How data containers fit in top level hierarchy

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a passion for discovery

U.S. DEPARTMENT OF ENERGY | Office of Science

I am trying to capture your view of how to arrange nuclear data

- **I will present the consensus view of required arrangement of nuclear data,**
  - presented at SG38 Meeting in Tokai, Japan, Dec. 2013
  - revised and presented at SG38 Meeting in Paris, France, Apr. 2014
  - revised again for this meeting
- **Element & attribute names are illustrative. They can be changed.**

Requirements for a top level hierarchy for a next generation nuclear data format

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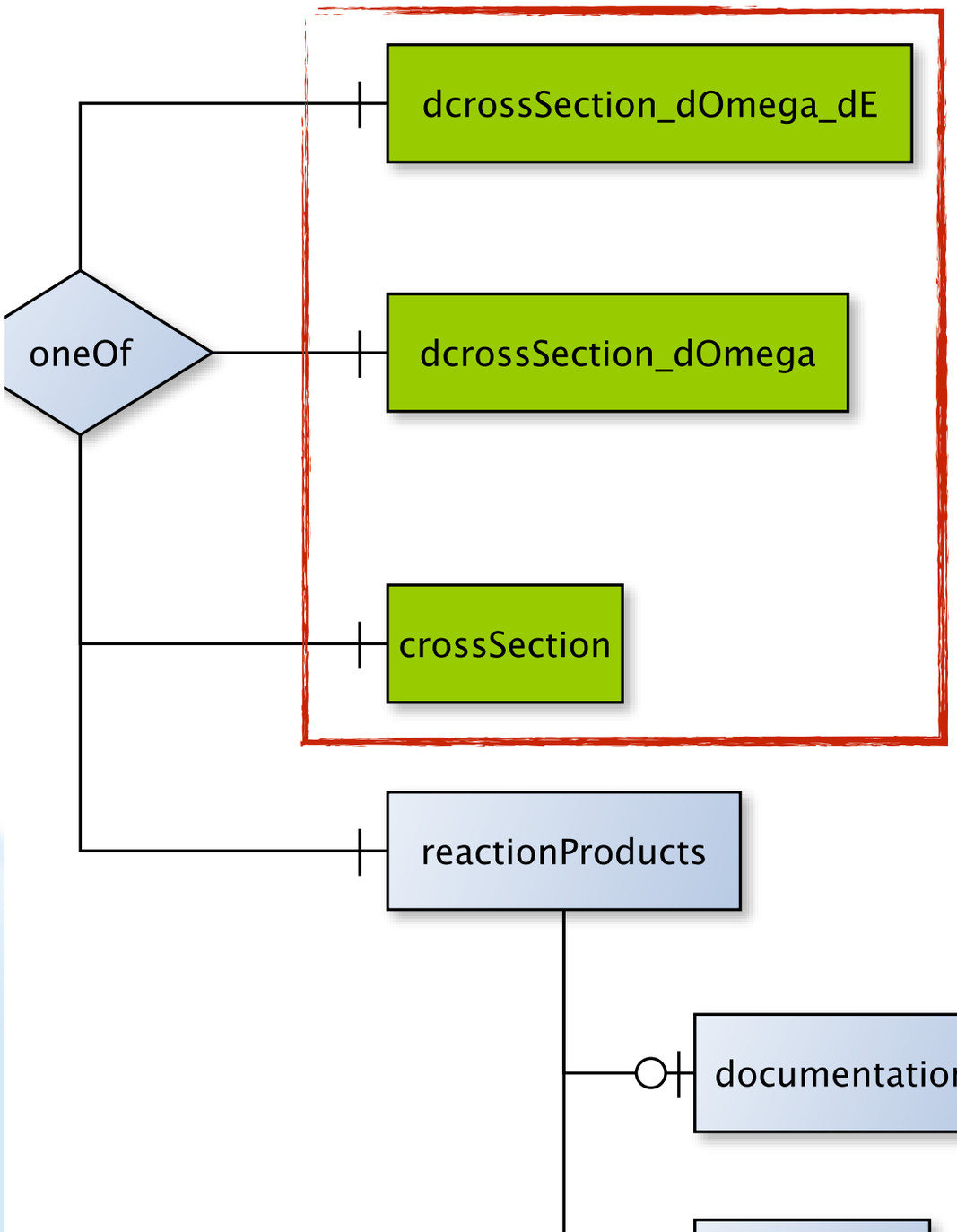
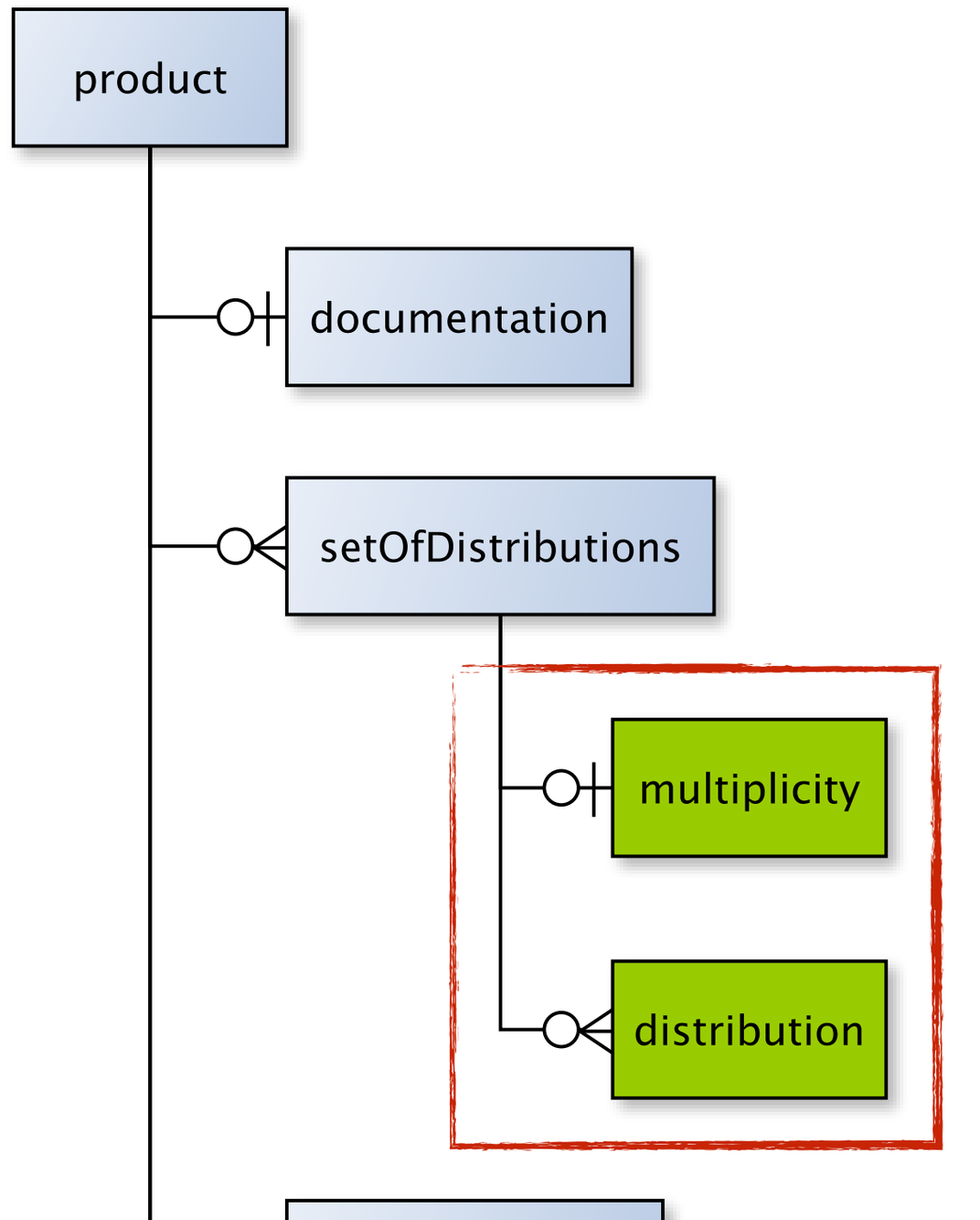
Low level containers are sprinkled throughout the hierarchy

