Embedding Coverings in Bundles

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Abstract. If $V \rightarrow X$ is a vector bundle of fiber dimension $k$ and $Y \rightarrow X$ is a finite sheeted covering map of degree $d$, the implications for the Euler class $e(V)$ in $H^k(X)$ of $V$ implied by the existence of an embedding $Y \rightarrow V$ lifting the covering map are explored. In particular it is proved that $dd'e(V) = 0$ where $d'$ is a certain divisor of $d - 1$, and often $d' = 1$. 

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