

Let S be a del Pezzo surface of degree one over an infinite field. After blowing up a specific point one obtains an elliptic surface E . Several results on the density of the set of rational points $S(k)$ in S require for $S(k)$ to contain a point which is non-torsion on its fiber on E , and/or not contained in ℓ exceptional curves on S . I will talk about the relation between these two conditions: is every point on S that is contained in ℓ exceptional curves torsion on its fiber on E ?

After motivating this question in more detail, I will show that the answer is yes if ℓ equals at least 9, and no if ℓ equals 7 (which is joint with Julie Desjardins). The question for 8 exceptional curves is still work in progress.