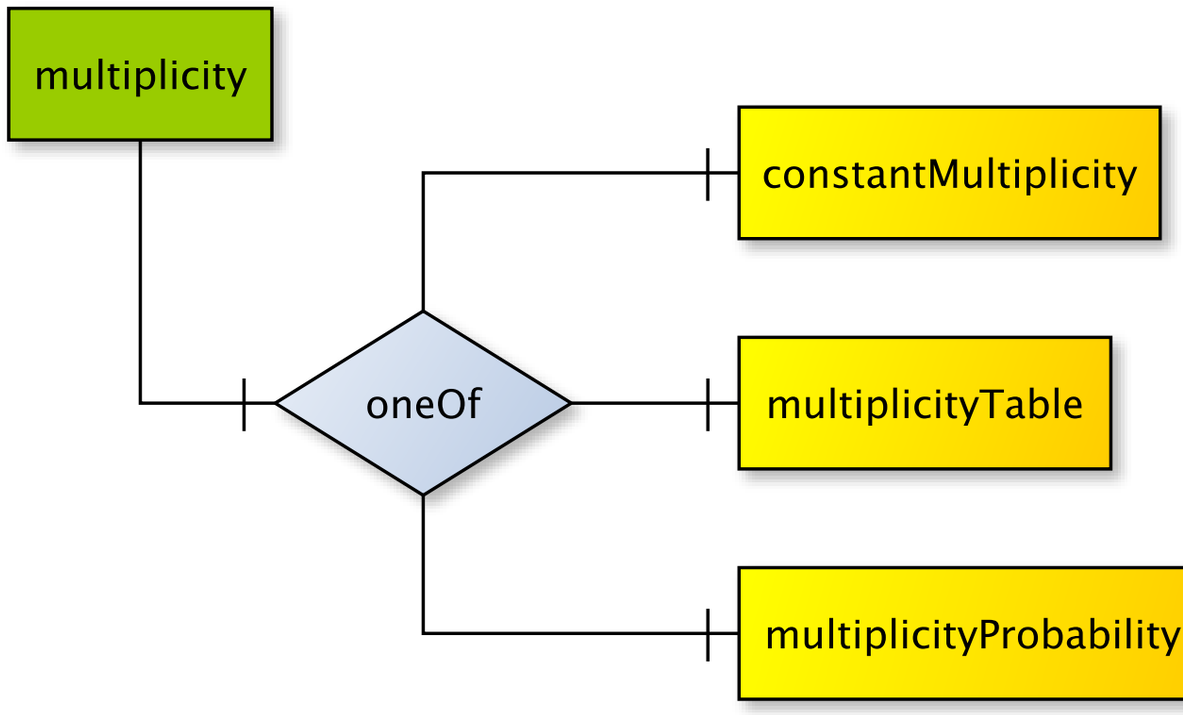
- In the cross sections



- In the distributions



Typical case: multiplicity data



- Gold boxes have the actual data tables
- Note, we expect to only have one table here

