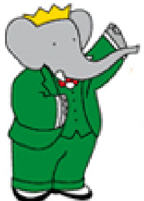
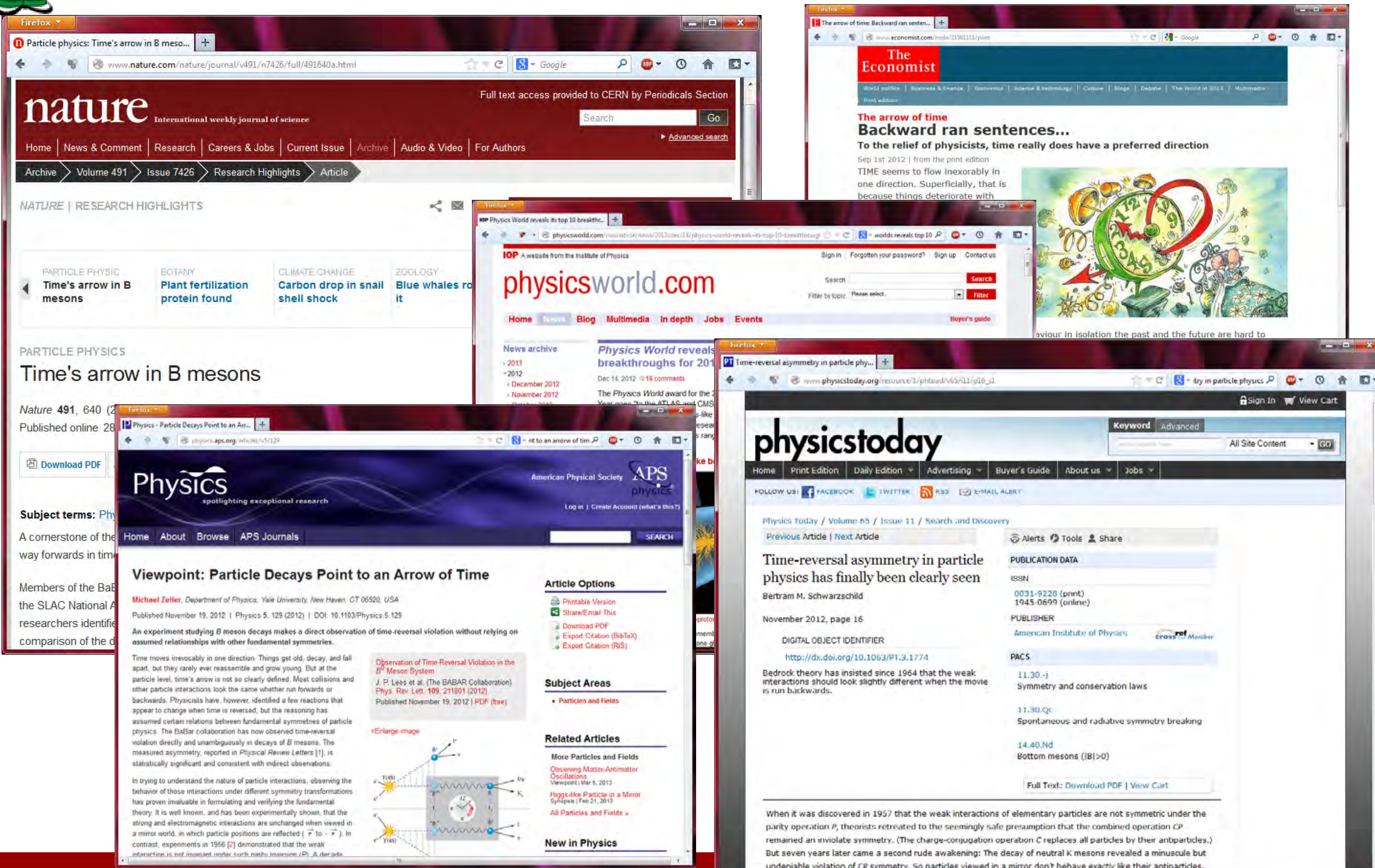


T-VIOLATION IN THE PRESS



a_μ^{HAD} CONTRIBUTION TO g-2

$$a_\mu^{SM} = \left(\frac{g-2}{2}\right)_\mu = a_\mu^{QED} + a_\mu^{had} + a^{weak}$$

a_μ precisely measured at BNL E821:

$a_\mu^{exp} - a_\mu^{SM} = (28.7 \pm 8.0) \times 10^{-10}$ (~3.4σ)

