

## Equation assignment sequence for variable $H$

no	var	equ	quations	token
43	13	-	$V_N :: \text{port variable}$	
42	23	-	$r_{zN} :: \text{port variable}$	
41	10	-	$r_{yN} :: \text{port variable}$	
40	59	-	$P_{NS,AS} :: \text{port variable}$	
39	128	-	$D_{NS,AS} :: \text{port variable}$	
38	127	-	$D_{N,A} :: \text{port variable}$	
37	5	-	$F_{N,A} :: \text{port variable}$	
36	1	-	$\# :: \text{port variable}$	
35	6	-	$t :: \text{port variable}$	
34	150	124	$n^o_{NS} := \text{Instantiate}(n_{NS}, \#)$	
33	69	47	$m_N := \lambda_S \stackrel{S \in NS}{\star} n_{NS}$	
32	42	116	$n_{NS} := \int_{t_o}^{t_e} \dot{n}_{NS} dt + n^o_{NS}$	
31	71	49	$\rho_N := m_N \cdot (V_N)^{-1}$	
30	50	134	$k_{xN}^c := \text{Instantiate}(k_{xN}^c, \#)$	
29	15	115	$p_N := \text{Instantiate}(p_N, \#)$	
28	65	46	$d_A := \text{sign} \left( F_{N,A} \stackrel{N}{\star} p_N \right)$	
27	4	3	$0.5 := \text{Instantiate}(\#, \#)$	
26	108	127	$c_{NS} := \text{Instantiate}(c_{NS}, \#)$	

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no	var	equ	quations	token
25	108	84	$c_{NS} := (V_N)^{-1} \odot n_{NS}$	
24	98	74	$\hat{V}_A := (\rho_N)^{-1} \cdot k_{xN}^c \cdot A_{yzN} \cdot D_{N,A} \overset{N}{\star} p_N$	
23	109	85	$c_{AS} := (0.5 \cdot (F_{NS,AS} - d_A \odot  F_{NS,AS} )) \overset{NS}{\star} c_{NS}$	
22	54	137	$k_{xNS}^d := \text{Instantiate}(k_{xNS}^d, \#)$	
21	45	114	$\mu_{NS} := \text{Instantiate}(\mu_{NS}, \#)$	
20	95	71	$A_{yzN} := r_{yN} \cdot r_{zN}$	
19	34	131	$k_{xN}^q := \text{Instantiate}(k_{xN}^q, \#)$	
18	110	86	$\hat{n}_{AS}^c := \hat{V}_A \odot c_{AS}$	
17	73	51	$F_{NS,AS} := F_{N,A} \odot P_{NS,AS}$	
16	58	139	$h_{NS} := \text{Instantiate}(h_{NS}, \#)$	
15	104	80	$\hat{n}_{AS}^d := A_{yzN} \odot (-k_{xNS}^d) \cdot D_{NS,AS} \overset{NS}{\star} \mu_{NS}$	
14	124	100	$\hat{q}_A := A_{yzN} \cdot k_{xN}^q \cdot D_{N,A} \overset{N}{\star} T_N$	
13	122	98	$\hat{w}_A := \text{Instantiate}(\hat{H}_A^c, \#)$	
12	120	96	$\hat{H}_A^c := \left( F_{NS,AS} \overset{NS}{\star} h_{NS} \right) \overset{S \in AS}{\star} \hat{n}_{AS}^c$	
11	106	82	$\hat{H}_A^d := \left( F_{NS,AS} \overset{NS}{\star} h_{NS} \right) \overset{S \in AS}{\star} \hat{n}_{AS}^d$	
10	125	101	$\hat{q}_N := F_{N,A} \overset{A}{\star} \hat{q}_A$	
9	123	99	$\hat{w}_N := F_{N,A} \overset{A}{\star} \hat{w}_A$	
8	121	97	$\hat{H}_N^c := F_{N,A} \overset{A}{\star} \hat{H}_A^c$	
7	107	83	$\hat{H}_N^d := F_{N,A} \overset{A}{\star} \hat{H}_A^d$	
6	2	1	$0 := \text{Instantiate}(\#, \#)$	

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no	var	equ	quations	token
5	8	5	$t_e := \text{Instantiate}(t, \#)$	
4	7	4	$t_o := \text{Instantiate}(t, \#)$	
3	151	125	$H^o_N := \text{Instantiate}(H_N, \#)$	
2	126	102	$\dot{H}_N := \hat{H}^c_N + \hat{H}^d_N + \hat{q}_N + \hat{w}_N$	
1	126	128	$\dot{H}_N := \text{Instantiate}(\dot{H}_N, 0)$	
0	18	123	$H_N := \int_{t_o}^{t_e} \dot{H}_N \, dt + H^o_N$	