Equation assignment sequence for variable *data*

no	var	equ	quations	token
105	26	-	A^v :: port variable	
104	64	-	$P_{NS,KS}$ :: port variable	
103	88	-	${K^o}_K$ :: port variable	
102	62	-	$P_{N,NK}$ :: port variable	
101	86	-	$N_{S,K}$ :: port variable	
100	61	-	$P_{S,NS}$ :: port variable	
99	60	-	$P_{K,NK}$ :: port variable	
98	63	-	$P_{NK,KS}$ :: port variable	
97	59	-	$P_{NS,AS}$ :: port variable	
96	128	-	$D_{NS,AS}$ :: port variable	
95	127	-	$D_{N,A}$ :: port variable	
94	5	-	$F_{N,A}$ :: port variable	
93	23	-	r_{zN} :: port variable	
92	10	-	r_{yN} :: port variable	
91	9	-	r_{xN} :: port variable	
90	12	-	S_N :: port variable	
89	6	-	t :: port variable	
88	11	-	U_N :: port variable	
87	13	-	V_N :: port variable	

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no	var	equ	quations	token
86	1	-	$\#$ :: port variable	
85	27	16	$Bo_N := \text{Instantiate}(S_N, \#)$	
84	87	64	$E_{aNK} := \text{Instantiate}(P_{N,NK} \overset{N}{\star} R_N \,.\, T_{NK}, \#)$	
83	28	17	$R_N := A^v \,.\, Bo_N$	
82	115	91	$c^o{}_{KS} := \text{Instantiate}(c_{KS}, \#)$	
81	114	90	$c_{KS} := c_{NS} \overset{NS}{\star} P_{NS,KS}$	
80	65	46	$d_A := \text{sign}\left(F_{N,A} \overset{N}{\star} p_N\right)$	
79	4	3	$0.5 := \text{Instantiate}(\#, \#)$	
78	108	127	$c_{NS} := \text{Instantiate}(c_{NS}, \#)$	
77	108	84	$c_{NS} := (V_N)^{-1} \odot n_{NS}$	
76	77	55	$T_{NK} := P_{N,NK} \overset{N}{\star} T_N$	
75	89	65	$K_{NK} := K^o{}_K \odot exp((-E_{aNK}) \,.\, \left(R_N \overset{N}{\star} P_{N,NK} \,.\, T_{NK}\right)^{-1})$	
74	116	92	$\phi_{KS} := \prod \left(c_{KS} \,.\, (c^o{}_{KS})^{-1}\right)$	
73	98	74	$\hat{V}_A := (\rho_N)^{-1} \,.\, k^c_{xN} \,.\, A_{yzN} \,.\, D_{N,A} \overset{N}{\star} p_N$	
72	109	85	$c_{AS} := (0.5 \,.\, (F_{NS,AS} - d_A \odot \lvert F_{NS,AS}\rvert)) \overset{NS}{\star} c_{NS}$	
71	95	71	$A_{yzN} := r_{yN} \,.\, r_{zN}$	
70	93	69	$N_{NS,NK} := P_{S,NS} \overset{S}{\star} \left(\left(P_{K,NK} \,.\, T_{NK} \,.\, (T_{NK})^{-1}\right) \overset{K}{\star} N_{S,K}\right)$	
69	117	93	$\xi_{NK} := K_{NK} \,.\, P_{NK,KS} \overset{KS}{\star} \phi_{KS}$	
68	110	86	$\hat{n}^c{}_{AS} := \hat{V}_A \odot c_{AS}$	
67	73	51	$F_{NS,AS} := F_{N,A} \odot P_{NS,AS}$	

