

Get a life!



Getting a life: first steps...

Paper presented at Beyond the Desert 1997: Accelerator and Non-Accelerator Approaches

159

High Q^2 DIS at HERA and Squark Production

H. Dreiner[†], M. Krämer[†] and P. Morawitz[‡]

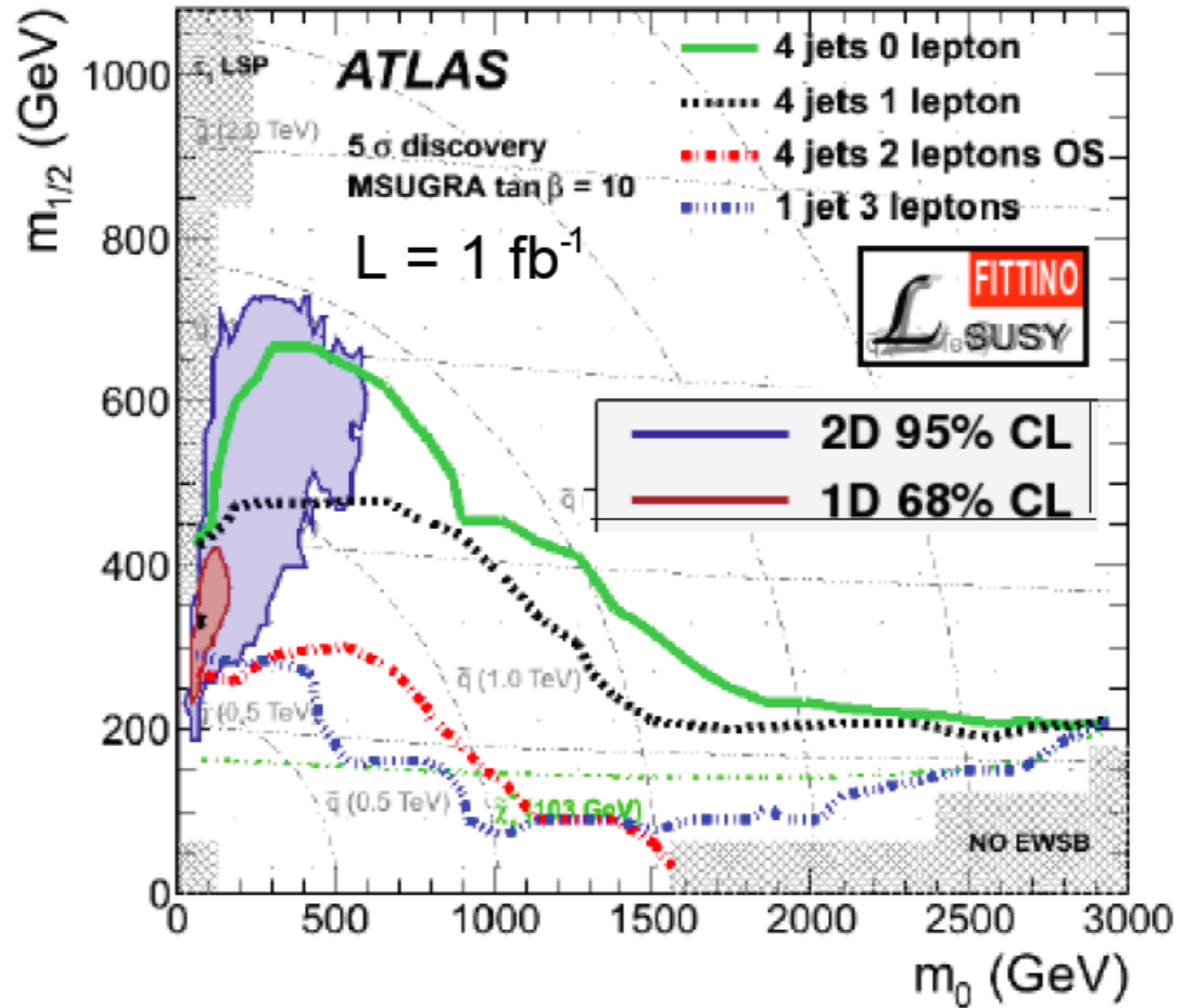
[†] Rutherford Laboratory, Oxfordshire, UK

[‡] Imperial College, London, UK

Abstract. We discuss the high- Q^2 HERA anomaly in terms of resonance squark production via supersymmetric R-parity violating operators. Since the announcement by the HERA experiments several indirect bounds as well as the direct bounds from the Tevatron have been improved. We combine the CDF and D0 bounds and determine their gluino mass dependence. We use all the new bounds to update the possible solutions. We find the two-squark solution is no longer viable.



Getting a life: the Fittino years



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v1 [hep-ph] 12 Mar 2010

SUSY parameter determination at the LHC using cross sections and kinematic edges

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[hep-ph] 6 Oct 2011

Using rates to measure mixed modulus-anomaly mediated supersymmetry breaking at the LHC

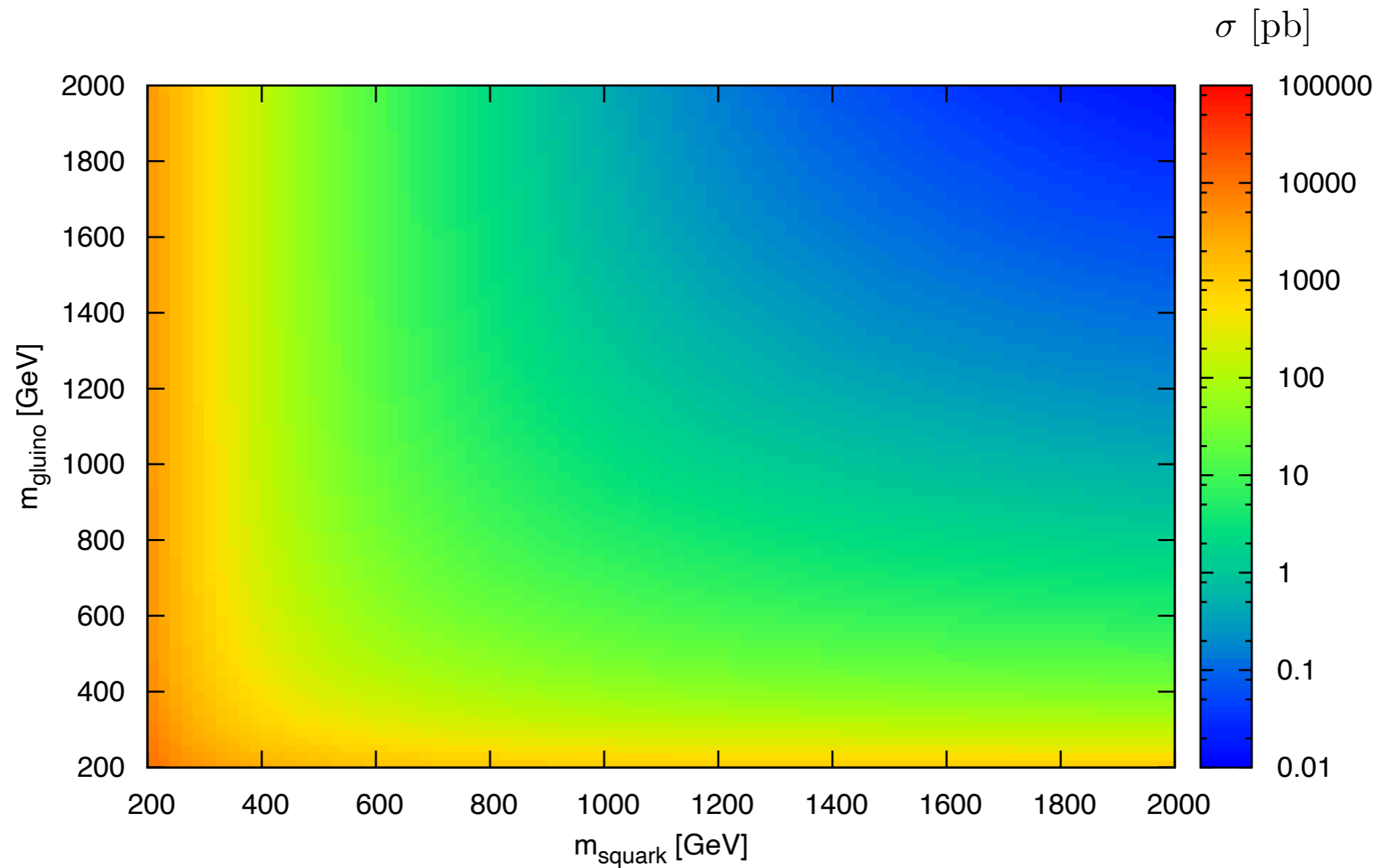
J. A. Conley,^a H. K. Dreiner,^a L. Glaser,^b M. Krämer,^b and J. Tattersall^{a,b}

