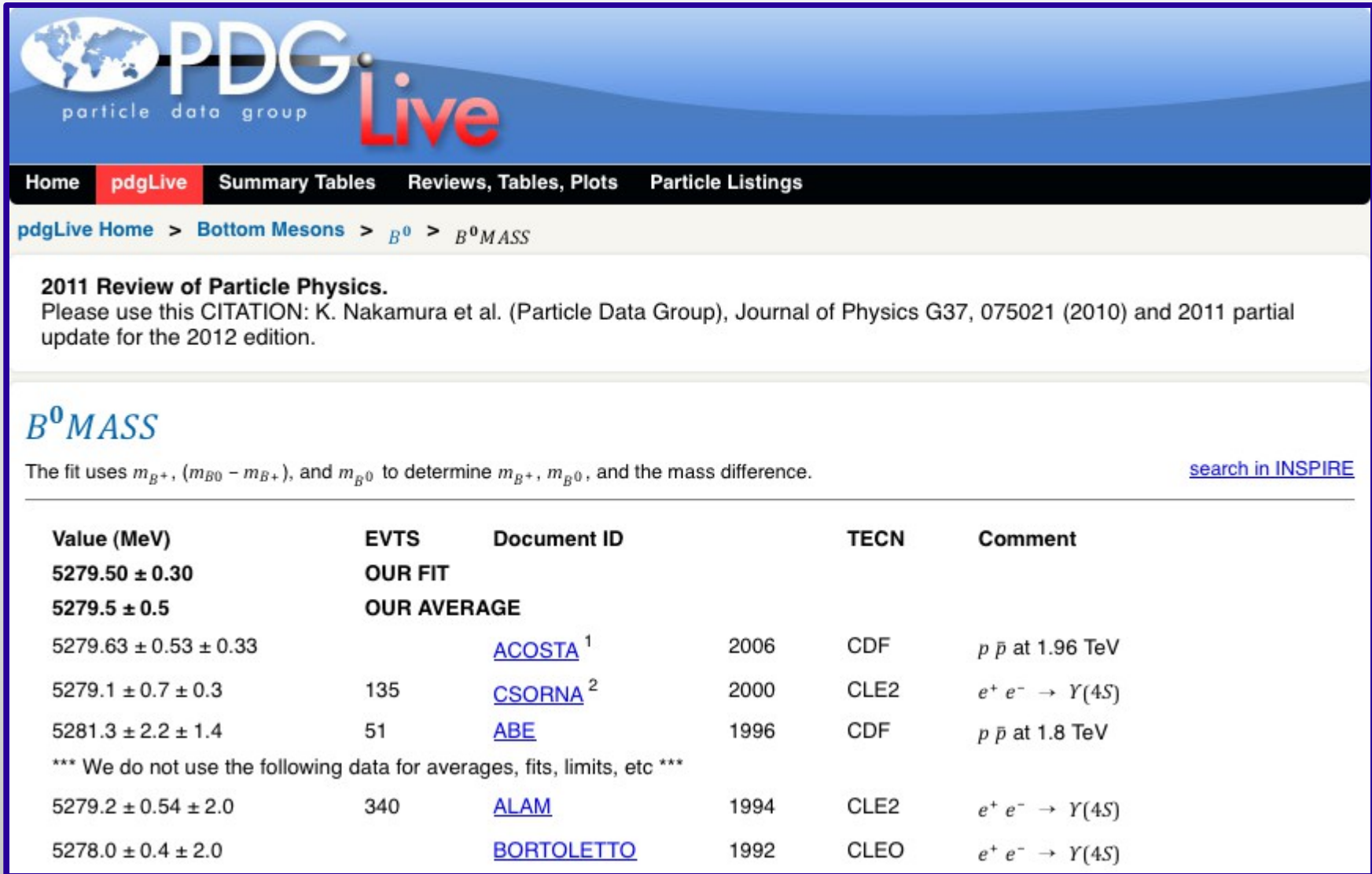
Juerg Beringer
 Particle Data Group
 Lawrence Berkeley National Laboratory



