

# Draft Proposal for PDG Identifiers

## Purpose and Use Cases

PDG Identifiers are strings that can be used to reference items in PDG such as review articles, particles, datablocks or decay modes.

Currently envisaged use cases include:

- External references to items in the PDG database. For example, given a PDG Identifier one can directly go to a specific page in pdgLive.
- Tags that can be included into the meta data of publication databases (in particular INSPIRE).
- Internal use within PDG applications

## Definition of PDG Identifiers

All PDG Identifiers consist of a single string without embedded spaces of the following form:

[DATABASE::]NODE[:ATTRIBUTE=VALUE[,ATTRIBUTE=VALUE...]]

where

- DATABASE is optional and refers to a specific version of the PDG database or RPP edition (e.g. the 2006 edition instead of the latest one). Details still have to be worked out.
- NODE is a PDG node.
- NODE may be followed by qualifiers consisting of an ATTRIBUTE/VALUE pair. For now the primary use case for this are decay mode designators.

PDG Identifiers are not case-sensitive.

## Examples

- "S043" - W boson
- "S043M" - W boson mass
- "S043:DESIG=2" - Decay mode  $W^+ \rightarrow \mu^+ \nu$

The current list of PDG Identifiers can be found [here](#).

## Comments

- The format proposed above has the disadvantage of needing quoting when used in URLs. However, people are not expected to type in such URLs, so this doesn't seem a big issue.
- PDG will provide the definition and an authoritative list of all valid PDG Identifiers with their meaning.
- For people who want to use PDG Identifiers as tags, we plan to provide an application similar to pdgLive, where users can navigate to the page containing the information of interest that will then provide the corresponding tag.
- In many cases only the particle nodes (four character nodes such as S043) will be used as tags.
- If a decay mode is to be tagged, the form where the designator is given as a qualifier for the particle node

should be used, even if a corresponding node should exist (note the fundamental differences between nodes and decay modes in the PDG database).

-- JuergBeringer? - 17 Nov 2009

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Topic revision: r4 - 2011-09-16 - 23:32:57 - Main.beringer

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