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## The PDG Empire



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**Collaboration** 



### Particle Data Group collaboration of 206 authors from 24 countries and 140 institutions + 700 consultants in the HEP community



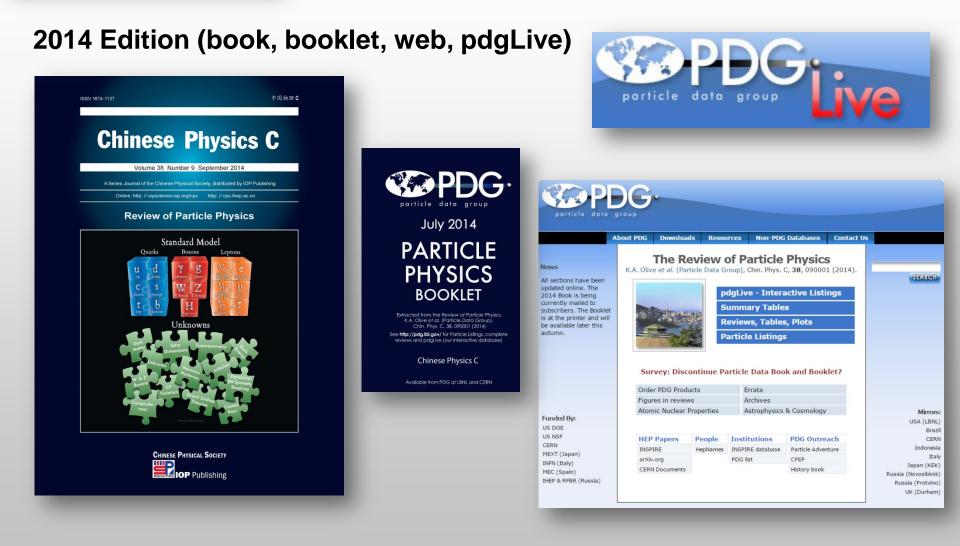
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**Review of Particle Physics** 



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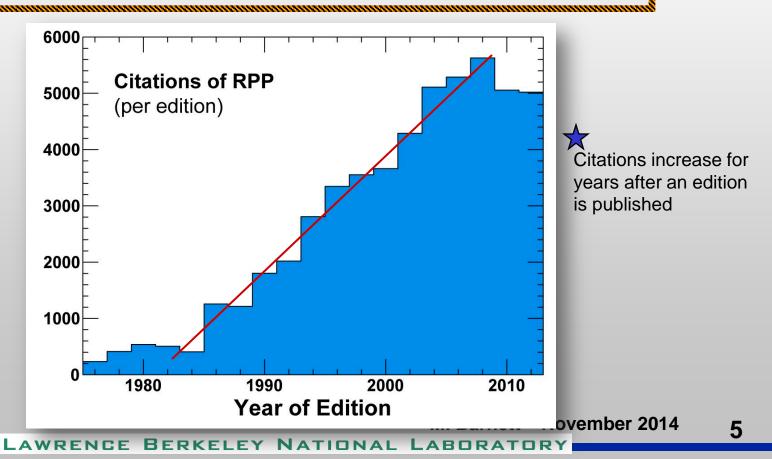