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no	var	equ	quations	token
66	104	80	$\hat{n}^d{}_{AS} := A_{yzN} \odot \left(-k^d_{xNS}\right) . D_{NS,AS} \overset{NS}{\star} \mu_{NS}$	
65	124	100	$\hat{q}_A := A_{yzN} . k^q_{xN} . D_{N,A} \overset{N}{\star} T_N$	
64	122	98	$\hat{w}_A := \text{Instantiate}(\hat{H}^c{}_A, \#)$	
63	120	96	$\hat{H}^c{}_A := \left(F_{NS,AS} \overset{NS}{\star} h_{NS}\right) \overset{S \in AS}{\star} \hat{n}^c{}_{AS}$	
62	106	82	$\hat{H}^d{}_A := \left(F_{NS,AS} \overset{NS}{\star} h_{NS}\right) \overset{S \in AS}{\star} \hat{n}^d{}_{AS}$	
61	118	94	$\tilde{n}_{NS} := V_N \odot \left(N_{NS,NK} \overset{NK}{\star} \xi_{NK}\right)$	
60	111	87	$\hat{n}^c{}_{NS} := F_{NS,AS} \overset{AS}{\star} \hat{n}^c{}_{AS}$	
59	105	81	$\hat{n}^d{}_{NS} := F_{NS,AS} \overset{AS}{\star} \hat{n}^d{}_{AS}$	
58	125	101	$\hat{q}_N := F_{N,A} \overset{A}{\star} \hat{q}_A$	
57	123	99	$\hat{w}_N := F_{N,A} \overset{A}{\star} \hat{w}_A$	
56	121	97	$\hat{H}^c{}_N := F_{N,A} \overset{A}{\star} \hat{H}^c{}_A$	
55	107	83	$\hat{H}^d{}_N := F_{N,A} \overset{A}{\star} \hat{H}^d{}_A$	
54	2	1	$0 := \text{Instantiate}(\#, \#)$	
53	150	124	$n^o{}_{NS} := \text{Instantiate}(n_{NS}, \#)$	
52	119	95	$\dot{n}_{NS} := \hat{n}^c{}_{NS} + \hat{n}^d{}_{NS} + \tilde{n}_{NS}$	
51	119	129	$\dot{n}_{NS} := \text{Instantiate}(\dot{n}_{NS}, 0)$	
50	8	5	$t_e := \text{Instantiate}(t, \#)$	
49	7	4	$t_o := \text{Instantiate}(t, \#)$	
48	151	125	$H^o{}_N := \text{Instantiate}(H_N, \#)$	
47	126	102	$\dot{H}_N := \hat{H}^c{}_N + \hat{H}^d{}_N + \hat{q}_N + \hat{w}_N$	

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no	var	equ	quations	token
46	126	128	$\dot{H}_N := \text{Instantiate}(\dot{H}_N, 0)$	
45	145	117	$T_{refN} := \text{Instantiate}(T_N, \#)$	
44	45	114	$\mu_{NS} := \text{Instantiate}(\mu_{NS}, \#)$	
43	45	32	$\mu_{NS} := \frac{\partial U_N}{\partial n_{NS}}$	
42	15	6	$p_N := \left(-\frac{\partial U_N}{\partial V_N}\right)$	
41	15	115	$p_N := \text{Instantiate}(p_N, \#)$	
40	24	14	$v_{zN} := \frac{\partial r_{zN}}{\partial t}$	
39	22	13	$v_{yN} := \frac{\partial r_{yN}}{\partial t}$	
38	21	12	$v_{xN} := \frac{\partial r_{xN}}{\partial t}$	
37	16	7	$T_N := \frac{\partial U_N}{\partial S_N}$	
36	16	113	$T_N := \text{Instantiate}(T_N, \#)$	
35	42	116	$n_{NS} := \int_{t_o}^{t_e} \dot{n}_{NS} \ dt + n^o{}_{NS}$	
34	18	123	$H_N := \int_{t_o}^{t_e} \dot{H}_N \ dt + H^o{}_N$	
33	18	122	$H_N := m_N \,.\, \int_{T_{refN}}^{T_N} c_{pN} \ dT_N$	
32	18	9	$H_N := U_N - p_N \,.\, V_N$	
31	56	43	$k^d_{zNS} := (\mu_{NS})^{-1} \,.\, \left(v_{zN} \odot \left((V_N)^{-1} \odot \frac{\partial U_N}{\partial \mu_{NS}}\right)\right)$	
30	55	138	$k^d_{yNS} := \text{Instantiate}(k^d_{yNS}, \#)$	
29	55	42	$k^d_{yNS} := (\mu_{NS})^{-1} \,.\, \left(v_{yN} \odot \left((V_N)^{-1} \odot \frac{\partial U_N}{\partial \mu_{NS}}\right)\right)$	
28	54	137	$k^d_{xNS} := \text{Instantiate}(k^d_{xNS}, \#)$	
27	54	41	$k^d_{xNS} := (\mu_{NS})^{-1} \,.\, \left(v_{xN} \odot \left((V_N)^{-1} \odot \frac{\partial U_N}{\partial \mu_{NS}}\right)\right)$	