- **3 year computing upgrade project started in 2008/09**
 - Project ends this December
 - Will continue to improve and extend new system in “maintenance phase”, albeit at reduced staffing level (0.5 FTE)
- **High-priority items on track**
 - A few lower-priority items will be completed in maintenance phase
- **Current priority: new “pdgLive” for browsing PDG data**
 - Many new features – will discuss only cross-linking
 - **Fully support PDG Identifiers for cross-linking**
 - Strings used to reference items of PDG data (see previous Summits)
 - Plan to support REST-style^(*) URLs based on PDG Identifiers:
 - [http://pdglive.lbl.gov/view/NODE/\[desig/NNM\]](http://pdglive.lbl.gov/view/NODE/[desig/NNM])
 - [http://pdglive.lbl.gov/xml/NODE/\[desig/NNM\]](http://pdglive.lbl.gov/xml/NODE/[desig/NNM])
 - e.g.: <http://pdglive.lbl.gov/view/S042M/>
 - Continued discussions with INSPIRE team on cross-linking

* *REST = REpresentational State Transfer*

Work in progress



[Home](#) | [pdgLive](#) | [Summary Tables](#) | [Reviews, Tables, Plots](#) | [Particle Listings](#)

[pdgLive Home](#) > [Bottom Mesons](#) > B^0 > B^0 MASS

2011 Review of Particle Physics.
 Please use this CITATION: K. Nakamura et al. (Particle Data Group), Journal of Physics G37, 075021 (2010) and 2011 partial update for the 2012 edition.

B^0 MASS

The fit uses m_{B^+} , $(m_{B^0} - m_{B^+})$, and m_{B^0} to determine m_{B^+} , m_{B^0} , and the mass difference. [search in INSPIRE](#)

Value (MeV)	EVTS	Document ID	TECN	Comment
5279.50 ± 0.30		OUR FIT		
5279.5 ± 0.5		OUR AVERAGE		
5279.63 ± 0.53 ± 0.33		ACOSTA ¹	2006	CDF $p\bar{p}$ at 1.96 TeV
5279.1 ± 0.7 ± 0.3	135	CSORNA ²	2000	CLE2 $e^+e^- \rightarrow Y(4S)$
5281.3 ± 2.2 ± 1.4	51	ABE	1996	CDF $p\bar{p}$ at 1.8 TeV
*** We do not use the following data for averages, fits, limits, etc ***				
5279.2 ± 0.54 ± 2.0	340	ALAM	1994	CLE2 $e^+e^- \rightarrow Y(4S)$
5278.0 ± 0.4 ± 2.0		BORTOLETTO	1992	CLEO $e^+e^- \rightarrow Y(4S)$

Work in progress

2011 Review of Particle Physics.
Please use this CITATION: K. Nakamura et al. (Particle Data Group), Journal of Physics G37, 075021 (2010) and 2011 partial update for the 2012 edition.

B^0 MASS
The fit uses m_{B^+} , $(m_{B^0} - m_{B^+})$, and m_{B^0} to determine

[search in INSPIRE](#)

Value (MeV)	EVTS	Document	TECN	Comment
5279.50 ± 0.30		OUR FIT		
5279.5 ± 0.5		OUR AVERAGE		
5279.63 ± 0.53 ± 0.33		<u>ACOSTA</u> ¹	2006	CDF $p\bar{p}$ at 1.96 TeV
5279.1 ± 0.7 ± 0.3	135	<u>CSORNA</u> ²	2000	CLE2 $e^+e^- \rightarrow Y(4S)$
5281.3 ± 2.2 ± 1.4	51	<u>ABE</u>	1996	CDF $p\bar{p}$ at 1.8 TeV
*** We do not use the following data for averages, fits, limits, etc ***				
5279.2 ± 0.54 ± 2.0	340	<u>ALAM</u>	1994	CLE2 $e^+e^- \rightarrow Y(4S)$
5278.0 ± 0.4 ± 2.0		<u>BORTOLETTO</u>	1992	CLEO $e^+e^- \rightarrow Y(4S)$

Work in progress

PDG Live
particle data group

Home **pdgLive** Summary Tables Reviews, Tables, Plots Particle Listings

pdgLive Home > Bottom Mesons > B^0 > B^0 MASS

2011 Review of Particle Physics.
Please use this CITATION: K. Nakamura et al. (Particle Data Group) update for the 2012 edition.