^a*Physikalisches Institut der Universität Bonn
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Lisa.Glaser@physik.rwth-aachen.de, mkraemer@physik.rwth-aachen.de,
jamie@th.physik.uni-bonn.de*

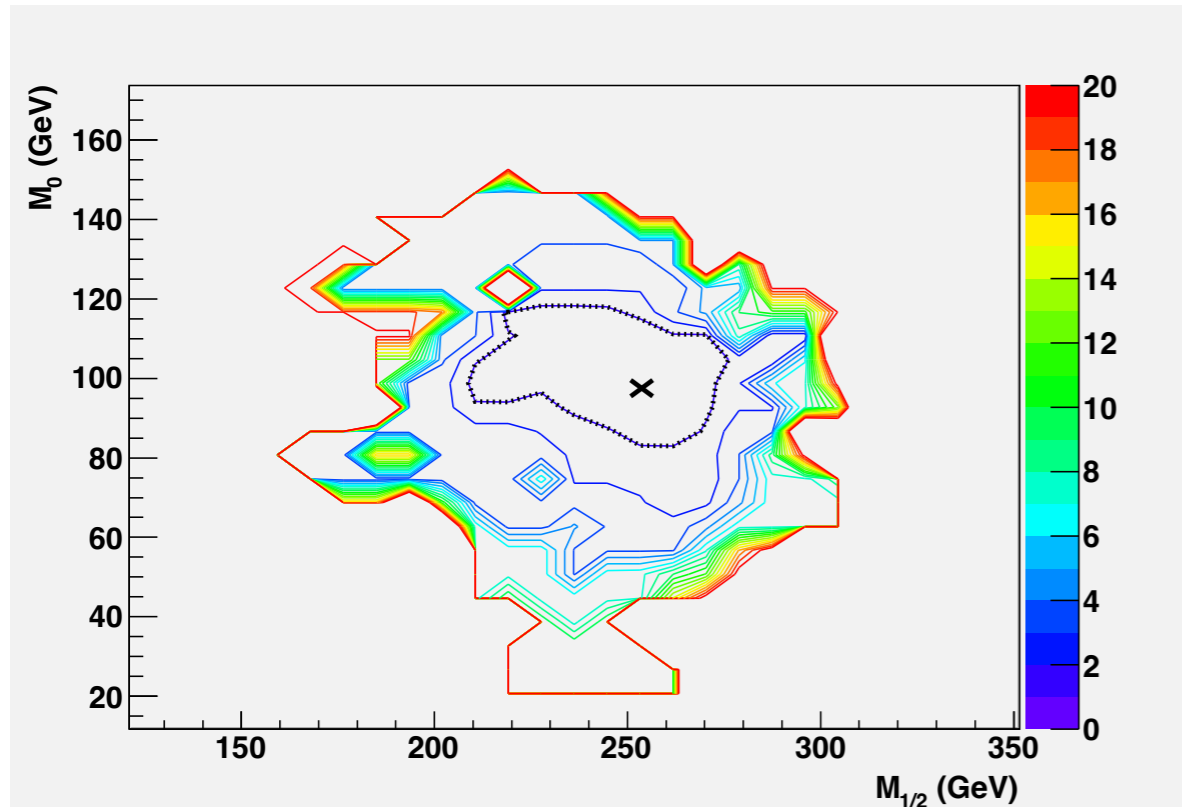
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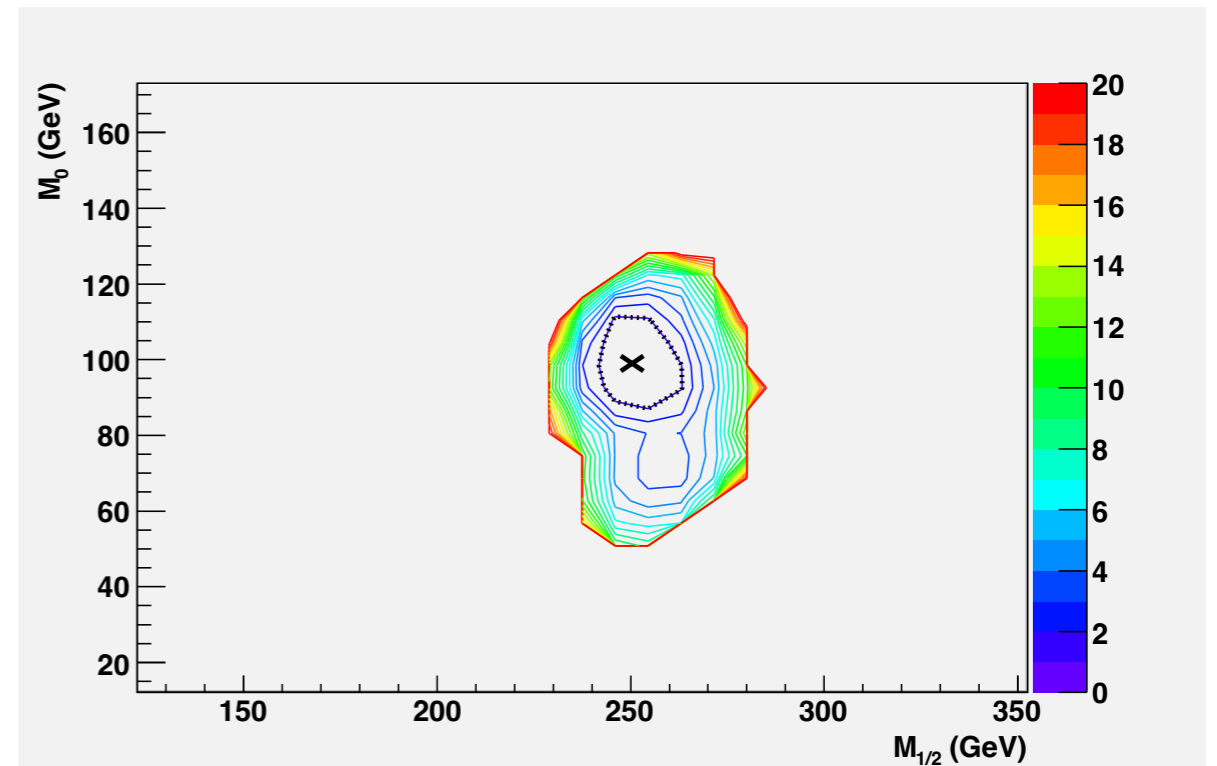
Herbi K. Dreiner, Michael Krämer, Jonas M. Lindert, Ben O'Leary, JHEP 1004:109,2010