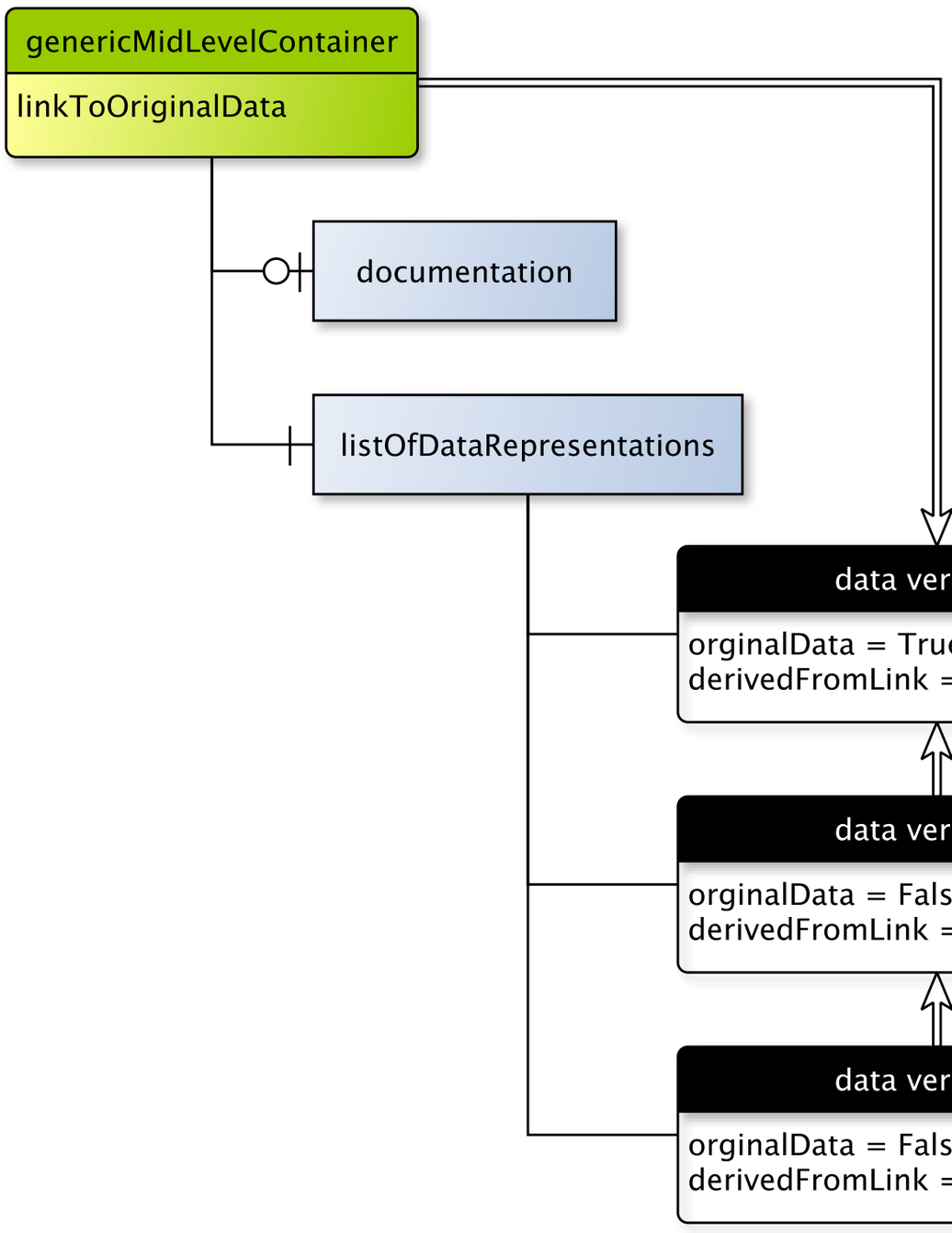
+ = 1

♀ = 1 or 0

⧋ = Any num.

