

Literaturverzeichnis

- [1] P. Bak, *How nature works*, (Springer, New York 1996).
- [2] P. Bak, C. Tang and K. Wiesenfeld, Phys. Rev. Lett. 59, 381 (1987); Phys. Rev. A38, 364 (1988).
- [3] W. H. Press, Comm. Mod. Phys. C7, 103 (1978).
- [4] B. Gutenberg and C. F. Richter, *Seismicity of the Earth*, (Princeton University Press, Princeton, NJ, 1949); C. H. Scholz, *The mechanics of Earthquakes and Faulting*, Cambridge University Press, 1990; C. H. Scholz, in T. Rieste and D. Sherrington (eds.), *Spontaneous Formation of Space-Time Structures and Criticality*, Dordrecht: Kluwer, 1991.
- [5] D. M. Raup and J. J. Seposki, Proceedings of the National Academy of Science, USA, 81, 801 (1984).
- [6] P. Ball, Nature 402, C73 (1999).
- [7] H. J. Jensen, *Self-Organized Criticality*, (Cambridge University Press, Cambridge 1998).
- [8] H. M. Jaeger, C. H. Liu, and S. R. Nagel, Phys. Rev. Lett. 62, 40 (1989); H. M. Jaeger, and S. R. Nagel, Science 255, 1523 (1989); J. Rosendahl, M. Vekic, and J. Kelly, Phys. Rev. E 47, 1401 (1993); E. Somfai, A. Cziok and T. Vicsek, Physica 205A, 355 (1994); E. Somfai, A. Cziok and T. Vicsek, J. Phys. A 27,, L757 (1994);

- [9] V. Frette et al., *Nature* 379, 49 (1996).
- [10] D. Dhar and R. Ramaswamy, *Phys. Rev Lett.* 63, 1659 (1989); D. Dhar, *Phys. Rev Lett.* 64, 1613 (1990); M. Creutz, *Nucl. Phys. B (Proc. Suppl.)* 20, 758 (1991); K. Christensen, H. C. Fogedby, and H. J. Jensen, *J. Stat. Phys.* 63, 653 (1991); M. Creutz, *Nucl. Phys. B (Proc. Suppl.)* 26, 252 (1992); K. Christensen and Z. Olami, *Phys. Rev. E* 48, 3361 (1993); H. Flyvbjerg, *Phys. Rev. Lett.* 76, 940 (1996); M. Paczuski and S. Boettcher, *Phys. Rev. Lett.* 77, 111 (1996); K. B. Lauritsen, S. Zapperi, and H. E. Stanley, *Phys. Rev. E* 54, 2483, (1996); M. V. Medvedev and P. H. Diamond, *Phys. Rev. E* 58, 6824 (1998); S. D. Edney, P. A. Robinson, and D. Chisholm, *Phys. Rev. E* 58, 5395 (1998).
- [11] P. Bak, K. Chen and M. Creutz, *Nature* 342, 780 (1989).
- [12] P. Bak and K. Sneppen, *Phys. Rev. Lett.* 71, 4083 (1993).
- [13] H. Flyvbjerg and B. Lautrup, *Phys. Rev. A* 46, 6714 (1992); P. Bak, H. Flyvbjerg, and B. Lautrup, *Phys. Rev. A* 46, 6724 (1992); S. Maslov, M. Paczuski, and P. Bak, *Phys. Rev. Lett.* 73, 2162 (1994); S. Zapperi, K. B. Lauritsen, and H. E. Stanley, *Phys. Rev. Lett.* 75, 4071 (1995). S. Boettcher and M. Paczuski, *Phys. Rev. E* 54, 1082 (1996); P. Bak and S. Boettcher, *Physica* D107, 171 (1997); S. Boettcher and M. Paczuski, *Phys. Rev. Lett.* 79, 889 (1997); S. Boettcher, *Phys. Rev. E* 56, 6466 (1997); S. Boettcher and M. Paczuski, *Phys. Rev. Lett.* 2267 (2000).
- [14] P. Bak and C. Tang, *J. Geophys. Res.* B94, 15635 (1989); K. Ito and M. Matsuzaki, *J. Geophys. Res.* B95, 6853 (1989); Z. Olami, H. J. Feder, K. Christensen, *Phys. Rev. Lett.* 68, 1244 (1992).
- [15] L. Pietronero, A. Vespignani, and S. Zapperi, *Phys. Rev. Lett.* 72, 1690 (1994); A. Vespignani, S. Zapperi, and L. Pietronero, *Phys. Rev. E* 51, 1711

