Future of JADE data and authorship models

- current handling of authors
- alternative authorship models
- open access ?

current handling of authorship (A)

Study of moments of event shapes and a determination of α_S using e^+e^- annihilation data from JADE

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In memory of Beate Naroska.

Abstract. Data from e^+e^- annihilation into hadrons, collected by the JADE experiment at centre-of-mass energies between 14 GeV and 44 GeV, are used to study moments of event shape distributions. Models with hadronisation parameters tuned to the LEP 1 precision data provide an adequate description of the low energy data studied here. The NLO QCD calculations, however, show systematic deficiencies for some of the moments. The strong coupling measured from the moments which are reasonably described by NLO QCD,

$$\alpha_S(M_{Z^0}) = 0.1287 \pm 0.0007(\text{stat.}) \pm 0.0011(\text{exp.}) \pm 0.0022(\text{had.}) \pm 0.0075(\text{theo.}),$$

is consistent with the world average.

PACS. 12.38.Bx Perturbative calculations – 12.38.Qk Experimental tests

- ref. [1] is: **B. Naroska, Phys.Rept.148:67,1987.**
- listed and found in SPIRES under „cn JADE"
- previous JADE authors not unpacked in SPIRES
- n.b.: each paper „refereed" by JADE „editorial board" (usually R. Felst, E. Elsen, J. Olsson) before publication.

alternative authorship models:

(B): only original authors who participated in analysis sign paper:

- drop „JADE-collaboration" from author list
- but require that there is always at least one original JADE member signing as author (i.e., no access of outside people to JADE data)
- acknowledge orig. JADE collab., cite Phys. Rep. as before

(C): „open access" to JADE data

- JADE takes no control of analysing JADE data at all
- no regulation of authorship
- requirement to cite and acknowledge JADE Phys. Rep.
- other requirements (e.g. disclaimer of non-responsibility) ?

DATA PRESERVATION

Study group considers how to preserve data

For experimentalists in high-energy physics, the data are like treasure, but how can they be saved for the future? A study group is investigating data-preservation options.

A simulated event in the JADE detector, generated using a refined Monte Carlo program and reconstructed using revitalized software more than 10 years after the end of the experiment. (Courtesy Siggi Bethke.)

High-energy-physics experiments collect data over long time periods, while the associated collaborations of experimentalists exploit these data to produce their physics publications. The scientific potential of an experiment is in principle defined and exhausted within the lifetime of such collaborations. However, the continuous improvement in areas of theory, experiment and simulation – as well as the advent of new ideas or unexpected discoveries – may reveal the need to re-analyse old data. Examples of such analyses already exist and they are likely to become more frequent in the future. As experimental complexity and the associated costs continue to

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Models of Data Preservation

Preservation Model	Use case
1. Provide additional documentation	Publication-related information search
2. Preserve the data in a simplified format	Outreach, simple training analyses
3. Preserve the analysis level software and data format	Full scientific analysis based on existing reconstruction
4. Preserve the reconstruction and simulation software and basic level data	Full potential of the experimental data

Cost, complexity, benefits

An R&D project should be defined in each experiment

ICFA Meeting, August 19, 2009 Ch. Diaconu

Governance and organisation