Integral section of certain rational elliptic surfaces and contact conics for an irreducible 3—nodal quartics

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Let $Q$ be an irreducible 3-nodal quartic and let $C$ be a conic such that $C \cap Q$ does not contain any node of $Q$ and the intersection multiplicity at $z \in C \cap Q$ is even for each $z$. In this talk, we will determine the splitting type of $f^* C$, where $f_C : Z_C \to P^2$ is the double cover of $P^2$ branched along $C$. The type of $C$ depends on how the tangent line at $z$ intersects with $Q$. As an application we construct Zariski pairs.