

Abstract Submitted  
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**Fano-Andreev effect in Quantum Dots in Kondo regime**<sup>1</sup> PEDRO ORELLANA, ANA MARIA CALLE, MONICA PACHECO, Universidad Tecnica Federico Santa Maria, VICTOR APEL, Universidad Catlica del Norte — In the present work, we investigate the transport through a T-shaped double quantum dot system coupled to two normal leads and to a superconducting lead. We study the role of the superconducting lead in the quantum interferometric features of the double quantum dot and by means of a slave boson mean field approximation at low temperature regime. We inquire into the influence of intradot interactions in the electronic properties of the system as well. Our results show that Fano resonances due to Andreev bound states are exhibited in the transmission from normal to normal lead as a consequence of quantum interference and proximity effect. This Fano effect produced by Andreev bound states in a side quantum dot was called Fano-Andreev effect, which remains valid even if the electron-electron interaction are taken into account, that is, the Fano-Andreev effect is robust against e-e interactions even in Kondo regime.

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