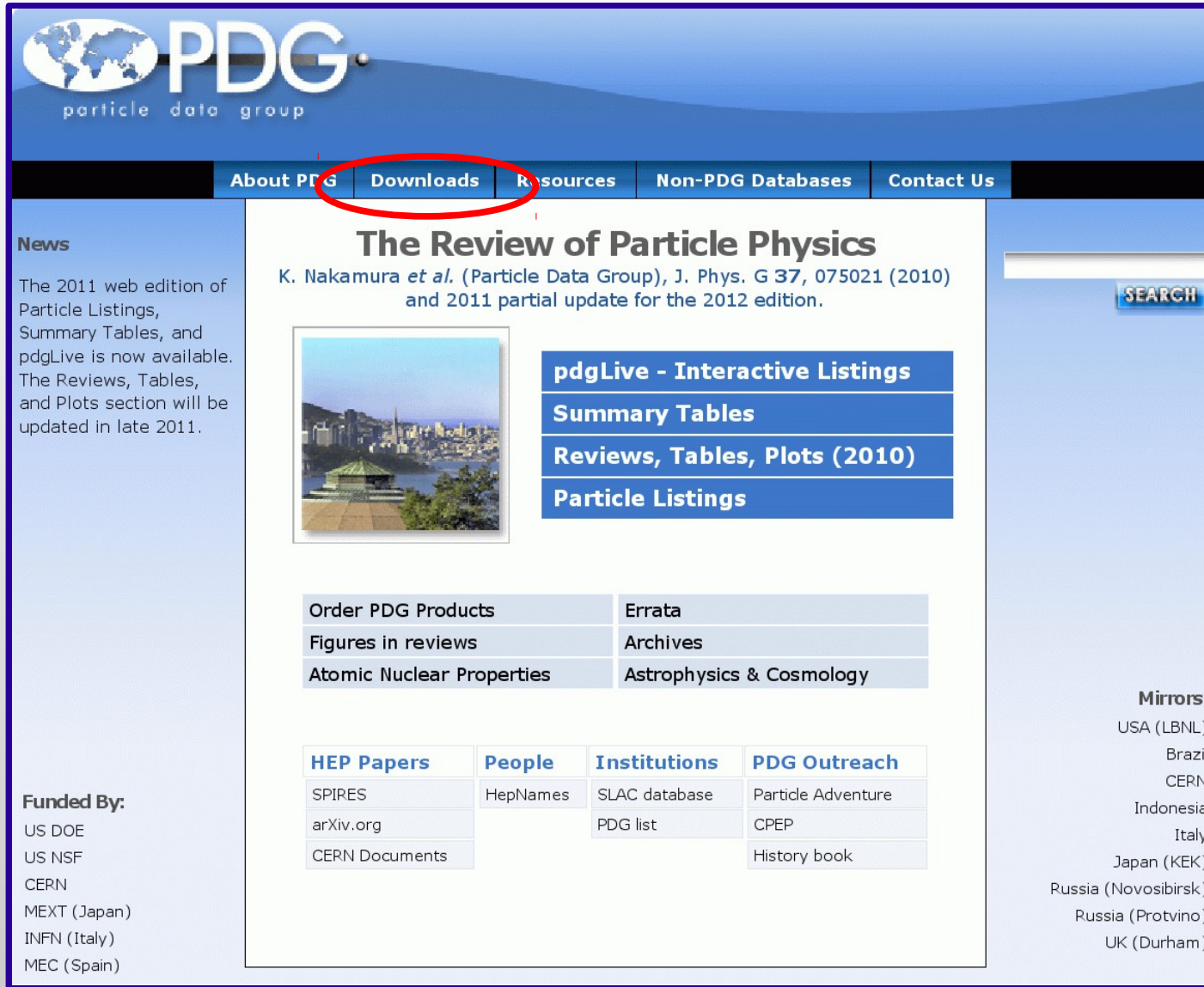
B^0 MASS

The fit uses m_{B^+} , $(m_{B^0} - m_{B^+})$, and m_{B^0} to determine m_{B^+} , m_{B^0} , and the mass difference.

