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Abstracts of Short Communications and Posters

Section:

6. Topology

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Incompressible surfaces in the exterior of tunnel number one knots

A knot k in S^3 has tunnel number one if there exists an arc τ embedded in S^3, with $k \cap \tau = \partial\tau$, such that $S^3 - intN(k \cup \tau)$ is a genus 2-handlebody.
We construct for each integer $g \geq 2$, infinitely many tunnel number one knots, whose exterior contain a closed meridionally incompressible surface of genus g.
We also construct for each integer $g \geq 1$, infinitely many tunnel number one knots, whose exterior contain an essential meridional surface of genus g.
These results give affirnative answer to questions asked by C. McA. Gordon and A. Reid.