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**Gotay, Mark J. ; Śniatycki, Jędrzej**
**On the quantization of presymplectic dynamical systems via coisotropic imbeddings.**
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The geometric quantization of a presymplectic manifold $(M, \Omega)$ is studied within the framework of Kostant and Souriau. Here $\Omega$ is a closed 2-form of constant rank on the smooth manifold $M$. The method used is to consider a coisotropic embedding of $M$ into a symplectic manifold $X$ with symplectic form $\omega$. This corresponds to first class constraints in the sense of Dirac. Under suitable conditions on a polarization $F$ of $(X, \omega)$, and for compact $M$, it is shown that the quantized operator associated with a classical observable $f \in C^\infty(X)$ can be determined by operations in an arbitrary small neighbourhood of $M$ in $X$. This is applied to obtain a result on the independence of the quantization of a choice of coisotropic embedding.

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