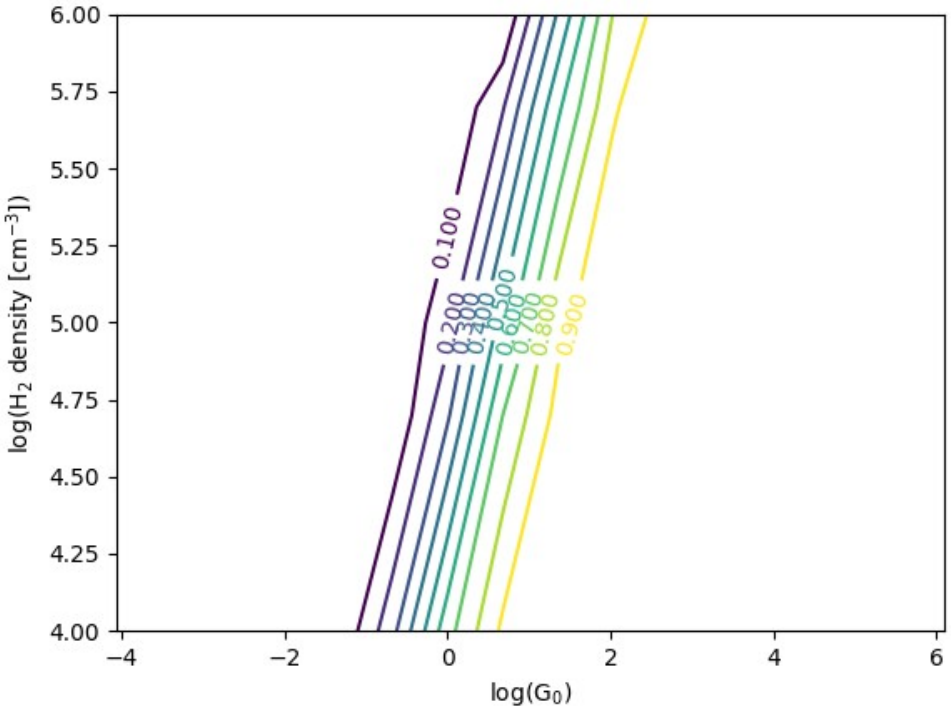
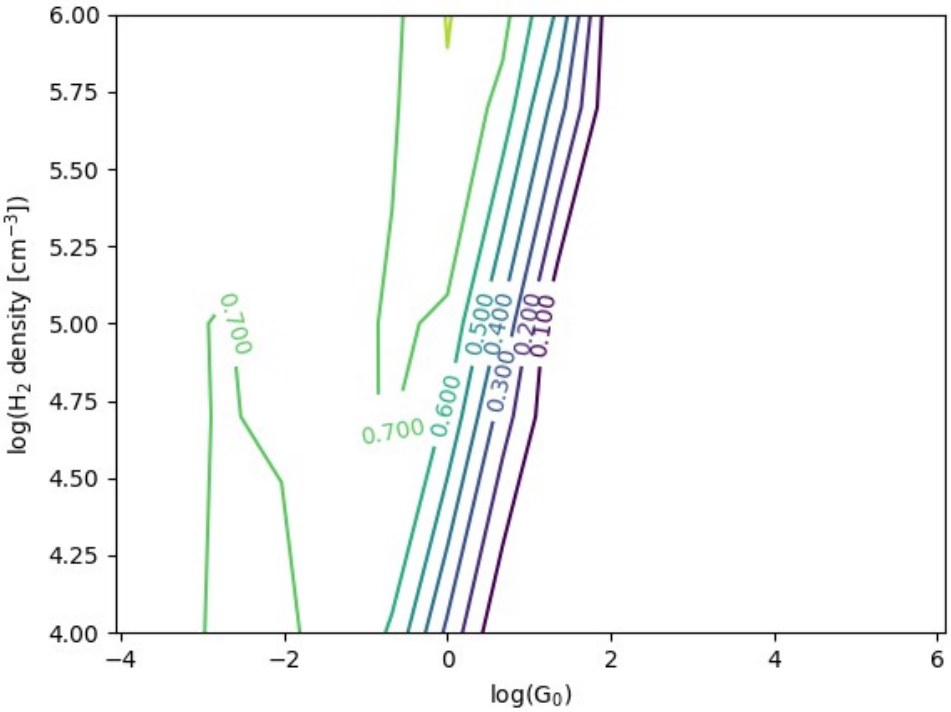
Rozpad CN:

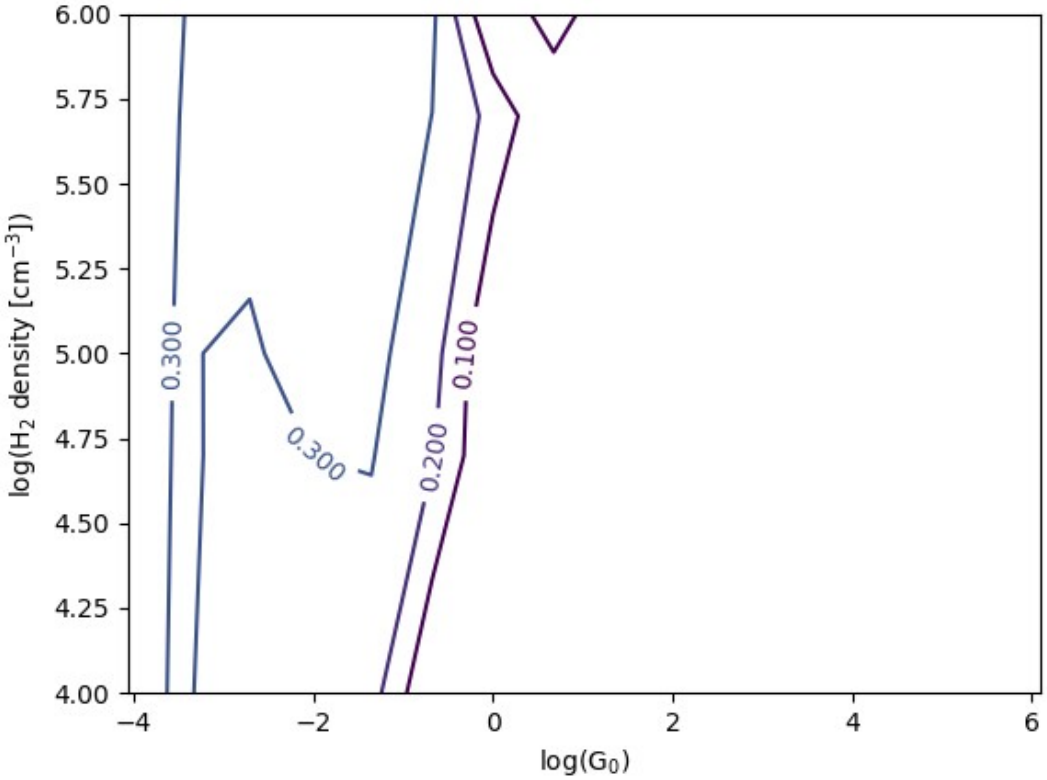
CN + ph → C + N



O + CN → N + CO

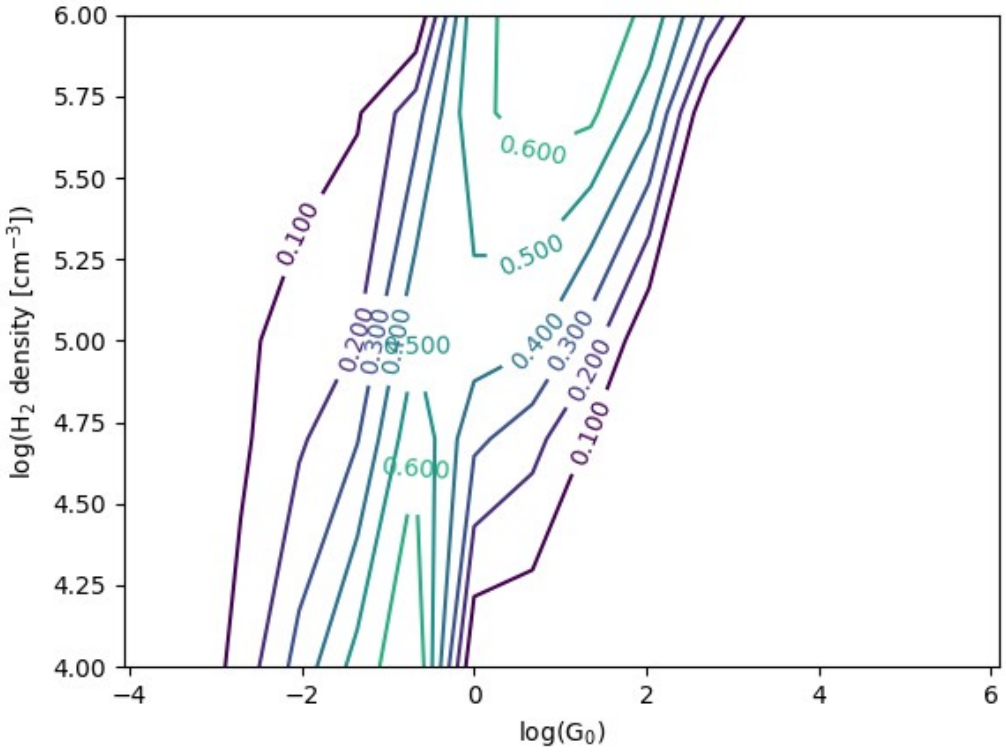


