Mathematics > Algebraic Geometry

On the Brauer-Manin obstruction for cubic surfaces

Andreas-Stephan Elsenhans, Jörg Jahnel

(Submitted on 5 Nov 2010)

We describe a method to compute the Brauer-Manin obstruction for smooth cubic surfaces over $\bbQ$ such that $\Br(S)/\Br(\bbQ)$ is of order two or four. This covers the vast majority of the cases when this group is non-zero. Our approach is to associate a Brauer class with every Galois invariant double-six. We show that all order two Brauer classes may be obtained in this way. We also recover Sir Peter Swinnerton-Dyer's result that $\Br(S)/\Br(\bbQ)$ may take only five values.

Subjects:	**Algebraic Geometry (math.AG)**; Number Theory (math.NT)
MSC classes:	`Primary 11D25, Secondary 11D85, 11G35`
Cite as:	**arXiv:1011.1430v1** [math.AG]

Submission history

From: Jörg Jahnel [view email]

[v1] Fri, 5 Nov 2010 15:27:31 GMT (22kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Download:

- PDF
- PostScript
- Other formats

Current browse context:

math.AG

< prev | next >

new | recent | 1011

Change to browse by:

math
  math.NT

References & Citations

- NASA ADS

Bookmark(what is this?)