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I, ~~rates~~



I + rates



Herbi K. Dreiner, Michael Krämer, Jonas M. Lindert, Ben O'Leary, JHEP 1004:109,2010

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RAPID COMMUNICATION

PHYSICAL REVIEW D **84**, 011701(R) (2011)

What if the LHC does not find supersymmetry in the $\sqrt{s} = 7$ TeV run?

Philip Bechtle and Björn Sarrazin

Deutsches Elektronen-Synchrotron DESY, Notkestraße 85, D-22607 Hamburg, Germany

Klaus Desch, Herbi K. Dreiner, and Peter Wienemann

Physikalisches Institut der Universität Bonn, Nussallee 12, D-53115 Bonn, Germany

Michael Krämer and Carsten Robens

Institute for Theoretical Particle Physics and Cosmology, RWTH Aachen University, D-52056 Aachen, Germany

Ben O'Leary

Institute for Theoretical Physics and Astrophysics, Würzburg University, Am Hubland, D-97074 Würzburg, Germany

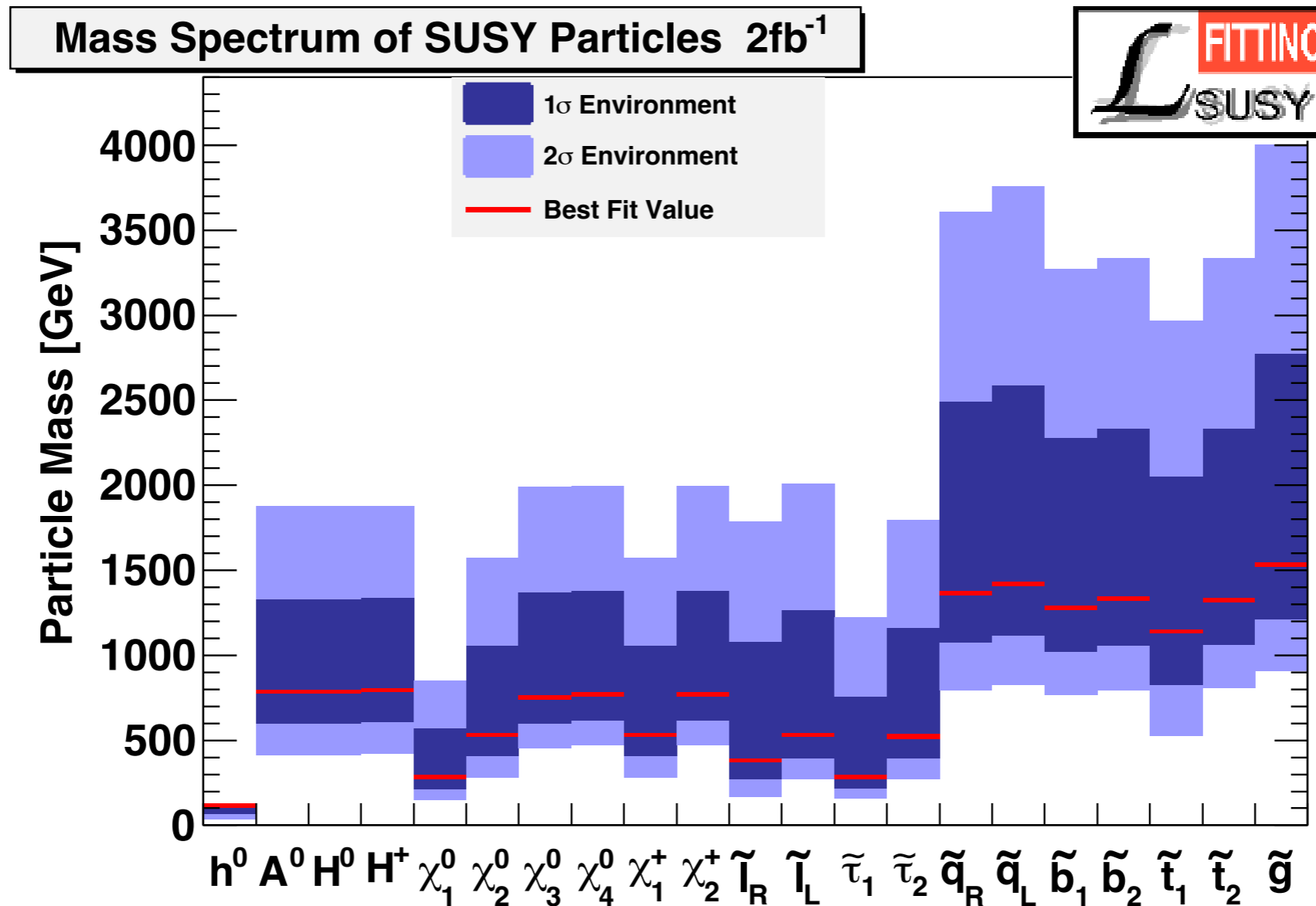
(Received 23 February 2011; published 19 July 2011)

We investigate the implications for supersymmetry from an assumed absence of any signal in the first period of LHC data taking at 7 TeV center-of-mass energy and with 1 to 7 fb⁻¹ of integrated luminosity. We consider the zero-lepton plus four jets and missing transverse energy signature, and perform a combined fit of low-energy measurements, the dark matter relic density constraint and potential LHC exclusions within a minimal supergravity model. A nonobservation of supersymmetry in the first period of LHC data taking would still allow for an acceptable description of low-energy data and the dark matter relic density in terms of minimal supergravity models, but would exclude squarks and gluinos with masses below 1 TeV.