$CN + N \rightarrow C + N_2$

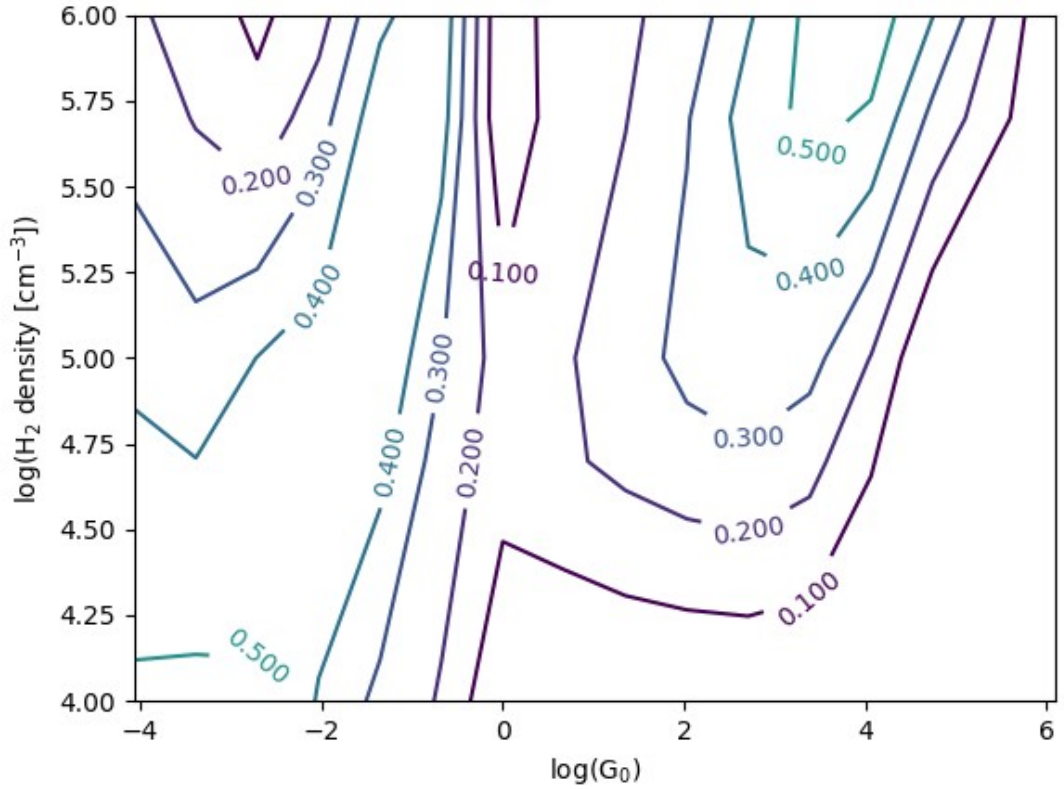


Produkcja CN:

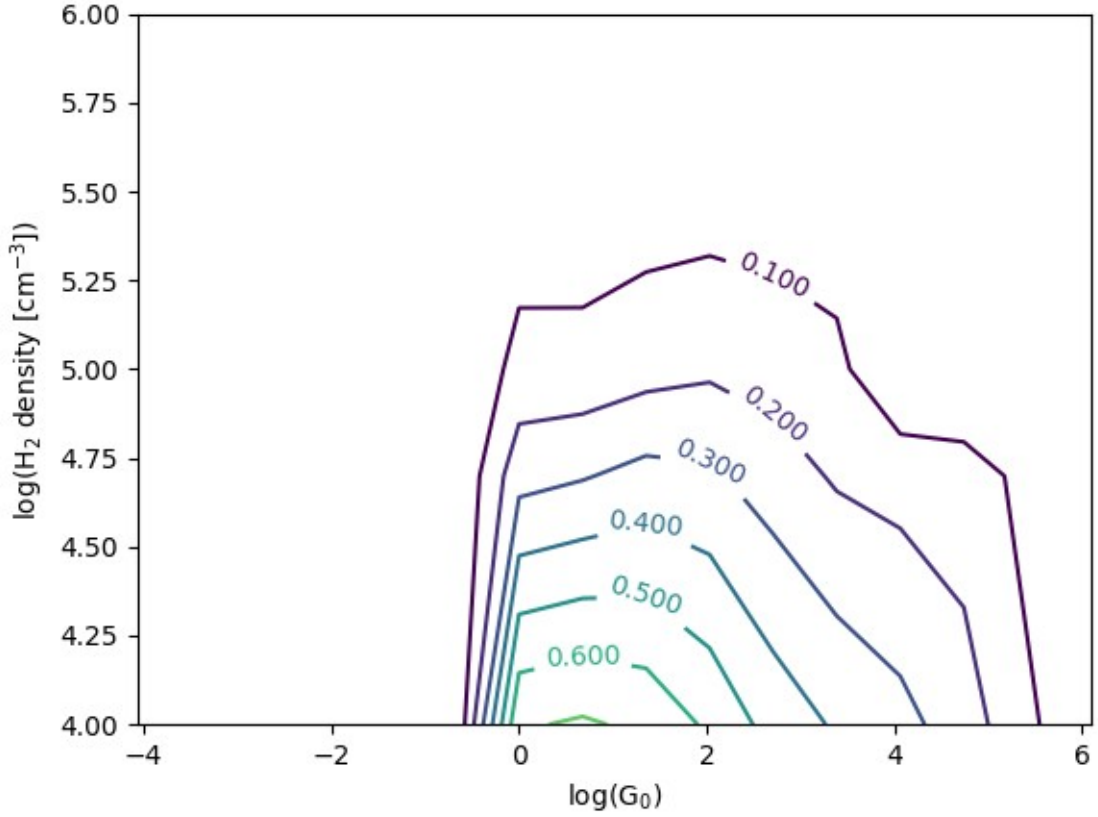
$N + C_2 \rightarrow C + CN$



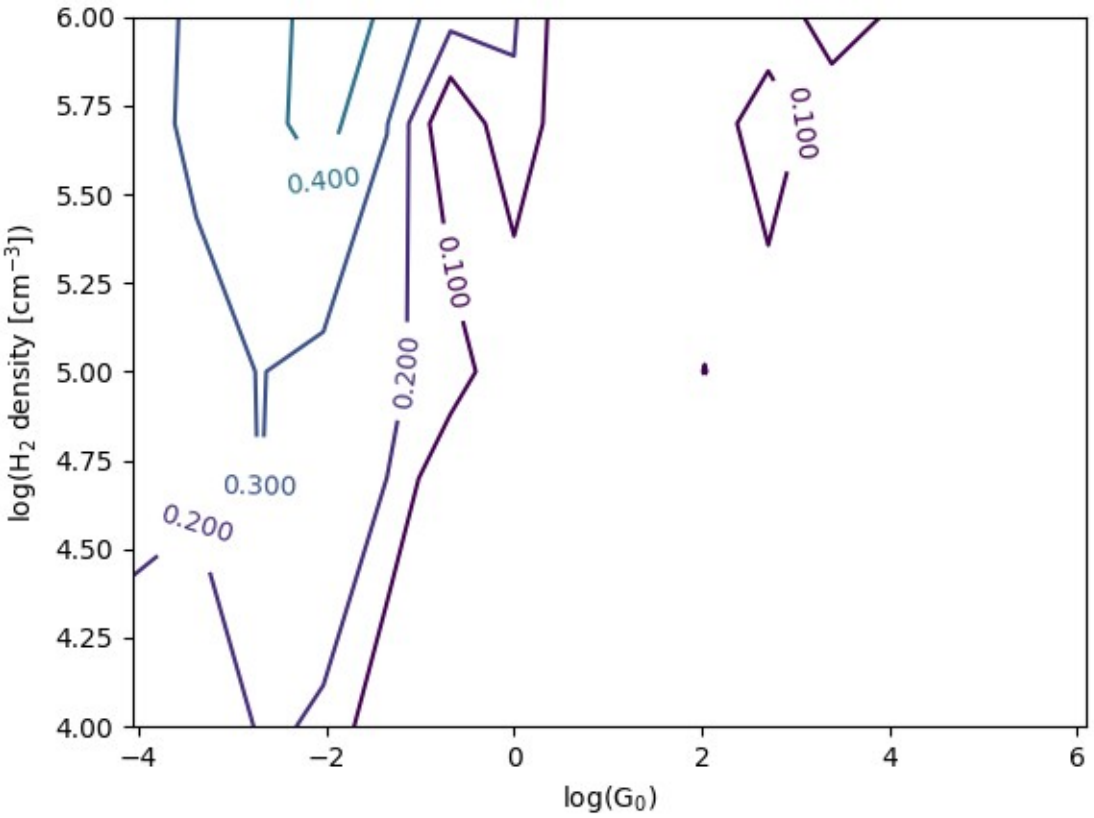
