On 03.04.2012 09:08, David Masser wrote:

P.S. Well, the coefficients defining the quintic may mess up the precise integrality, but regarding these coefficients as fixed, the damage should be limited. We could supoose that these coefficients are themselves integers, and it would suffice to get equations for the coordinates t in question of the form at^n+...=0, where a (not 0) is independent of the coordinates of P (and optimistically n=16).

The analogue holds for degree 3 i.e. elliptic curves, because the equations are A_2(t)=xB_2(t), where P=(x,y) with A_2 monic of degree 4 and B_2 cubic, both independent of x. So a=1.

Begin forwarded message:

> From: David Masser <David.Masser@unibas.ch>
> Date: 3. April 2012 07:47:00 GMT+02:00
> To: Juri Chomé <juri.chome@gmail.com>
> Subject: Re: Masterarbeit P.S.
>
> Dear Mr. Chomé,
>
> Sorry for the delay. It gives a good impression, and I will take it with me for proper reading over the Easter break. In the meantime I hope you could make progress on the other things we mentioned.
>
> With Umberto Zannier I am considering various questions, and one attack on these might be through some result of which the following might be the simplest form. Given P in the "Jacobian" M, you can presumably quite quickly halve it; i.e. find P' with P=2P'. As a check on your calculations, there should be 16 possibilities for P' (in general). Now suppose the coordinates of P are integral in some sense, for example integral over Z. Are those of P' necessarily also integral?
>
> Best wishes,
> David Masser.