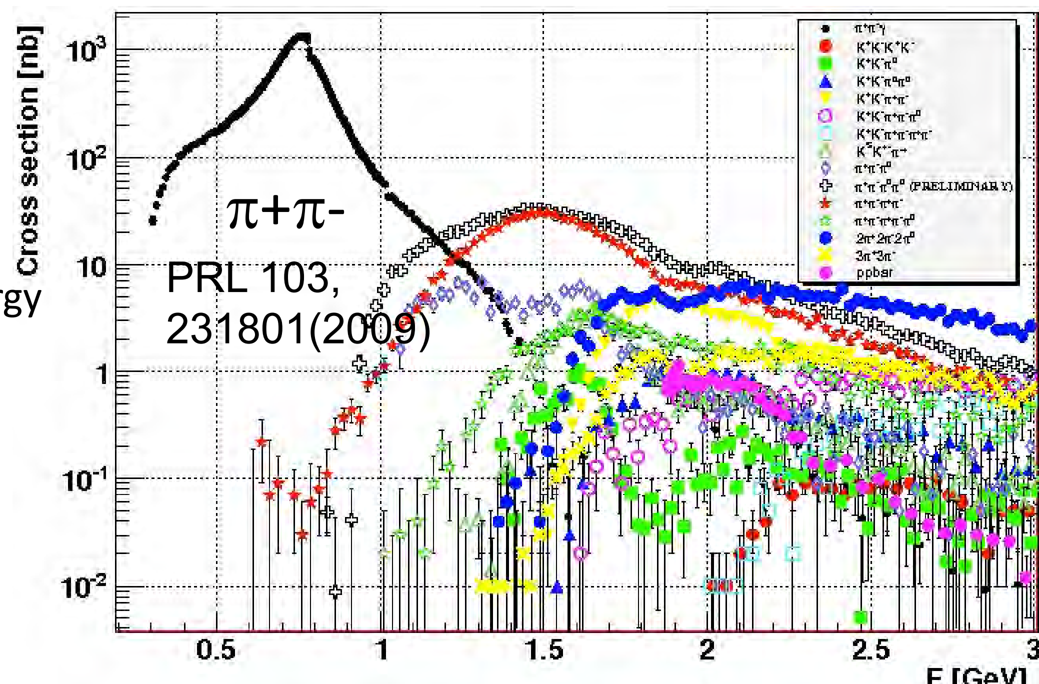
Dominant uncertainty from hadronic vacuum polarization. Cannot be calculated by QCD “first principles” so determine it via dispersion relations, by measuring the total hadronic cross section

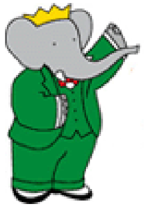
$$a_\mu^{had} = \frac{\alpha^2}{3\pi^2} \int_{4m_\pi^2}^{\infty} \frac{K(s)}{s} R(s)\, ds$$

BaBar is the only experiment to measure low energy cross section from threshold up to ~4-5 GeV.

- In all cases most precise measurements

More results to be added from σ(e+e- → π+π-π+π-), σ(e+e- → K+K-) and other channels



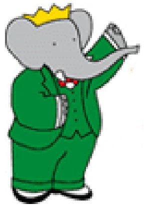


SLAC AND DATA PRESERVATION

- Excluding BaBar no other current project at SLAC seems to be concerned with preservation
- Fermi/GLAST relies on NASA support
  - High level data is preserved in FITS and simulations and performance measures are all parameterized. There is no plan (yet) for the low level ROOT data.
  - High level simulation and analysis, and the lower level reconstruction/simulation. The NASA science support center is committed to supporting the high level code and data products for a long time (20 yrs)
  - No real plan for low level code life past the mission end
- LCLS has a 10 years policy
  - User home (up to 20GB) stored on disk + tape for indefinite amount of time
  - Tape archive (unlimited size) has two copies for 10 years
  - Committed to have the XTC file parser compatible with all data ever taken at LCLS
  - After end of LCLS program they will maintain the code for more than 2 years but less than 10
- New experiments and projects are too young to be worried about preservation but DOE will require soon a Data Management plan
- Older experiments like SLD and LASS have data saved on tape and code partly migrated to newer platform while documentation is on paper only (when still existent) but their survival is endangered (see DPHEP2)

CONCLUSION

- Long Term may not be as long as you think…
- Ramp down planning, freezing, validation,…, yes to all you want, but external factors could make the choice for you
  - Economic crisis, sequestration,…
- We need a robust foundation for data preservation that is really able to help on many levels, from technology to $ if needed
  - Can DPHEP / DASPOS become such an entity ?



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