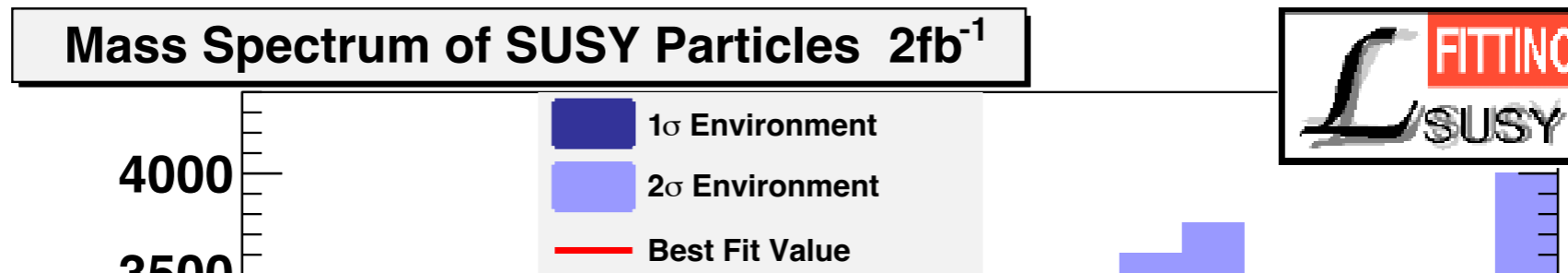
DOI: [10.1103/PhysRevD.84.011701](https://doi.org/10.1103/PhysRevD.84.011701)

PACS numbers: 12.60.Jv, 13.85.Rm, 14.80.Ly

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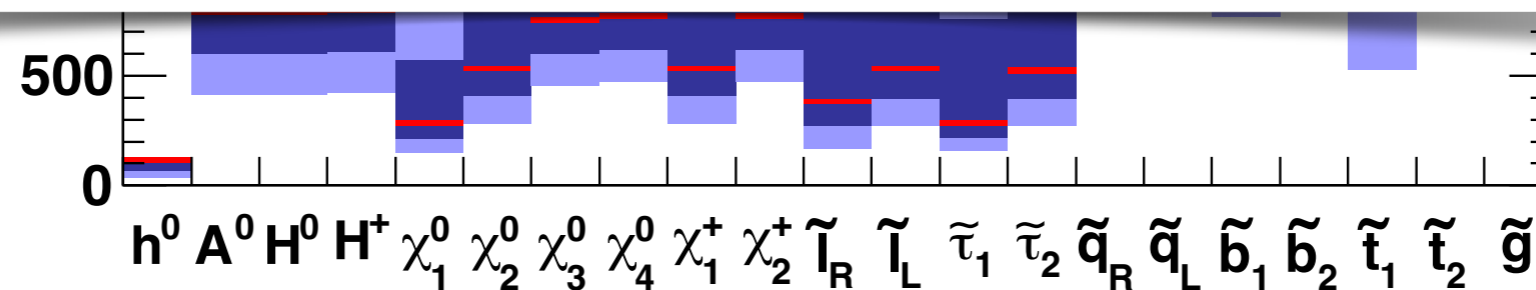


Anonymous said...

<http://arxiv.org/pdf/1102.4693>

takes 8 people to write 4 pages about the fact that if susy is not found in the 7 TeV run then it is probably heavy...

24 February 2011 at 06:45



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Eur. Phys. J. C (2016) 76:96
DOI 10.1140/epjc/s10052-015-3864-0

THE EUROPEAN
PHYSICAL JOURNAL C



CrossMark

Regular Article - Experimental Physics

Killing the cMSSM softly

Philip Bechtle^{1,a}, José Eliel Camargo-Molina^{2,b}, Klaus Desch^{1,c}, Herbert K. Dreiner^{1,3,d}, Matthias Hamer^{4,e}, Michael Krämer^{5,f}, Ben O'Leary^{6,g}, Werner Porod^{6,h}, Björn Sarrazin^{1,i}, Tim Stefaniak^{7,j}, Mathias Uhlenbrock^{1,k}, Peter Wienemann^{1,l}

¹ Physikalisches Institut, University of Bonn, Bonn, Germany

² Department of Astronomy and Theoretical Physics, Lund University, 223-62 Lund, Sweden

³ Bethe Center for Theoretical Physics, University of Bonn, Bonn, Germany

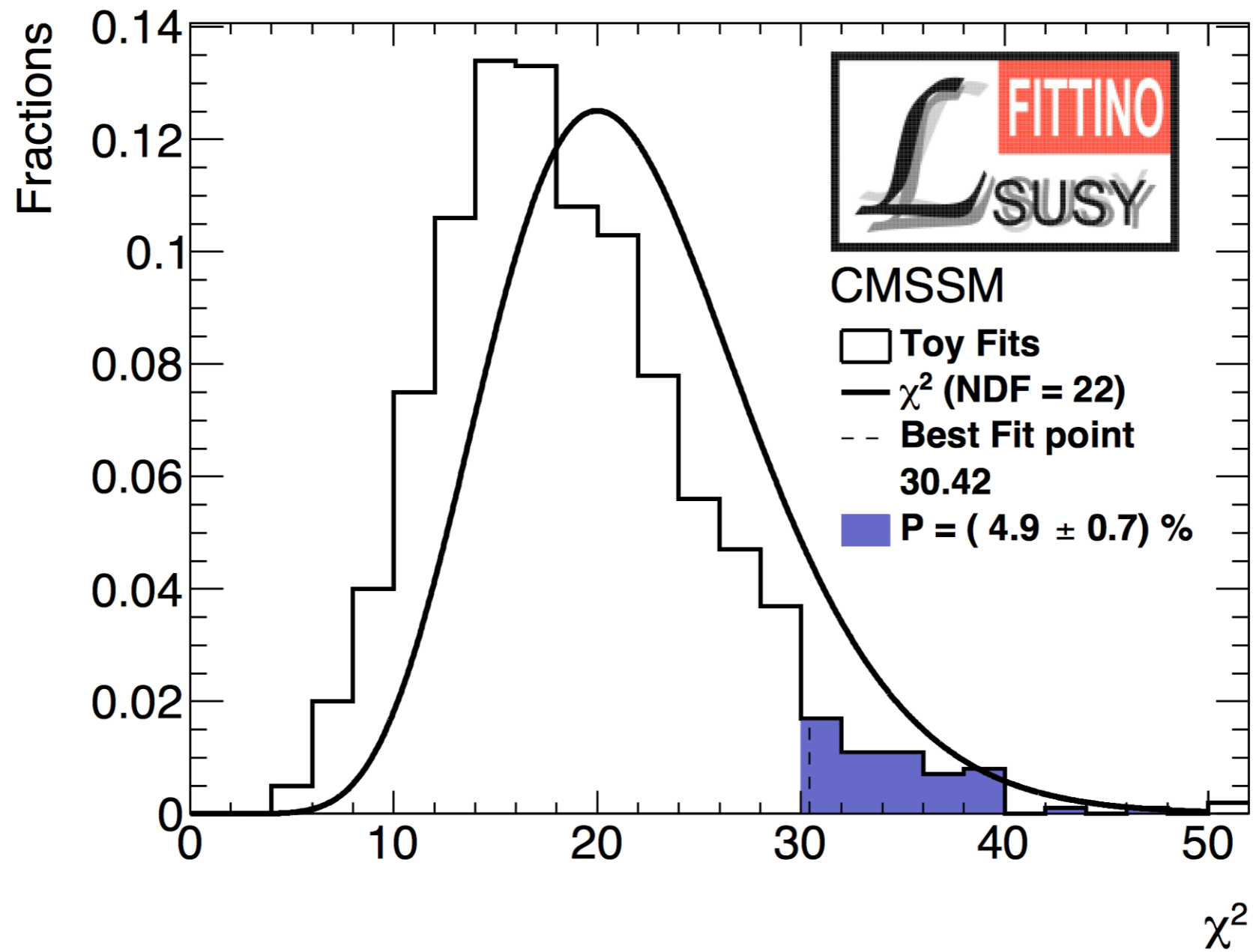
⁴ Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Brazil

⁵ Institute for Theoretical Particle Physics and Cosmology, RWTH Aachen, Aachen, Germany

⁶ Institut für Theoretische Physik und Astrophysik, University of Würzburg, Würzburg, Germany

⁷ Santa Cruz Institute for Particle Physics, University of California, Santa Cruz, CA 95064, USA

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Fit(s) for LHC run-2

A main objective of the LHC is the search for and the possible discovery of new physics beyond the Standard Model. An essential aspect is the quantitative interpretation, i.e. fits, of the data in terms of existing, well-motivated new physics models. These can be complete models, such as the constrained minimal supersymmetric model, effective TeV-scale models like the general MSSM, or simplified models, constructed to understand a subset of the data in terms of easily understandable physical parameters.