Value (MeV)	EVTS	Document ID	TECN	Comment
5279.50 ± 0.30		OUR FIT		
5279.5 ± 0.5		OUR AVERAGE		
5279.63 ± 0.53 ± 0.33		ACOSTA ¹	2006	CDF $p\bar{p}$ at 1.96 TeV
5279.1 ± 0.7 ± 0.3	135	CSORNA ²	2000	CLE2 $e^+e^- \rightarrow Y(4S)$
5281.3 ± 2.2 ± 1.4	51	ABE	1996	CDF $p\bar{p}$ at 1.8 TeV
*** We do not use the following data for averages, fits, limits, etc ***				
5279.2 ± 0.54 ± 2.0	340	ALAM	1994	CLE2 $e^+e^- \rightarrow Y(4S)$
5278.0 ± 0.4 ± 2.0		BORTOLETTO	1992	CLEO $e^+e^- \rightarrow Y(4S)$

[search in INSPIRE](#)

NEW: Search INSPIRE for related papers based on PDG identifiers



The screenshot shows the PDG website homepage. The navigation menu includes 'About PDG', 'Downloads', 'Resources', 'Non-PDG Databases', and 'Contact Us'. The 'Downloads' link is circled in red. The main content area features a news item about the 2011 web edition of Particle Listings, Summary Tables, and pdgLive. Below this is a search bar and a list of links: 'pdgLive - Interactive Listings', 'Summary Tables', 'Reviews, Tables, Plots (2010)', and 'Particle Listings'. There are also tables for 'Order PDG Products' and 'HEP Papers', and a 'Mirrors' section listing various international locations.

