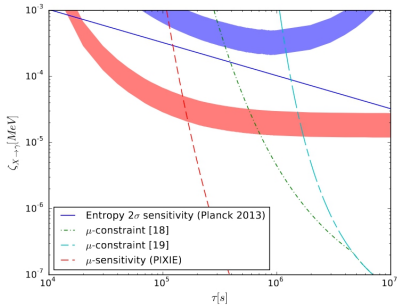

Big Bang Nucleosynthesis (BBN) is an admirable achievement of the standard cosmological model as it very precisely predicts the amount of the most abundant elements, in particular hydrogen and helium. On close inspection the picture is marred by a long standing and annoying problem. Though its abundance is extremely small, the standard predicted amount of lithium is about a factor 3 larger than what observed in some metal-poor stars believed to trace the primordial abundance. Tweaking the theory of BBN to correct the lithium abundance affects that of the hydrogen or helium to an extent that this is ruled out by the Cosmic Microwave Background (CMB).

In a very recent paper, **Pasquale D. Serpico and Vivian Poulin (LAPTh, CNRS)** have shown that a loophole in the calculation of the electromagnetic cascades re-opens the possibility of finding an easy way out to the old problem of the lithium abundance.

In fact, the general result found in the paper is not specifically related to the lithium problem, but rather to the inaccuracy of an approximation used in the description of cascades within perfectly standard physics (for another application, see their follow-up paper). The improvement in the calculation allows now to bridge a gap between the lithium problem, the nature of dark matter, or to signatures of particle physics beyond the standard model (for instance in the neutrino sector), and therefore could lead to a better understanding of other fundamental mysteries of our Universe. The paper, *L oophole to the Universal Photon Spectrum in Electromagnetic Cascades and Application to the Cosmological Lithium Problem* , has now appeared in Physical Review Letters and has been blogged and discussed, see here .