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Medium and high p_T direct photons in PHENIX GABOR DAVID, Brookhaven National Laboratory, PHENIX COLLABORATION — We will present a critical survey of published and recent preliminary results on direct photon production observed by PHENIX in various colliding systems and energies. Within current systematic errors all available p+p data are consistent with NLO pQCD calculations and after proper scaling and accounting for the isospin effect the heavy ion data are also consistent with the dominance (exclusivity?) of primordial hard scattering. In other words, no evidence of additional production (like jet-photon conversion) or change of nPDFs has been found so far, nor has a clean signal of direct photon flow been seen. However, all these effects are predicted to be relatively small and may just be obscured by earlier experimental uncertainties. In light of the latest available high statistics data we will review what (if any) new conclusions can be drawn on various mechanisms of direct photon production at medium and high p_T in heavy ion collisions.

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