**Top Cited** 

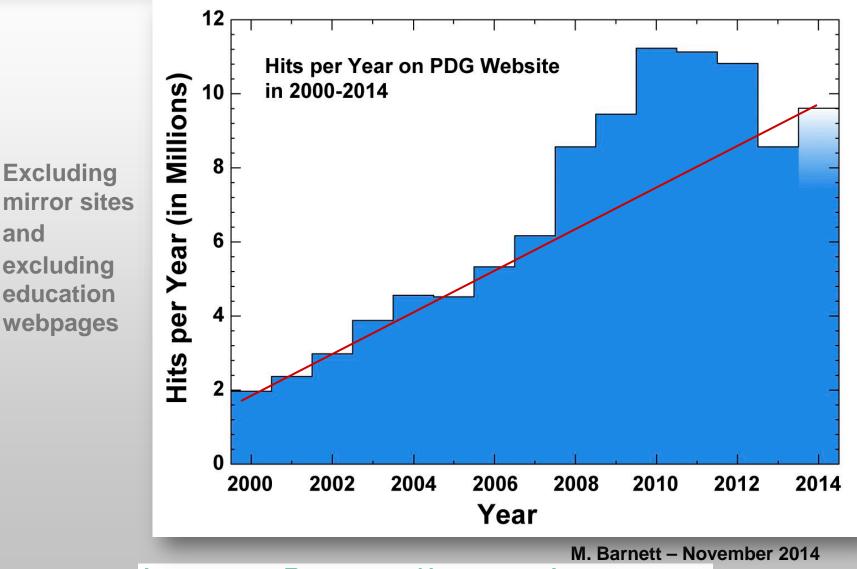
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### The Review is the all-time top cited article in High Energy Physics with more than <u>51,000</u> citations (INSPIRE)







Web Usage

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**PDG Printed Products** 



- Review of Particle Physics 14,000 copies of 1675-page book
- Particle Physics Booklet
  32,000 copies of 328-page booklet
- Pocket Diary for Physicists
  17,000 copies DROPPED due to lack of funding.

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PDG Survey on Printed Products



Survey on the future of the Book and Booklet. (The Diary was discontinued due to budget cuts).

An amazing <u>6164</u> readers responded, demonstrating the very high value our community places on PDG products.

(We sent out one email; no reminders).

More later.

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- 3283 new measurements from 899 new papers (of total 32,000 measurements and 9000 papers).
- 112 reviews with many exciting and new features
- Important new data in areas such as Higgs, SUSY, neutrinos, top quark, B physics, etc.
- **★** Color Figures everywhere



The Web allows us to see what most interest our readers.

The hits (page views) on



almost exactly equal.

Clearly people care about both.

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# Astrophysics & Cosmology



#### 14 years ago: Very little

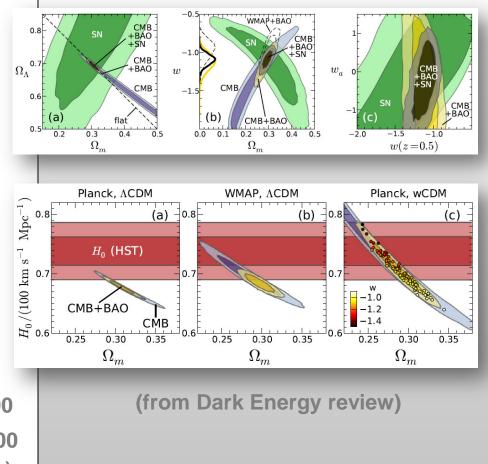
#### Now:

(downloads) Astrophysical Constants 5100 Big Bang Cosmology 6300 Cosmological Parameters:

 $H_0, \Lambda, \Omega, etc.$  11300 Experimental Tests of

Gravitational Theory 3300 Dark Matter 7200 Dark Energy 6800 Cosmic Background Rad. 4800 Big Bang Nucleosynthesis 3500

(downloads)