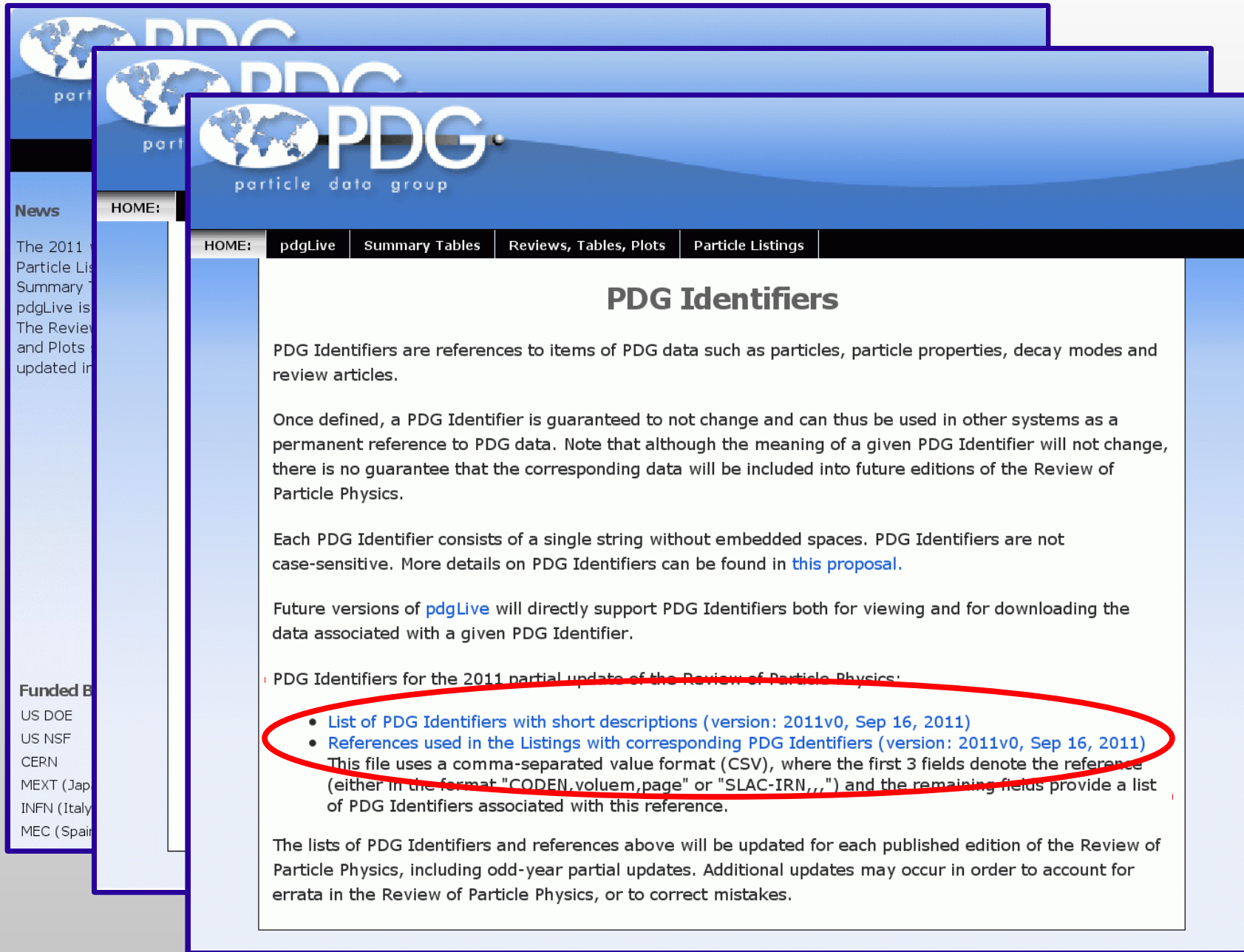
<http://pdg.lbl.gov>



The screenshot shows the PDG website interface. At the top left is the PDG logo. Below it is a navigation bar with links: HOME: pdgLive, Summary Tables, Reviews, Tables, Plots, and Particle Listings. The main content area is titled 'Computer Downloads' and lists several resources:

- 2011 web edition of RPP for different platforms
- 2010 book edition of RPP
 - [Particle Physics Booklet \(rpp-2010-booklet.pdf file, 6 MBytes\);](#)
 - [rpp-2010-JPhys-G-37-075021.pdf file \(40 MBytes\) of the published RPP 2010 book;](#)
- Figures from the reviews in RPP
- The PDG Monte Carlo particle numbering scheme
 - [The PDG Monte Carlo particle numbering scheme is a particle numbering system for use in interfacing different Monte Carlo event generators and detector simulators.](#)
- Tables of particle information
 - [A table of masses, widths, and PDG Monte Carlo particle ID numbers is produced around Summer of even-numbered years after production of the Review of Particle Physics. Documentation appears at the front of the data.](#)
- Cross Sections and related quantities.
- PDG Identifiers** (circled in red)

On the left side of the screenshot, there is a 'News' section with a snippet of text: 'The 2011 Particle List Summary pdgLive is The Review and Plots updated in'. Below that is a 'Funded By' section listing: US DOE, US NSF, CERN, MEXT (Japan), INFN (Italy), and MEC (Spain).



PDG
particle data group

HOME: pdgLive Summary Tables Reviews, Tables, Plots Particle Listings

PDG Identifiers

PDG Identifiers are references to items of PDG data such as particles, particle properties, decay modes and review articles.

Once defined, a PDG Identifier is guaranteed to not change and can thus be used in other systems as a permanent reference to PDG data. Note that although the meaning of a given PDG Identifier will not change, there is no guarantee that the corresponding data will be included into future editions of the Review of Particle Physics.

Each PDG Identifier consists of a single string without embedded spaces. PDG Identifiers are not case-sensitive. More details on PDG Identifiers can be found in [this proposal](#).

