Running your code:
Go to the code file location and type:
NuSMV -int

Then, running the file:
NuSMV > read_model -i *filename.smv*
NuSMV > go

EXISTING
1. file: existing3chtimer
// Counterexample with a system with mitm (different variants' condition inside the file)
check_ltlspec -p "F((STA_location = STA_AP_Con_ChX & AP_location = AP_STA_Con_ChX)| (STA_location = STA_AP_Con_ChY & AP_location = AP_STA_Con_ChY)| (STA_location = STA_AP_Con_ChZ & AP_location = AP_STA_Con_ChZ))"

2. file: existing3chtimer
// TRUE with a system that has an adversary
check_ltlspec -p "F((STA_location = STA_AP_Con_ChX & AP_location = AP_STA_Con_ChY)| (STA_location = STA_AP_Con_ChY & AP_location = AP_STA_Con_ChX)| (STA_location = STA_AP_Con_ChY & AP_location = AP_STA_Con_ChZ) | (STA_location = STA_AP_Con_ChZ & AP_location = AP_STA_Con_ChY) |(STA_location = STA_AP_Con_ChZ & AP_location = AP_STA_Con_ChX) | (STA_location = STA_AP_Con_ChX & AP_location = AP_STA_Con_ChZ)| (STA_location = STA_AP_Con_ChX & AP_location = AP_STA_Con_ChX)| (STA_location = STA_AP_Con_ChY & AP_location = AP_STA_Con_ChY)| (STA_location = STA_AP_Con_ChZ & AP_location = AP_STA_Con_ChZ))"

3. file: existing3ch_othertimer
DoS vulnerability
// Counterexample as adversary block the eapol message (eapol3 or eapol4) and retransmission threshold is false (means exhausted all tries)– AP/STA will go to Disconnect state from the CE state, and then comeback to disconnect
check_ltlspec -p "F((STA_location = STA_AP_Con_ChX & AP_location = AP_STA_Con_ChX)| (STA_location = STA_AP_Con_ChY & AP_location = AP_STA_Con_ChY)| (STA_location = STA_AP_Con_ChZ & AP_location = AP_STA_Con_ChZ))"

OCV
1. file: ocv3ch_csa
// TRUE. No counterexample with a system with csa based mitm
check_ltlspec -p "F((STA_location = STA_AP_Con_ChX & AP_location = AP_STA_Con_ChX)| (STA_location = STA_AP_Con_ChY & AP_location = AP_STA_Con_ChY)| (STA_location = STA_AP_Con_ChZ & AP_location = AP_STA_Con_ChZ) | (STA_location = STA_Discon & AP_location = AP_Discon))"

2. file: ocv3ch_othermitm
// FALSE. Counterexample when other types of MitM than CSA-based
check_ltlspec -p "F((STA_location = STA_AP_Con_ChX & AP_location = AP_STA_Con_ChX) & (STA_location = STA_AP_Con_ChY & AP_location = AP_STA_Con_ChY) & (STA_location = STA_AP_Con_ChZ & AP_location = AP_STA_Con_ChZ) & (STA_location = STA_Discon & AP_location = AP_Discon))"