### Amazing Diversity of Topics Interest Our Community



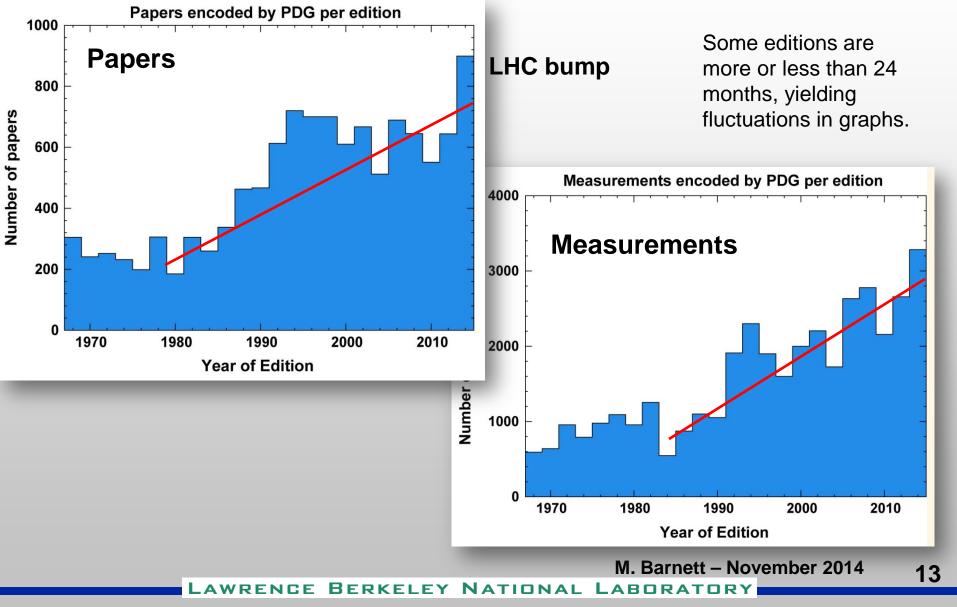
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1	Higgs boson	
	Passage of particles throu	gh matter
	Plots of cross sections an	
	Neutrino mass, mixing, and os	
-	Electroweak model and constraints of	on new physic
-	Particle detectors at accelerators	
	Cosmic rays	
	QCD	
	Statistics Downloa	ads of
	Quark model PDG rev	iews in
	Cosmological parameters 2014 edi	tion
	Physical constants	
-	Kinematics	
-	CKM quark-mixing matrix	
-	Cross-section formulae	
	Dark matter	
-	Dark energy	
	Top quark	
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### **Workload Trends**









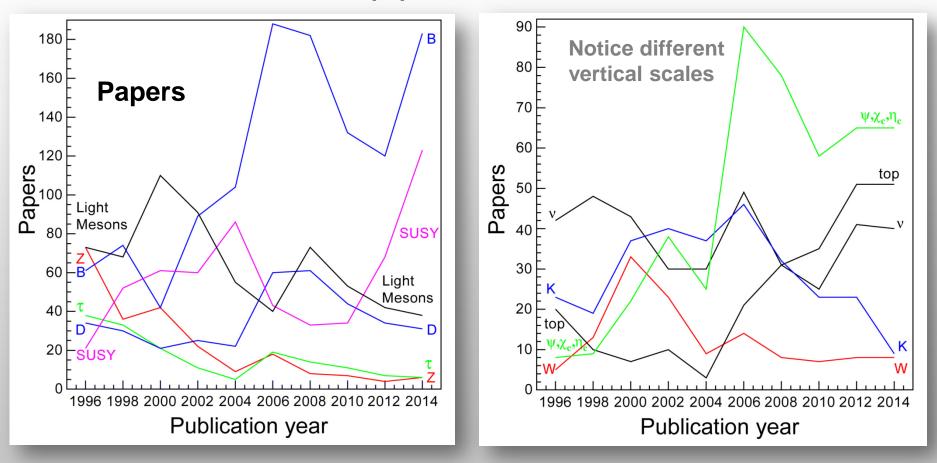
2008	2010	2012	<u>2014</u>
33	34	68	123
18	21	21	36
12	34	51	138
18	16	36	50
6	5	12	17
11	10	17	32
4	12	37	94
1	3	2	6
103	135	244	496
	33 18 12 18 6 11 4 1	333418211234181665111041213	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

**Searches** 

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132/120/183 B papers in 2010/2012/2014 editions