- (1995); V. Loretto, L. Pietronero, A. Vespignani, and S. Zapperi, Phys. Rev. Lett. 75, 465 (1995); A. Vespignani, S. Zapperi, and L. Pietronero, Phys. Rev. Lett. 77, 4560 (1996).
- [16] S. J. Gould, Paleobiology 3, 135 (1977); D. M. Raup, Science 231, 1528 (1986).
- [17] M. Paczuski, Sergei Maslov, and Per Bak, Phys. Rev. D53, 414 (1996).
- [18] H. Abramowicz and A. Caldwell, Rev. Mod. Phys. 71, 1275 (1999).
- [19] S. Aid, et al., H1 Coll., Phys. Lett. B354, 494 (1995); M. Derrick, et al., ZEUS Coll., Phys. Lett. B345, 576 (1995).
- [20] F. Halzen and A. D. Martin, *Quarks and Leptons: An Introductory Course in Modern Particle Physics*, (John Wiley and Sons, 1984), p. 179.
- [21] M. Derrick, et al., ZEUS Coll., Phys. Lett. B315, 481 (1993); T. Ahmed, et al., H1 Coll., Nucl. Phys. B429, 477 (1994).
- [22] A. M. Cooper-Sarkar and R. C. E. Devenish, Int. J. Mod. Phys. A13, 3385 (1998).
- [23] L.A.T. Bauerdick, H. Kowalski und G. Wolf, Phys. Bl. 50, 1114 (1994).
- [24] T. Ahmed, et al., H1 Coll., Phys. Lett. B348, 681 (1995); M. Derrick, et al., ZEUS Coll., Z. Phys. C68, 569 (1995); ibid, C70, 391 (1996); J. Phillips, in *Proceeding of the 28th Int. Conf. on High-Energy Physics, Warsaw, 1996*, edited by Z. Ajduk and A. K. Wroblewski (World Scientific, 1997) Vol.1, p. 623.
- [25] C. Adloff et al., H1 Coll., Z.Phys. C76, 613 (1997); J. Breitweg et al., ZEUS Coll., Europ.Phys.J. C6, 43 (1999).

- [26] E. Gallo, in Proc. of the 18th Int. Symp. on Lepton - Photon Interactions, edited by A. De Roeck and A. Wagner, Singapore, World Scientific (1998).
- [27] C. Adloff, et al., H1 Coll., Z. Phys. C74, 221 (1997); J. Breitweg, et al., ZEUS Coll., Z. Phys. C75, 421 (1997); M. Derrick, et al., ZEUS Coll., Phys. Lett. B293, 465 (1992).
- [28] M.G. Albrow, et al., Nucl. Phys. B108, 1 (1976); R. D. Schamberger, et al., Phys. Rev. D17, 1268 (1978).
- [29] R. L. Cool, et al., Phys. Rev. Lett. 47, 701 (1981); F. Abe, et al., CDF Coll., Phys. Rev. D50, 5535 (1994); K. Goulianos, in *Proceedings of DIS97, Chicago, 1997*, edited J. Repond and D. Krakauer, (AIP), p.527.
- [30] M. Bozzo, et al., UA4 Coll., Phys. Lett. B136, 217 (1984); D. Bernard, et al., UA4 Coll., Phys. Lett. B186, 227 (1987); A. Brandt, et al., UA8 Coll., Nucl. Phys. B514, 3 (1998).
- [31] M. Derrick, et al., ZEUS Coll., Phys. Lett. B332, 228 (1994); Phys. Lett. B346, 399 (1995); S. Aid, et al., H1 Coll., Nucl. Phys. B445, 3 (1995).
- [32] S. Abachi, et al., D0 Coll., Phys. Rev. Lett. 72, 2332 (1994); Phys. Rev. Lett. 76, 734 (1996); F. Abe, et al., CDF Coll., Phys. Rev. Lett. 74, 855 (1995).
- [33] J. Breitweg et al., Eur. Phys. J. C1, 81-96 (1998); Eur. Phys. J. C2, 237-246 (1998).
- [34] C. Boros, Z. Liang and T. Meng, Phys. Rev. D54, 6658 (1996).
- [35] T. Meng, R. Rittel and Y. Zhang, Phys. Rev. Lett. 82, 2044 (1999).
- [36] C. Boros, T. Meng, R. Rittel, K. Tabelow, and Z. Yang, Phys. Rev. D61, 094010 (2000).
- [37] T. Meng, R. Rittel, K. Tabelow and Y. Zhang, hep-ph/9910331.

