

On a homeomorphism obtained by bridge position of a knot

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Abstract. For a knot in bridge position of the three sphere, we have a Heegaard splitting of the three sphere such that the knot is included standardly in one of the Heegaard handlebodies. Then we obtain a Heegaard splitting of the zero surgery manifold along the knot from the Heegaard splitting of the three sphere. In this talk, we consider how a Heegaard surface homeomorphism of this Heegaard splitting of the zero surgery manifold is obtained from the Heegaard splitting of the three sphere by the zero surgery of the knot. We show that a Heegaard surface homeomorphism is represented by a certain product of the generators of the mapping class group of the Heegaard surface.