J. Math. Kyoto Univ.
3-3 (1964) 363~368.

Corrections and supplement to the paper "Reduction of models over a discrete valuation ring"

By

Hiroshi YANAGIHARA

(Communicated by Prof. Nagata, Feb. 5, 1964)

---

1. In this short note we shall correct a proposition given in [1] and rewrite, in part, the proof of a theorem depending on the proposition. Moreover we shall add some results on calculus of generalized cycles on absolutely irreducible models over a discrete valuation ring, which were treated in [1].

We shall generalize the definitions of products and intersections of generalized cycles, which have a sense in [1], whenever all the components of generalized cycles dominate the same place of the ground ring. In other words we shall define these calculus without any restriction on generalized cycles. Then, making use of properties of the operation ρ defined in [1], we shall see that some important results on calculus of generalized cycles in [1] remain also true.

The notations and the terminologies are the same as those of [1]. In particular we shall fix a ground ring $\mathfrak{o}$ with the quotient field k, the maximal ideal $\mathfrak{p}=(\pi)$ and the residue class field κ.

2. At first place we shall generalize the definition of a product of generalized cycles on absolutely irreducible models. Let M and N be two absolutely irreducible affine models over $\mathfrak{o}$, whose affiine rings are $\mathfrak{o}[x]$ and $\mathfrak{o}[y]$ respectively. Then $A=\mathfrak{o}[x]\otimes_{\mathfrak{o}}\mathfrak{o}[y]$ is the affine ring of the affine model $M\times N$. Let P and Q be spots of M and N corresponding to the prime ideals $\mathfrak{m}$ and $\mathfrak{n}$ of $\mathfrak{o}[x]$ and $\mathfrak{o}[y]$ respectively. If P and Q dominate the same place of the ground ring $\mathfrak{o}$, $P\times Q$ is defined in the sense of [1] and it is easy to see that the