Title: Flow-invariant structures on unit tangent bundles

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We study unit tangent bundles $T_1 M$ for which the structural operator $h = \frac{1}{2} \mathfrak{L}_\xi \phi$, its characteristic derivative $h' = \nabla_\xi h$ or the characteristic Jacobi operator $\ell = R(\cdot, \xi)\xi$ is invariant under the geodesic flow generated by the characteristic vector field ξ. Also, we prove that the operator ℓ on $T_1 M$ is η-parallel if and only if the base manifold is of constant curvature.

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