We propose to bring together world-leading experts in the area of global fits for BSM models and Higgs physics, to discuss status and challenges for the LHC run-2.

This workshop is jointly funded by the Higgs Centre and the DFG Network "New Physics at the LHC".

If you have been invited to attend this workshop, please fill in the registration form below. If you would like to receive an invite, please contact [mkraemer \[at\] physik.rwth-aachen.de](mailto:mkraemer@physik.rwth-aachen.de) (subject: Fits for LHC Workshop Oct 2016) (Michael Kraemer) in the first instance.

Speakers should please email their slides to [j.m.smillie \[at\] ed.ac.uk](mailto:j.m.smillie@ed.ac.uk) and/or [mkraemer \[at\] physik.rwth-aachen.de](mailto:mkraemer@physik.rwth-aachen.de) (or pass them over via USB) for inclusion on the indico page.

Timetable

See the full timetable on Indico

OCT 10-12 2016 | Fit(s) for LHC run-2

Venues

The Higgs Centre for Theoretical Physics

School of Physics and Astronomy
James Clerk Maxwell Building
Peter Guthrie Tait Road
Edinburgh
EH9 3FD
UK

Organisers

- > Herbi Dreiner
- > Joachim Kopp
- > Michael Krämer (RWTH Aachen University)
- > Tilman Plehn (Heidelberg University)
- > Jennifer Smillie (University of Edinburgh)
- > Jamie Tattersall



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Fit(s) for

A main objective of the workshop is to go beyond the Standard Model fits, of the data in terms of complete models, such as TeV-scale models like supersymmetry to understand a subset of the data.

We propose to bring together experts in these models and Higgs physics.

This workshop is jointly organized by the Higgs Centre at the LHC".

If you have been invited, please contact the organizers below. If you would like to propose a workshop, please contact physik.rwth-aachen.de (subject: Fit(s) for the LHC) by email instance.

Speakers should please contact the organizers at physik.rwth-aachen.de.

Timetable

See the full timetable



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The afterlife: machine learning

Eur. Phys. J. C (2017) 77:707
DOI 10.1140/epjc/s10052-017-5224-8

THE EUROPEAN
PHYSICAL JOURNAL C



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Regular Article - Theoretical Physics

SCYNet: testing supersymmetric models at the LHC with neural networks

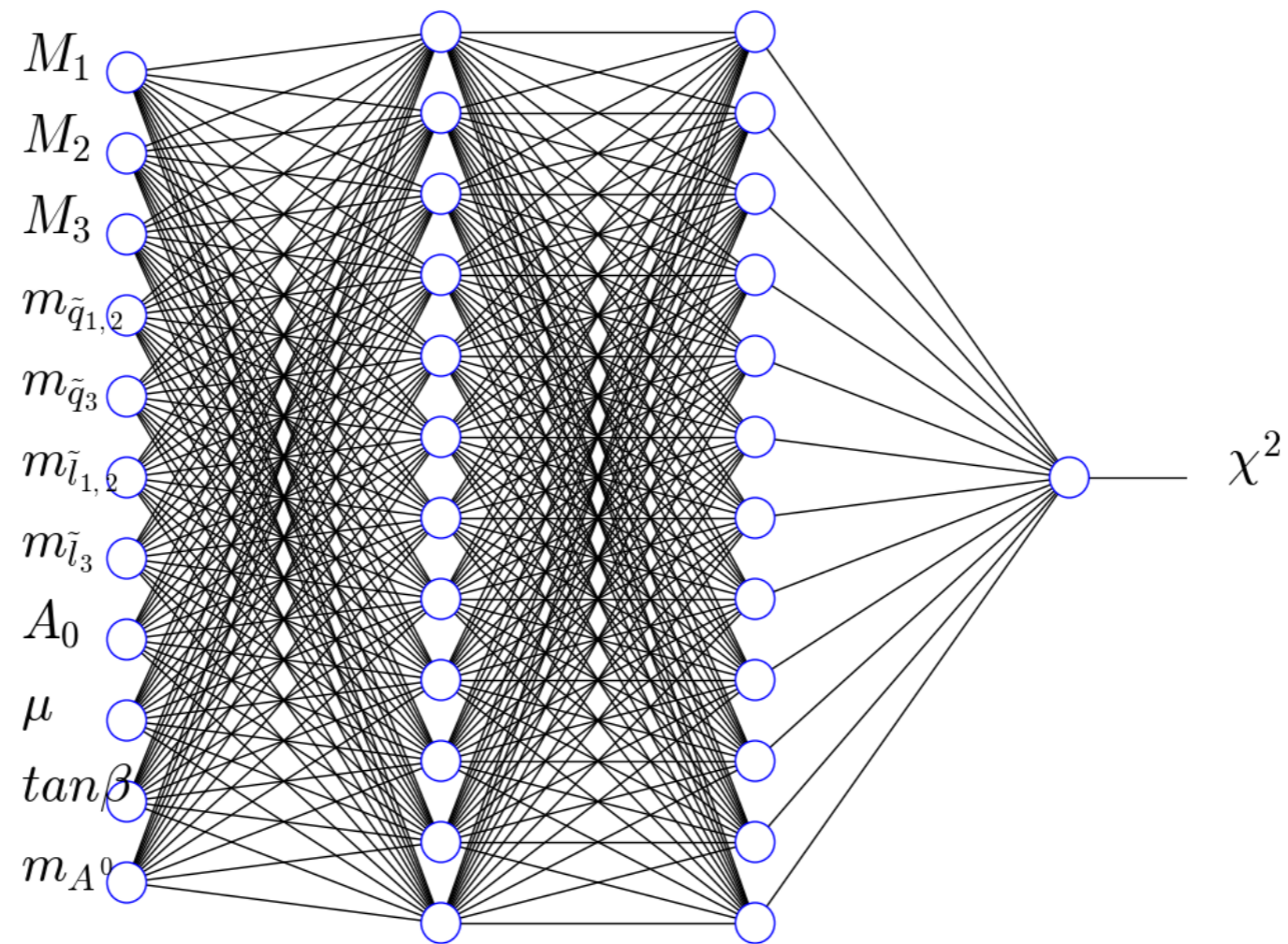
Philip Bechtle^{1,a}, Sebastian Belkner^{1,b}, Daniel Dercks^{2,c}, Matthias Hamer^{1,d}, Tim Keller^{3,e}, Michael Krämer^{3,f}, Björn Sarrazin^{3,g}, Jan Schütte-Engel^{3,h}, Jamie Tattersall^{3,i}

¹ Universität Bonn, Nussallee 12, Bonn, Germany

² Universität Hamburg, Luruper Chaussee 149, Hamburg, Germany

³ Institute for Theoretical Particle Physics and Cosmology, RWTH Aachen University, 52074 Aachen, Germany

The afterlife: machine learning



Philip Bechtle, Sebastian Belkner, Daniel Dercks, Matthias Hamer, Tim Keller, Michael Krämer, Björn Sarrazin, Jan Schütte-Engel, Jamie Tattersall, Eur.Phys.J.C 77 (2017) 10, 707

The afterlife: machine learning

MK

Hi ChatGPT, can you tell me something about the physicist Herbert "Herbi" Dreiner?



