FIG. 10: Binned samples of the double Gaussian distribution $p_{dGau}(x)$. The normalisation is arbitrary and has no relevance here. (a) uses a Metropolis-Hastings algorithm and yields a good approximation whereas (b) uses the adaptive algorithm.
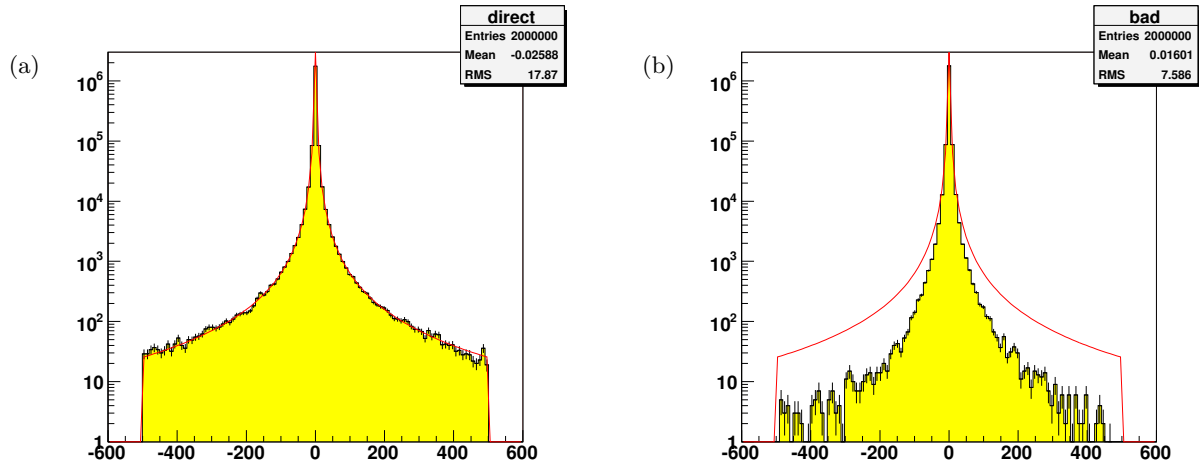

FIG. 11: Binned sampling of a Cauchy distribution $1/(1 + x^2)$ (shown in solid red line) truncated at $x = \pm 500$. (a) shows the result of direct sampling and yields a good approximation whereas (b) uses the adaptive algorithm.

[1] S. P. Martin, hep-ph/9709356.
[2] J. R. Ellis, K. A. Olive, Y. Santoso, and V. C. Spanos, Phys. Lett. **B588** (2004) 7–16, hep-ph/0312262.
[3] L. Roszkowski, R. Ruiz de Austri and K.-Y. Choi, JHEP **0508** (2005) 080 [arXiv:hep-ph/0408227]; D.G. Cerdeno *et al*, hep-ph/0509275.
[4] L. Covi, J. E. Kim, L. Roszkowski Phys. Rev. Lett. **82** (1999) 4180-4183, hep-ph/9905212; L. Covi, H. B. Kim, J. E. Kim, L. Roszkowski JHEP **0105** (2001) 033, hep-ph/0101009; L. Covi, L. Roszkowski, R. Ruiz de Austri and M. Small, JHEP **0406** (2004) 003 hep-ph/0402240.
[5] J. R. Ellis, J. S. Hagelin, D. V. Nanopoulos, K. A. Olive, and M. Srednicki, Nucl. Phys. **B238** (1984) 453–476.
[6] H. Baer *et. al.*, JHEP **07** (2002) 050, hep-ph/0205325.
[7] J. R. Ellis, K. A. Olive, Y. Santoso, and V. C. Spanos,

Phys. Lett. **B565** (2003) 176–182, hep-ph/0303043.
[8] M. Battaglia *et. al.*, Eur. Phys. J. **C33** (2004) 273–296, hep-ph/0306219.
[9] J. R. Ellis, K. A. Olive, Y. Santoso, and V. C. Spanos, Phys. Rev. **D69** (2004) 095004, hep-ph/0310356.
[10] M. E. Gomez, T. Ibrahim, P. Nath and S. Skadhauge, Phys. Rev. D **70**, 035014 (2004) [arXiv:hep-ph/0404025].
[11] J. R. Ellis, S. Heinemeyer, K. A. Olive, and G. Weiglein, JHEP **02** (2005) 013, hep-ph/0411216.
[12] **ATLAS** Collaboration, W. W. Armstrong *et. al.*, CERN-LHCC-94-43.
[13] D. N. Spergel *et. al.*, Astrophys. J. Suppl. **148** (2003) 175, astro-ph/0302209.
[14] C. L. Bennett *et. al.*, Astrophys. J. Suppl. **148** (2003) 1, astro-ph/0302207.