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**Fabiola Manjarrez-Gutierrez\***, Instituto de Matematicas, UNAM, Area de la Investigacion Cientifica, Circuito Exterior. CU Coyoacan, 04510 Mexico DF, Mexico. *Additivity of circular width for knots in  $S^3$* . Preliminary report.

A circular handle decomposition of a knot exterior  $E(K)$  is a structure  $E(K) = (R \times I) \cap N_1 \cap T_1 \dots \cap T_l \cap N_l / (R \times 0 \sim R \times 1)$ , each  $N_i$  is a collection of 1-handles, each  $T_i$  is a collection of 2-handles and  $R$  is a Seifert surface for  $K$ . We can reorder the handles in such a way that the intermediate steps are as “simple” as possible, giving rise to the definition of *circular width of the knot exterior*, denoted by  $cw(E(K))$ , and *circular thin position of the knot exterior*. Let  $K_1 \# K_2$  be the connected sum of two knots  $K_1$  and  $K_2$  in  $S^3$ , it is not hard to see that  $cw(E(K_1 \# K_2)) \leq cw(E(K_1)) \# cw(E(K_2))$ . It is natural to ask: Is it true that  $cw(E(K_1 \# K_2)) = cw(E(K_1)) \# cw(E(K_2))$  ?. We will show special cases for which the answer is positive, as well as a partial result that could let us to answer the question in the more general set. (Received April 12, 2010)