Yes, I can tell you about Herbert "Herbi" Dreiner. Herbert Dreiner is a theoretical physicist who is known for his research in particle physics and cosmology. He was born in Germany in 1963 and received his PhD from the University of Munich in 1989.



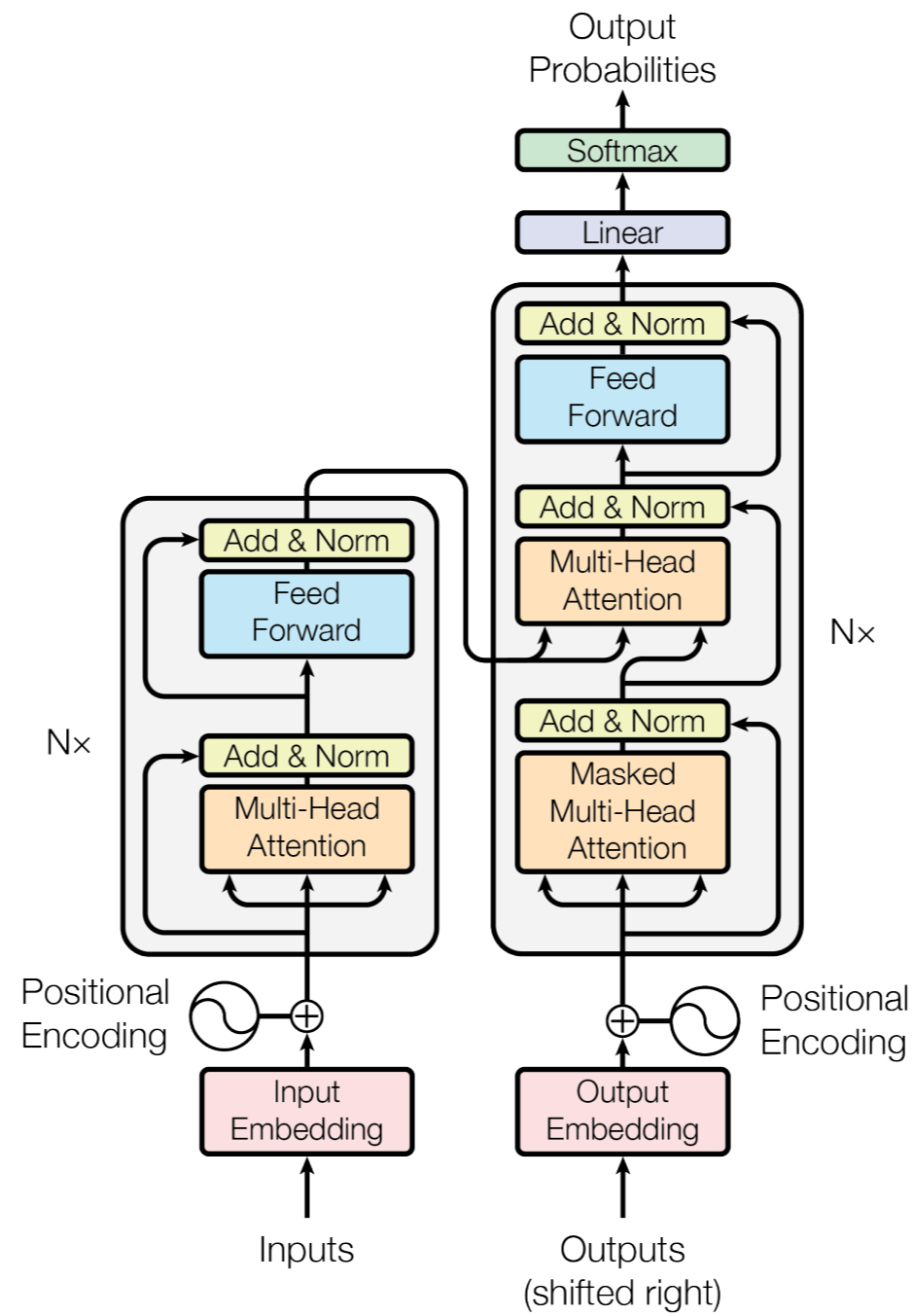
After completing his PhD, Dreiner worked as a postdoctoral researcher at CERN, the European Organization for Nuclear Research in Geneva, Switzerland, and at the University of California, Berkeley, in the United States. He later became a professor of theoretical physics at the University of Bonn in Germany, where he currently works.

Dreiner's research focuses on topics such as supersymmetry, dark matter, and the Higgs boson. He has published numerous papers in these fields and is considered an expert in his area of research. He has also collaborated with experimental physicists to analyze data from particle accelerators such as the Large Hadron Collider at CERN.

