	N_1^V	N_2^V	N_3^V	N_4^V
$\dot{\phi_1}$	-0.959	0.732	-0.652	0.753
$\dot{\phi_2}$	0.711	-1.000	0.793	-0.680
$\dot{\phi_3}$	-0.858	0.808	-0.892	0.809
$\dot{\phi}_4$	0.565	-0.732	0.658	-0.816