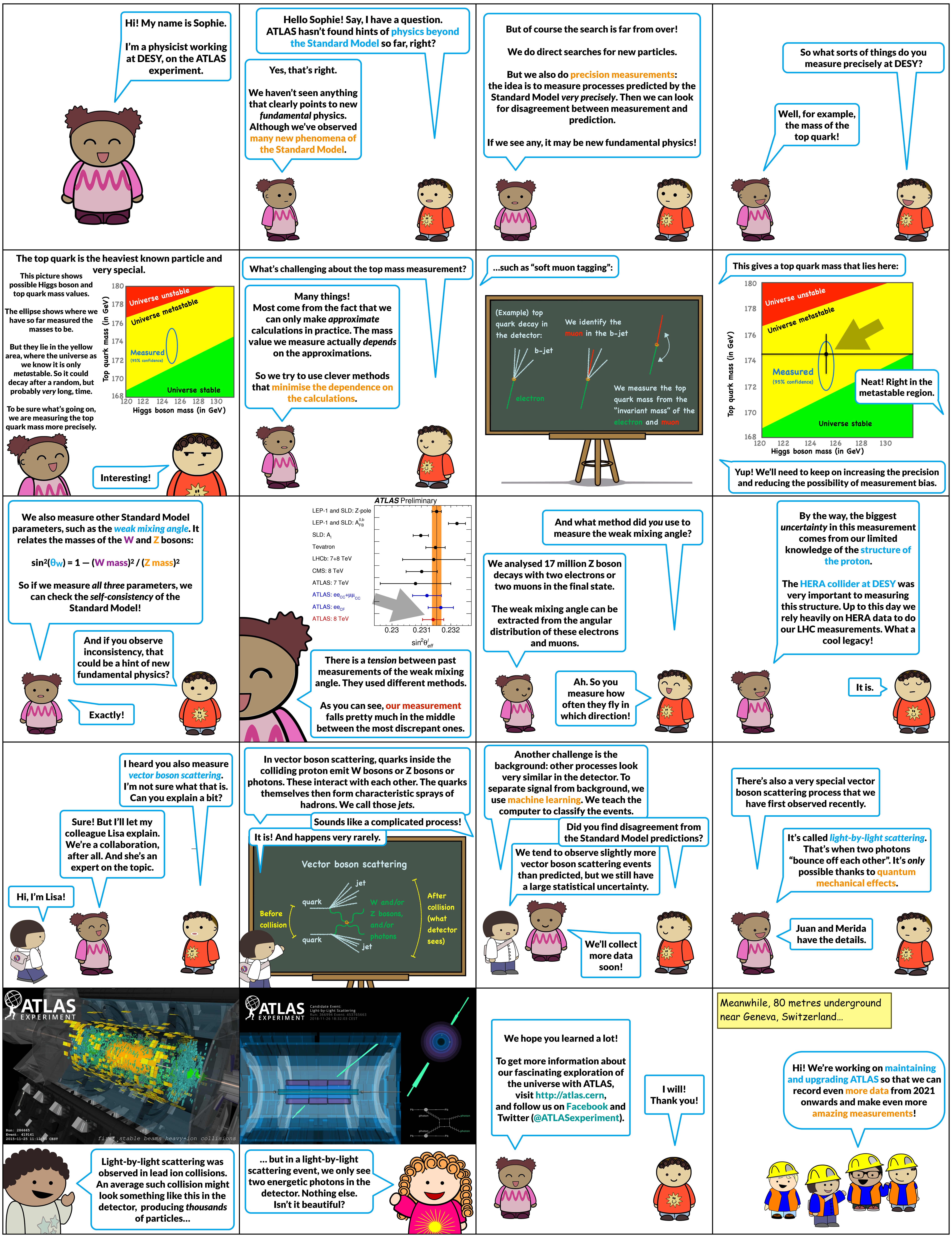
To be precise... with ATLAS

Precision measurements and studies of ultra-rare processes for testing the Standard Model of particle physics



Poster: Stefan Richter (DESY)

References

Top quark mass measurement using soft muon tagging: ATLAS Collaboration, ATLAS-CONF-2019-046 (http://cdsweb.cern.ch/record/2693954)
Figure of the universe's vacuum stability adapted from: J. R. Espinosa, PoS TOP2015 (2016) 043 (https://arxiv.org/abs/1512.01222)
Weak mixing angle measurement: ATLAS Collaboration, ATLAS-CONF-2018-037 (http://cdsweb.cern.ch/record/2630340)
Latest vector boson scattering measurement with direct DESY involvement: ATLAS Collaboration, Phys. Rev. Lett. 123 (2019) no. 16, 161801 (https://doi.org/10.1103/PhysRevLett.123.161801)
Light-by-light scattering measurement: ATLAS Collaboration, ATLAS-CONF-2019-002 (http://cdsweb.cern.ch/record/2667214)

Note: the figure in panels 5 and 8 refers to the pole mass. In panel 8, the direct measurement is shown as if it had directly measured the pole mass, which is not exactly correct and subject to much current debate.