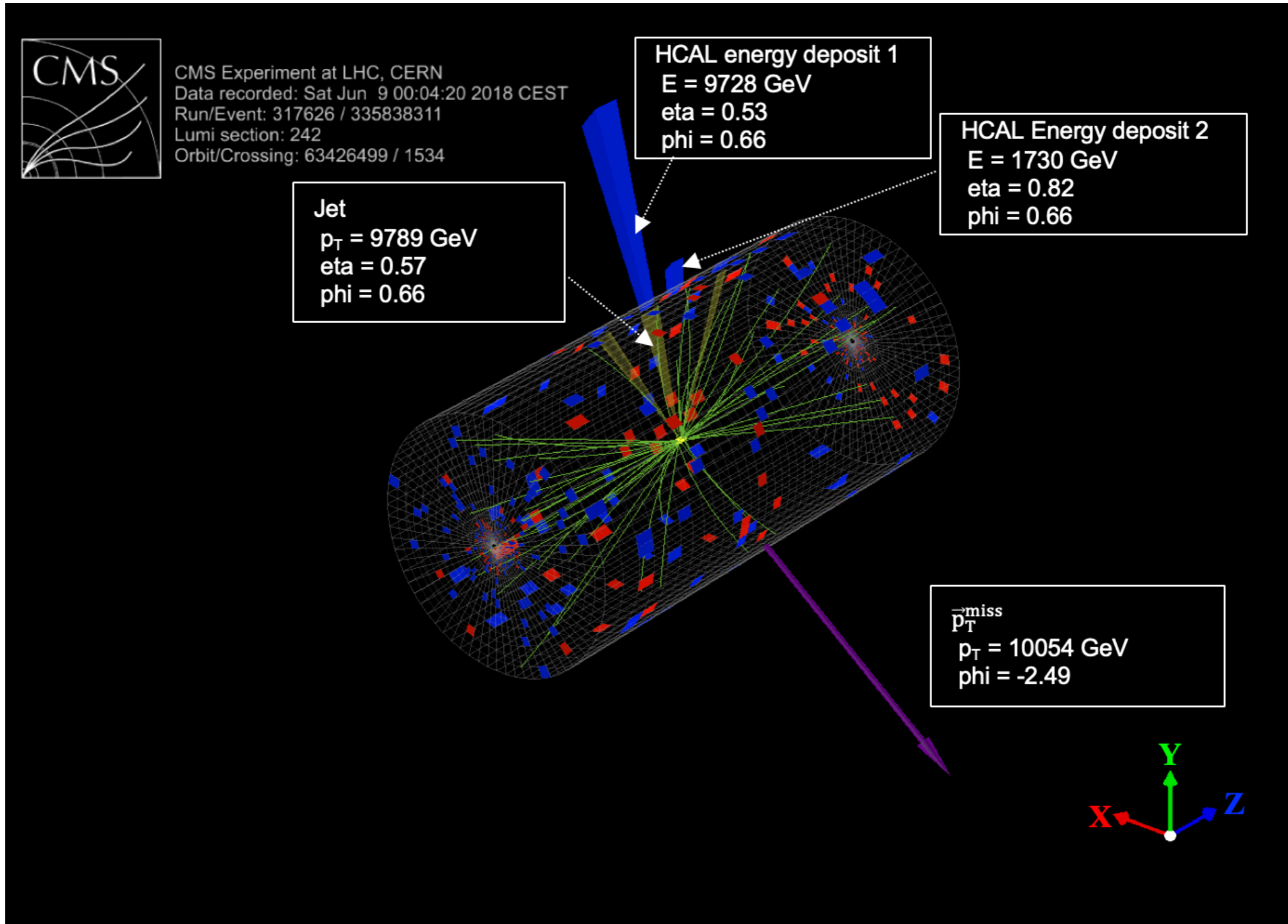
Dreiner has received several awards for his contributions to physics, including the Gottfried Wilhelm Leibniz Prize, which is one of the most prestigious awards for scientists in Germany. In addition to his research, Dreiner is also involved in science outreach and is a member of the German Physical Society's committee on physics education.

Overall, Herbert Dreiner is a prominent physicist whose research has advanced our understanding of the fundamental building blocks of the universe.

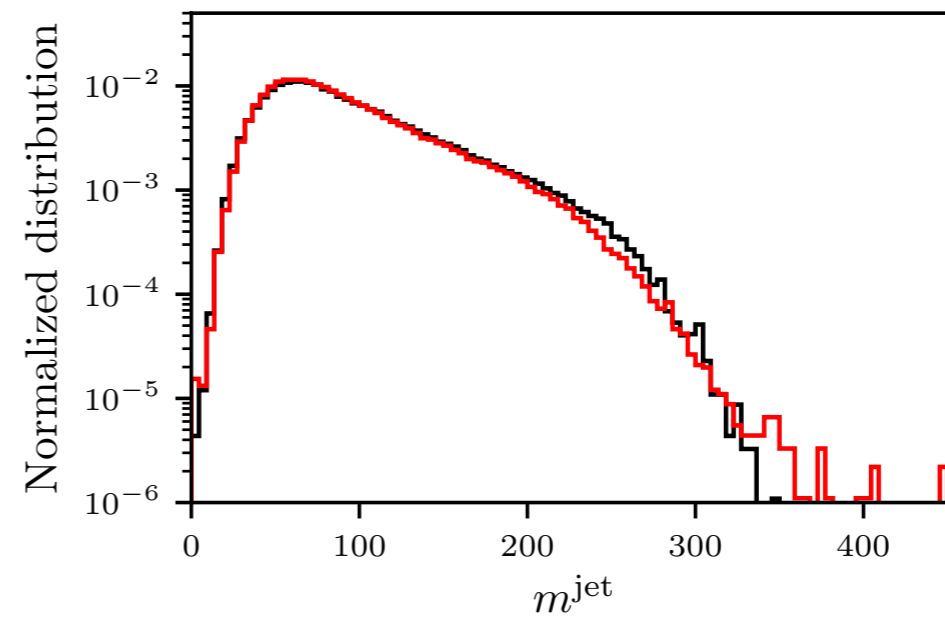
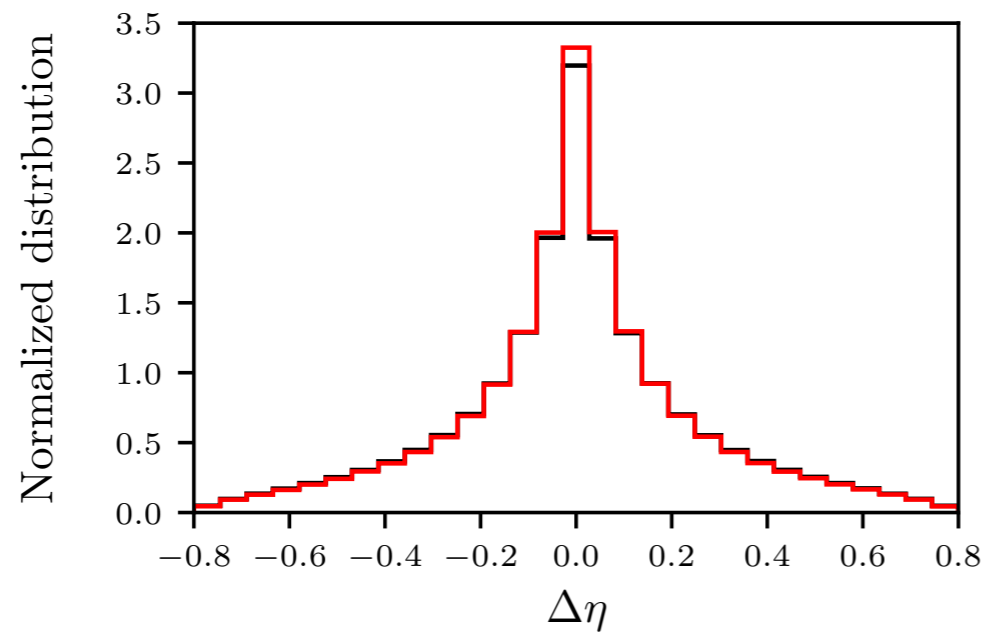
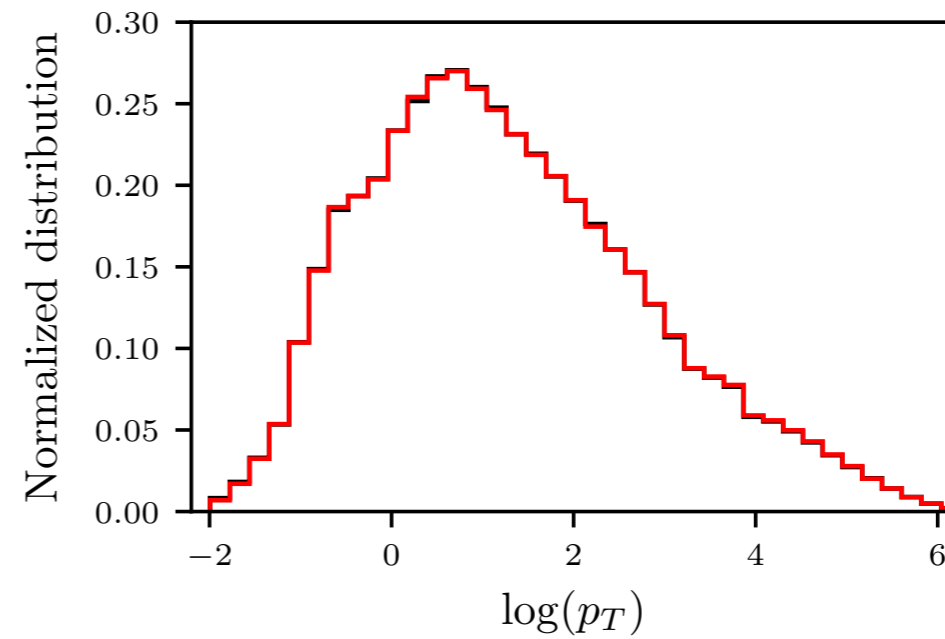
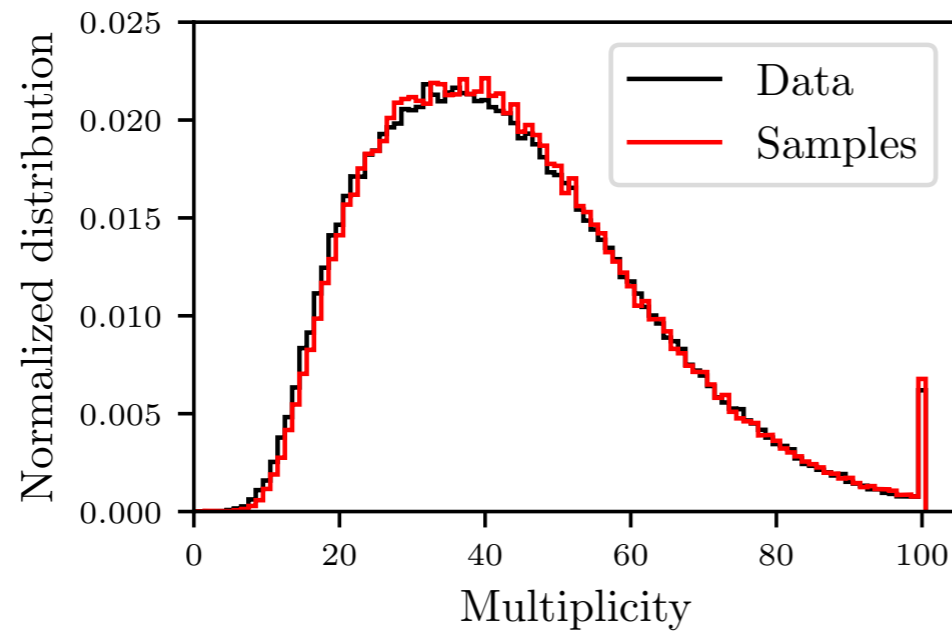
The afterlife: machine learning