but

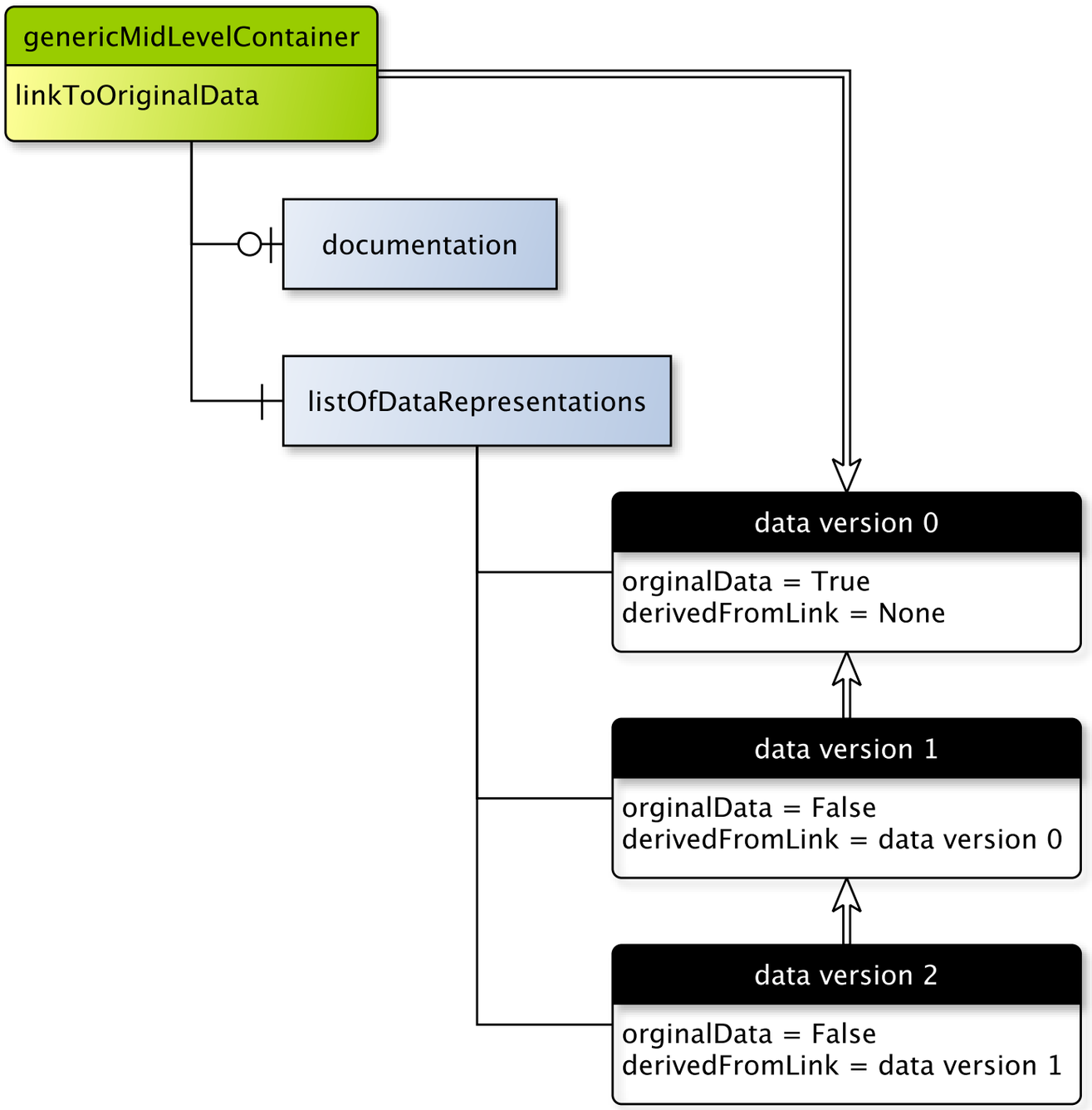
We are required to store original & derived data (not necessarily in the same file)



- Only one data set can be the original
- All others derived from it or from one another

- **Typical use cases:**
  - log-log data -> lin-lin data
  - original -> original + uncertainties (good for plotting)
  - grouped data
  - parameterized -> pointwise

We are required to store original & derived data (not necessarily in the same file)



This scheme can be used for many other purposes. The most obvious to me is for reconstructed resonances

This scheme generated a lot of discussion in the last two meetings, how do we feel about it?