

**Meeting:** 998, Houston, Texas, SS 8A, Special Session on Dynamical Systems

998-37-303      **Gonzalo Contreras\*** (gonzalo@cimat.mx), P.O. Box 402, 36.000 Guanajuato, GTO, Mexico,  
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Antonio Carlos, 6627, Caixa Postal 702, 30161-970 Belo Horizonte, MG, Brazil.  *$C^2$  densely the  
2-sphere has an elliptic closed geodesic.*

We prove that a riemannian metric on the 2-sphere or the projective plane can be  $C^2$  approximated by a  $C^\infty$  metric whose geodesic flow has an elliptic closed geodesic. (Received March 01, 2004)