Future versions of [pdgLive](#) will directly support PDG Identifiers both for viewing and for downloading the data associated with a given PDG Identifier.

PDG Identifiers for the 2011 partial update of the Review of Particle Physics:

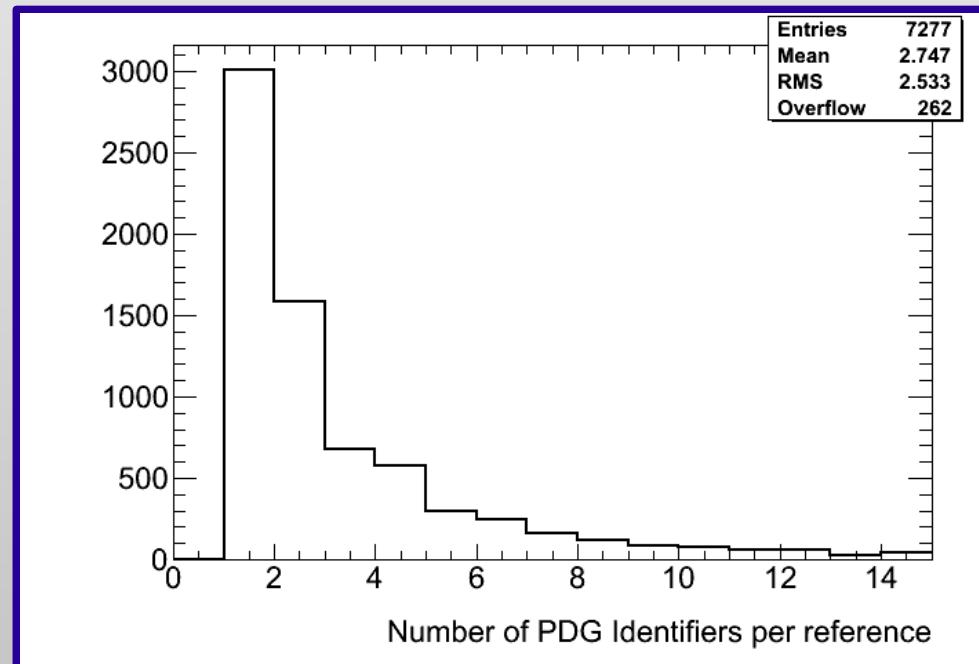
- [List of PDG Identifiers with short descriptions \(version: 2011v0, Sep 16, 2011\)](#)
- [References used in the Listings with corresponding PDG Identifiers \(version: 2011v0, Sep 16, 2011\)](#)

This file uses a comma-separated value format (CSV), where the first 3 fields denote the reference (either in the format "CODEN,volume,page" or "SLAC-IRN,,"") and the remaining fields provide a list of PDG Identifiers associated with this reference.

The lists of PDG Identifiers and references above will be updated for each published edition of the Review of Particle Physics, including odd-year partial updates. Additional updates may occur in order to account for errata in the Review of Particle Physics, or to correct mistakes.

- **Lists of PDG Identifiers are versioned**
 - Updated for new editions of the Review of Particle Physics
 - Additional updates for errata or bugs

- **List of references w/PDG Identifiers (for papers used by PDG)**
 - So far includes papers whose measurements are included in Listings
 - Plan to add papers cited by PDG reviews, comments, footnotes, ...
 - Current CSV format as agreed at Harvard Summit:
 - "CODEN,voluem,page" or "SLAC-IRN,,,", followed by list of PDG Identifiers
 - Reference papers by DOI instead?



- **3-year computing upgrade nearing successful conclusion**
- **New pdgLive will fully support PDG Identifiers**
 - Much more extensive cross-linking between INSPIRE and PDG
 - Same mechanism directly usable by any others interested
- **Initial list of references with PDG Identifiers available**
 - Based on papers whose measurements are used in PDG Listings
 - Provides initial set of “tags” for new cross-linking scheme
- **Need to discuss details of how to get data necessary to expand cross-linking**
 - Use of HEP taxonomy
 - Tagging of articles by libraries, authors, or users in general
 - ...