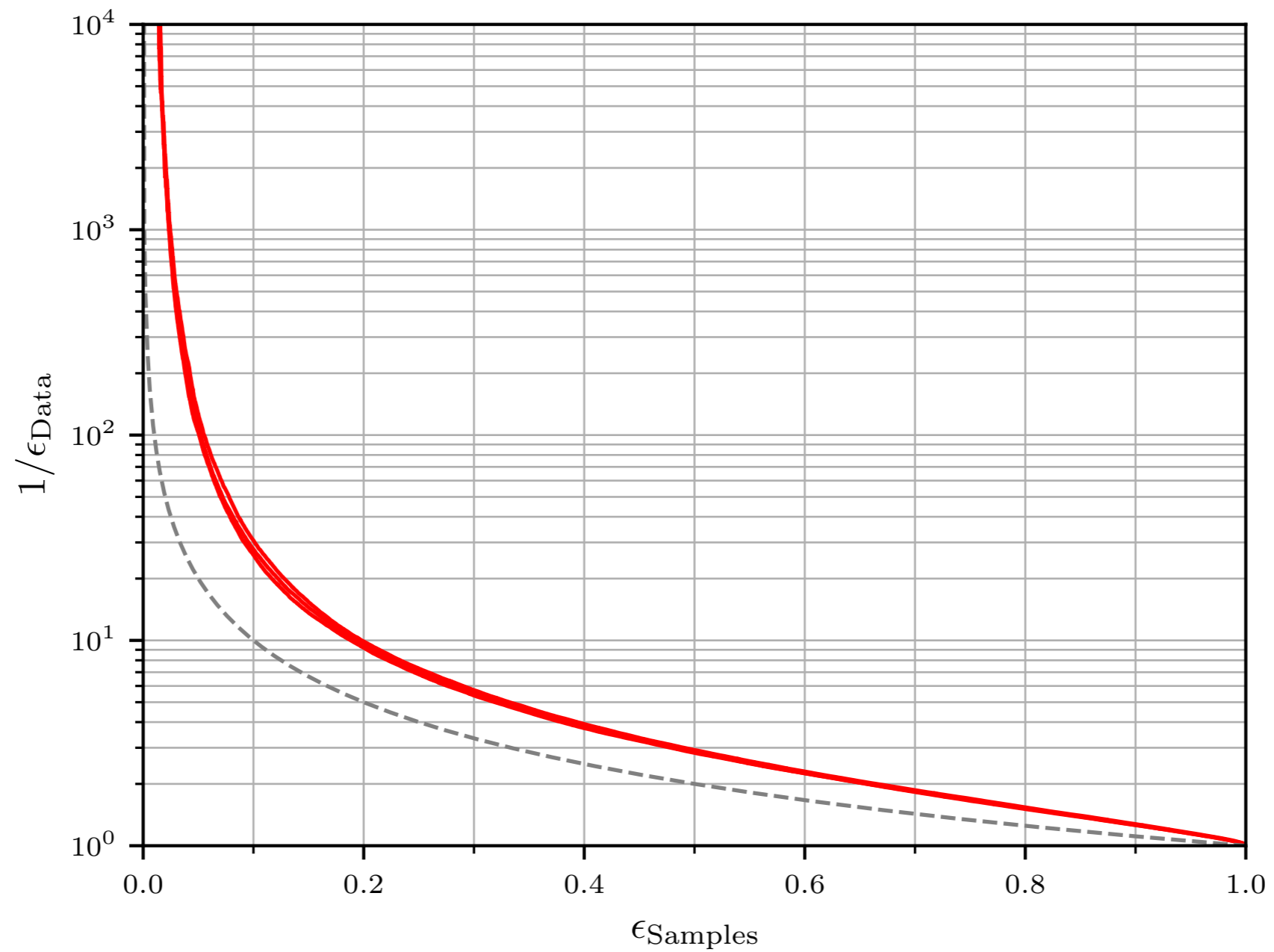
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The afterlife: machine learning



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Thank you Herbi!

