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**Anthony Várilly-Alvarado** and **Bianca Viray\*** (bviray@math.brown.edu). *Vertical Brauer groups and degree 4 del Pezzo surfaces.*

We show that Brauer classes of a locally solvable degree 4 del Pezzo surface  $X$  are vertical, that is, that every Brauer class is obtained by pullback from an element of  $\text{Br } k(\mathbb{P}^1)$  for some rational map  $f: X \dashrightarrow \mathbb{P}^1$ . As a consequence, we prove that a Brauer class does not obstruct the existence of a rational point if and only if there exists a fiber of  $f$  that is locally solvable. The proof is constructive and gives a simple and practical algorithm, distinct from that in [BBFL07], for computing all nonconstant classes in the Brauer group of  $X$ . (Received September 24, 2012)