- [38] F.E.Low, Phys. Rev. D12, 163 (1975); S. Nussinov, Phys. Rev. Lett. 34, 1286 (1975); G. Ingelman, P.Schlein, Phys. Lett. B152, 256 (1985); A. Donnachie, P.V. Landshoff, Phys. Lett. B191, 309 (1987); Y.A.Simonov, Phys. Lett. B249, 514 (1990); G. Ingelman, K. Janson-Prytz, Phys. Lett. B281, 325 (1992); G.Ingelman, K.Prytz, Z. Phys. C58, 285 (1993).
- [39] J. Bartels, in *Proceedings of the 17th Int. Symp. on Lepton-Photon Interactions, Beijing, 1995*, edited by Zheng Zhi-peng and Chen He-sheng, (World Scientific, 1996), Vol. 2, p. 554; H. Abramowicz, J. Bartels, L. Frankfurt and H. Jung, in *Proceedings of the Workshop on Future Physics at HERA*, edited by G. Ingelman, A. De Roeck, R. Klanner, (publ. by DESY), Vol. 2, p. 535; E. Gallo, in *Proceedings of the 18th Int. Symp. on Lepton - Photon Interactions, Hamburg, 1997*, edited by A. DeRoeck and A. Wagner, (World Scientific, Singapore 1998); and the references given therein; M. Erdmann, in *Proceedings of the 29th International Conference on High Energy Physics, Vancouver, 1998*, (in press).
- [40] V. D. Barger and R. J. N. Phillips, *Collider Physics*, Addison-Wesley, 1987.
- [41] H. Flyvbjerg, K. Sneppen and P. Bak, Phys. Rev. Lett. 71, 4087 (1993).
- [42] J. de Boer, B. Derrida, H. Flyvbjerg, A. D. Jackson, and T. Wettig, Phys. Rev. Lett. 73, 906 (1994).
- [43] G. Berendt und E. Weimar, *Matematik für Physiker*, Band 2, Physik Verlag, Weinheim 1983.
- [44] R. A. Brualdi, *Introductory Combinatorics*, North Holland, New York-Amsterdam-Oxford, 1977.
- [45] J. H. Conway and R. K. Guy, *The book of numbers*, Springer-Verlag, New York, 1996.

- [46] D. F. Bailey, Mathematics Magazine 69, Vol.2, 128 (1996).
- [47] S. Boettcher and Maya Paczuski, Phys. Rev. Lett. 76, 348 (1996).
- [48] M. Paczuski, P. Bak, and S. Maslov, Phys. Rev. Lett. 74, 4253 (1995).
- [49] J. de Boer, A. D. Jackson, and T. Wettig, Phys. Rev. E 51, 1059 (1995).
- [50] F. Golcher, R. Rittel, and K. Tabelow, in preparation.
- [51] M. M. Block and R. N. Cahn, Rev. Mod. Phys., Vol. 57, No. 2, 563 (1985);
J. Lee-Franzini, in *AIP Conference Proceedings No. 15*, (American Institute
of Physics, New York 1973) p.147; K. Goulian, Phys. Rep. 101 No.3, 169
(1983); and in *Proceedings of DIS97, Chicago, 1997*, edited by J. Repond
and D. Krakauer, (AIP), p. 527; U. Amaldi, M. Jacob, and G. Matthiae,
Ann. Rev. Nucl. Sci. 26, 385 (1976).
- [52] R. Serber, Rev. Mod. Phys. 36, 649 (1964); N. Byers and C. N. Yang, Phys.
Rev. 142, 976 (1966); T. T. Chou and C. N. Yang, Phys. Rev. 170, 1591
(1968); 175, 1832 (1968); 22, 610 (1980).
- [53] L. D. Landau and E. M. Lifshitz, *The Classical Theory of Fields*, 2nd rev.
edn. (Pergamon Press, Oxford 1962), p. 177 and p. 165.
- [54] K. Gottfried and V. Weiskopf, *Concepts in Particle Physics*, (Oxford Uni-
versity Press, New York, and Clarendon Press, Oxford 1986), vol. II, p. 347.
- [55] R. K. Pathria, *Statistical Mechanics*, (Pergamon Press, Oxford 1972), p. 451.
- [56] I. N. Bronstein und K. A. Semendjajew, *Taschenbuch der Mathematik*, 22.
Auflage, Verlag Harri Deutsch, Thun 1985.
- [57] I. S. Gradshteyn and I. M. Ryzhik, *Table of Integrals, Series and Products*,
(Academic Press, New York 1980), p. 682.