

## Equation assignment sequence for variable $\hat{n}^c$

no	var	equ	quations	token
27	2	-	$t :: \text{port variable}$	mass
26	15	-	$r_x :: \text{port variable}$	
25	40	-	$Mm :: \text{port variable}$	
24	18	-	$n :: \text{port variable}$	
23	3	-	$value :: \text{port variable}$	
22	17	-	$r_z :: \text{port variable}$	
21	16	-	$r_y :: \text{port variable}$	
20	21	-	$V :: \text{port variable}$	
19	19	-	$U :: \text{port variable}$	
18	9	-	$P_N S_A S :: \text{port variable}$	
17	1	-	$F :: \text{port variable}$	energy
16	61	44	$\lambda_S := \lambda_S$	
15	36	20	$v_{xN} := \frac{\partial r_{xN}}{\partial t}$	
14	24	9	$\mu_{NS} := \frac{\partial U_N}{\partial n_{NS}}$	
13	81	64	$m_N := \lambda_S \overset{S \in NS}{\star} n_{NS}$	
12	49	32	$k_{xN}^c := \left( \lambda_S \overset{S \in NS}{\star} (\mu_{NS})^{-1} \right) \cdot (V_N)^{-1} \cdot \frac{\partial U_N}{\partial p_N} \cdot v_{xN}$	
11	79	62	$c_{NS} := (V_N)^{-1} \odot n_{NS}$	
10	78	61	$d_A := \text{sign} \left( F_{N,A} \overset{N}{\star} p_N \right)$	

Continued on next page

no	var	equ	quations	token
9	6	3	$1/2 := Set(\#, \#)$	
8	82	65	$\rho_N := (V_N)^{-1} . m_N$	mass
7	80	63	$A_{y,z_N} := r_{y_N} . r_{z_N}$	
6	66	49	$k_{x_N}^c := k_{x_N}^c$	energy, mass
5	22	7	$p_N := \frac{\partial U_N}{\partial V_N}$	energy
4	84	67	$c_{AS} := (1/2 . (F_{NS,AS} - d_A \odot  F_{NS,AS} )) \stackrel{NS}{\star} c_{NS}$	mass
3	83	66	$\hat{V}_A := (\rho_N)^{-1} . k_{x_N}^c . A_{y,z_N} . F_{N,A} \stackrel{N}{\star} p_N$	mass
2	85	68	$\hat{n}_{AS}^c := \hat{V}_A \odot c_{AS}$	mass
1	10	6	$F_{NS,AS} := F_{N,A} \odot P_{NS,AS}$	
0	86	69	$\hat{n}_{NS}^c := F_{NS,AS} \stackrel{AS}{\star} \hat{n}_{AS}^c$	mass