Λ-calculus

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$$\Lambda(T;H) := \left[R(T)\otimes \overset{\mu}{\Lambda}(T)\otimes\Lambda(-H)\right]_0 \times \overset{\sigma}{\Sigma}(T)^H$$

$R(T)$: rational functions in $\{t_u\}_{u\in T}$

$\Sigma(T)$: the units of $R(T)$

tm^{uv}_w: the usual $\{u,v\to w \quad t_u,t_v\to t_w\}$

hm^{xy}_z: $x\to z,\quad y\to\sigma_x z,\quad \sigma_z := \sigma_x\sigma_y$

tha^{ux}: $[\mu,\sigma]\mapsto[(1+i_u\otimes i_x)\mu /\!/ (u\to\sigma_x u),\sigma]$

$\rho^{\pm}_{ux} = (1+(t_u^{\pm1}-1)ux,\ (x\to t_u^{\pm1}))$

$(\mu_1,\sigma_1)\cdot(\mu_2,\sigma_2) = (\mu_1(\Lambda\otimes\Lambda)\mu_2,\ \sigma_1\cup\sigma_2)$

$$hm^{xy}_z /\!/ tha^{ux} \overset{?}{=} tha^{ux} /\!/ tha^{uy} /\!/ hm^{xy}_z$$

$$tm^{uv}_w /\!/ tha^{wx} \overset{?}{=} tha^{ux} /\!/ tha^{vx} /\!/ tm^{uv}_w$$

$$\mathrm{Rank}_{R(T)}\Lambda(T;H) = \sum_k \binom{|T|}{k}\cdot\binom{|H|}{k}$$

$$= \binom{|T|+|H|}{|H|}$$

I need to write the constraint equation!

Does this have AT-KV implications?

Even before, does it have a non-commutative analog?

Is there a circuit-algebra map into Jana's thesis?