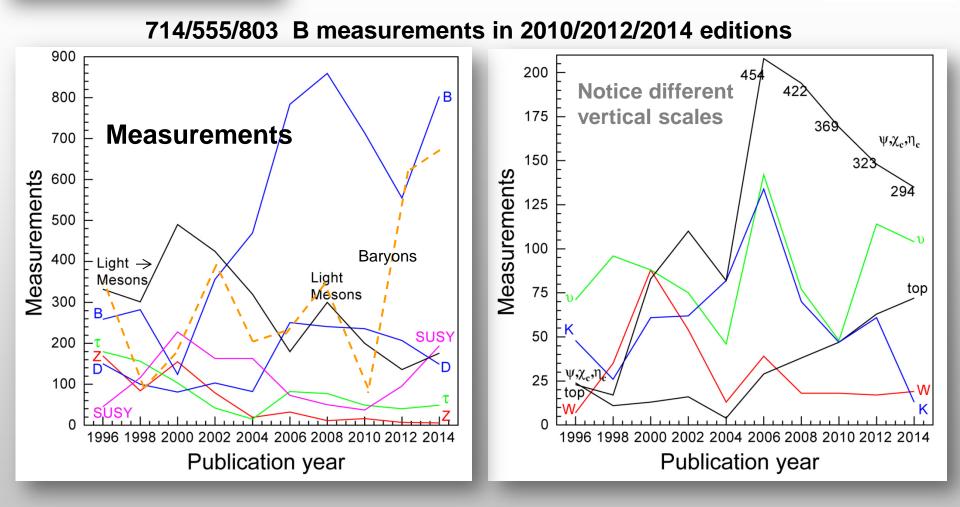


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# **New Papers in RPP-2014**

particle data group

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Papers <b>Papers</b>	2010	2012	2014	<b>Measurements</b>	2008	2010	2014
W Boson	7	8	8	W Boson	18	17	19
Z Boson	7	4	6	Z Boson	16	7	6
τ Lepton	11	7	6	τ lepton	49	40	49
Neutrinos and mixing	25	41	40	Neutrinos and mixing	48	114	<b>104</b>
Quarks (u,d,c,s,b)	17	20	24	Quarks (u,d,c,s,b)	33	51	27
Top quark	35	51	51	Top quark	47	63	72
b', t' quarks	1	5	15	b', t' quarks	1	6	17
γ, e, μ, π, η	20	15	11	γ, e, μ, π, η	40	23	11
K mesons	23	23	9	K mesons	47	61	13
D and D <sub>s</sub> mesons	44	34	31	D and D <sub>s</sub> mesons	236	207	149
B and B <sub>s</sub> mesons	132	120	183	B and B <sub>s</sub> mesons	714	555	803
$\psi$ , $\eta_{C}$ , $\chi_{C}$ , $\chi_{b}$ , upsilon	72	65	65	$\psi$ , $\eta_{C}$ , $\chi_{C}$ , $\chi_{b}$ , upsilon	329	323	294
Other unstable mesons	58	106	103	Other unstable mesons	369	568	470
Baryons	23	38	38	Baryons	88	667	714
Supersymmetry	34	68	123	Supersymmetry	37	96	194
Axions	21	21	36	Axions	22	22	40
Higgs	34	51	138	Higgs	45	68	258
W', Z'	16	36	50	W', Z'	29	60	66
Compositeness	5	12	17	Compositeness	5	13	23
Extra dimensions	10	17	32	Extra dimensions	14	19	42
Other searches	12	37	94	Other searches	22	65	279
Free q, monopoles	3	2	6	Free q, monopoles	4	2	7
TOTAL	553	644	899	TOTAL	2167	2658	3236

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#### **Five publishers bid on RPP and Booklet in past:**

Physics Letters B (Elsevier)

Physical Review D (AIP)

Journal of Physics G (IoP)

**European Physical Journal C (Springer)** 

Chinese Physics C (Chinese Phys. Soc.)

This year, one publisher bid on RPP and Booklet

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Funding from DOE + Japan (Japan 6% in FY15)

NSF grant (12% of budget) ended last year.

Due to Congress' continuing resolution, the PDG budget for this year (FY15) has been cut by 11%.

**96%** of the PDG budget is salary.

In FY15, salary alone is more than our funding during CR.

- We no longer pay any portion of retiree contributions.
- We replaced our full-time admin with a 10% admin (trying to hire a 1 FTE programmer to replace CD help)
- All printed products are not currently in our budget.

This situation is not sustainable.

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Deborah Harris – Chair	(Fermilab)
James Olsen	(Princeton)
Junichi Tanaka	(U. of Toky
Tancredi Carli	(CERN)
Anze Slosar	(BNL)
Yasunori Nomura	(UC Berkel

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