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**Luis G Valdez-Sanchez\*** (lvsanchez@utep.edu), Department of Mathematical Sciences, 500 West University Ave, El Paso, TX 79968-0514. *Distance three toroidal Dehn fillings of hyperbolic knots and manifolds.*

For a hyperbolic 3-manifold  $M$  with a torus boundary component  $T_0$ , a Dehn filling  $M(r) = M \cup_{T_0} S^1 \times D^2$  of  $M$  along a slope  $r \subset T_0$  (where  $r$  bounds a disk in  $S^1 \times D^2$ ) is said to be *toroidal* if  $M(r)$  contains an incompressible torus. We present the classification of all such pairs  $(M, T_0)$  admitting toroidal Dehn fillings  $M(r_1)$  and  $M(r_2)$  at distance  $\Delta(r_1, r_2) = 3$ , where one of the manifolds  $M(r_i)$  contains an incompressible *positive torus*, ie a torus intersected by the core of the Dehn filling solid torus of  $M(r_i)$  always in the same direction. We also outline the classification of hyperbolic knots in  $S^3$  admitting toroidal surgeries at distance 3, where in each surgery manifold there is an incompressible torus intersected twice by the core of the solid torus used in the surgery. (Received April 13, 2010)