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no	var	equ	quations	token
26	52	39	$k^c_{zN} := \left(\lambda_S \overset{S \in NS}{\star} (\mu_{NS})^{-1}\right) . (V_N)^{-1} . \frac{\partial U_N}{\partial p_N} . v_{zN}$	
25	52	136	$k^c_{zN} := \text{Instantiate}(k^c_{zN} . \#, -)$	
24	51	135	$k^c_{yN} := \text{Instantiate}(k^c_{yN}, \#)$	
23	51	38	$k^c_{yN} := \left(\lambda_S \overset{S \in NS}{\star} (\mu_{NS})^{-1}\right) . (V_N)^{-1} . \frac{\partial U_N}{\partial p_N} . v_{yN}$	
22	50	134	$k^c_{xN} := \text{Instantiate}(k^c_{xN}, \#)$	
21	50	37	$k^c_{xN} := \left(\lambda_S \overset{S \in NS}{\star} (\mu_{NS})^{-1}\right) . (V_N)^{-1} . \frac{\partial U_N}{\partial p_N} . v_{xN}$	
20	36	133	$k^q_{zN} := \text{Instantiate}(k^q_{zN}, \#)$	
19	36	24	$k^q_{zN} := (V_N)^{-1} . \frac{\partial U_N}{\partial T_N} . v_{zN}$	
18	35	23	$k^q_{yN} := (V_N)^{-1} . \frac{\partial U_N}{\partial T_N} . v_{yN}$	
17	35	132	$k^q_{yN} := \text{Instantiate}(k^q_{yN}, \#)$	
16	34	22	$k^q_{xN} := (V_N)^{-1} . \frac{\partial U_N}{\partial T_N} . v_{xN}$	
15	34	131	$k^q_{xN} := \text{Instantiate}(k^q_{xN}, \#)$	
14	31	19	$C_{vN} := \frac{\partial U_N}{\partial T_N}$	
13	69	47	$m_N := \lambda_S \overset{S \in NS}{\star} n_{NS}$	
12	30	18	$C_{pN} := \frac{\partial H_N}{\partial T_N}$	
11	71	49	$\rho_N := m_N . (V_N)^{-1}$	
10	58	45	$h_{NS} := H_N \odot (n_{NS})^{-1}$	
9	58	139	$h_{NS} := \text{Instantiate}(h_{NS}, \#)$	
8	57	44	$k^d{}_{NS} := \text{Stack}\left(k^d_{xNS}, k^d_{yNS}, k^d_{zNS}\right)$	
7	53	40	$k^c{}_N := \text{Stack}\left(k^c_{xN}, k^c_{yN}, k^c_{zN}\right)$	

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no	var	equ	quations	token
6	37	25	$k^q{}_N := \text{Stack}\left(k^q_{xN}, k^q_{yN}, k^q_{zN}\right)$	
5	29	142	$\lambda_S := \text{Instantiate}(\lambda_S, \#)$	
4	149	141	$c_{vN} := \text{Instantiate}(c_{vN}, \#)$	
3	149	121	$c_{vN} := C_{vN} \,.\, (m_N)^{-1}$	
2	148	140	$c_{pN} := \text{Instantiate}(c_{pN}, \#)$	
1	148	120	$c_{pN} := C_{pN} \,.\, (m_N)^{-1}$	
0	154	143	$data := \text{MixedStack}\left(k^q{}_N, k^c{}_N, k^d{}_{NS}, h_{NS}, c_{pN}, c_{vN}, \lambda_S, \rho_N\right)$	