N + CH → H + CN



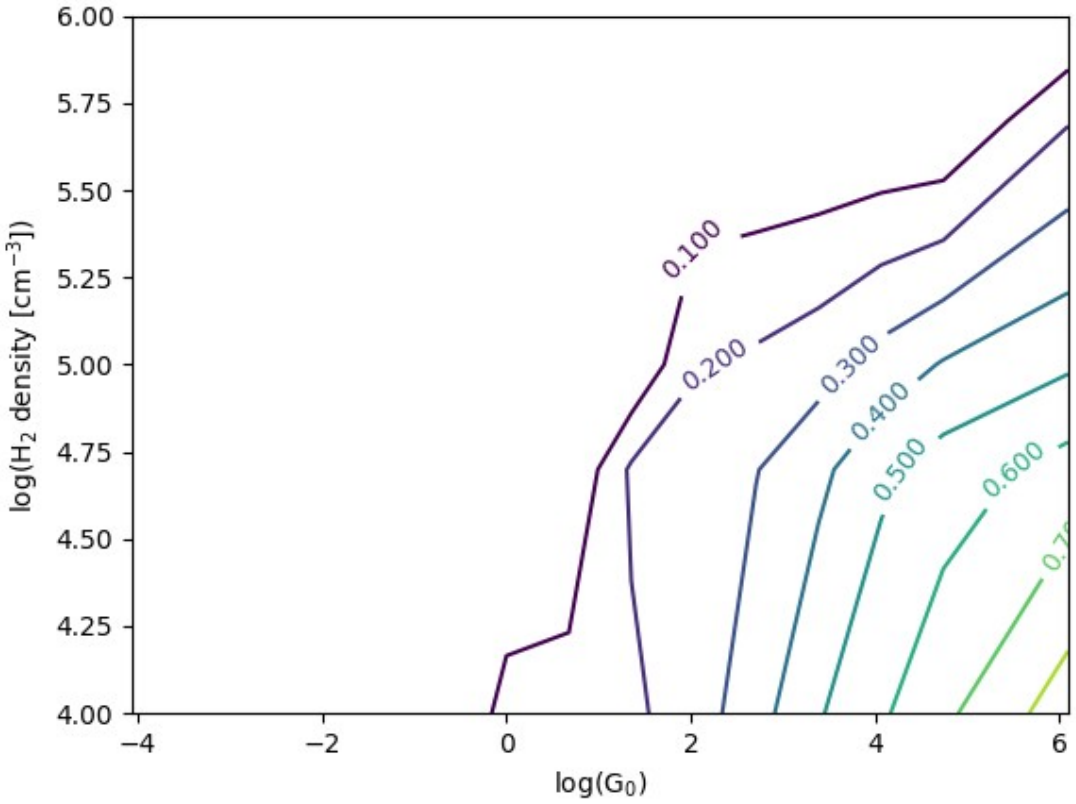
H + CN+ → CN + H+



CNC+ + e- → C + CN

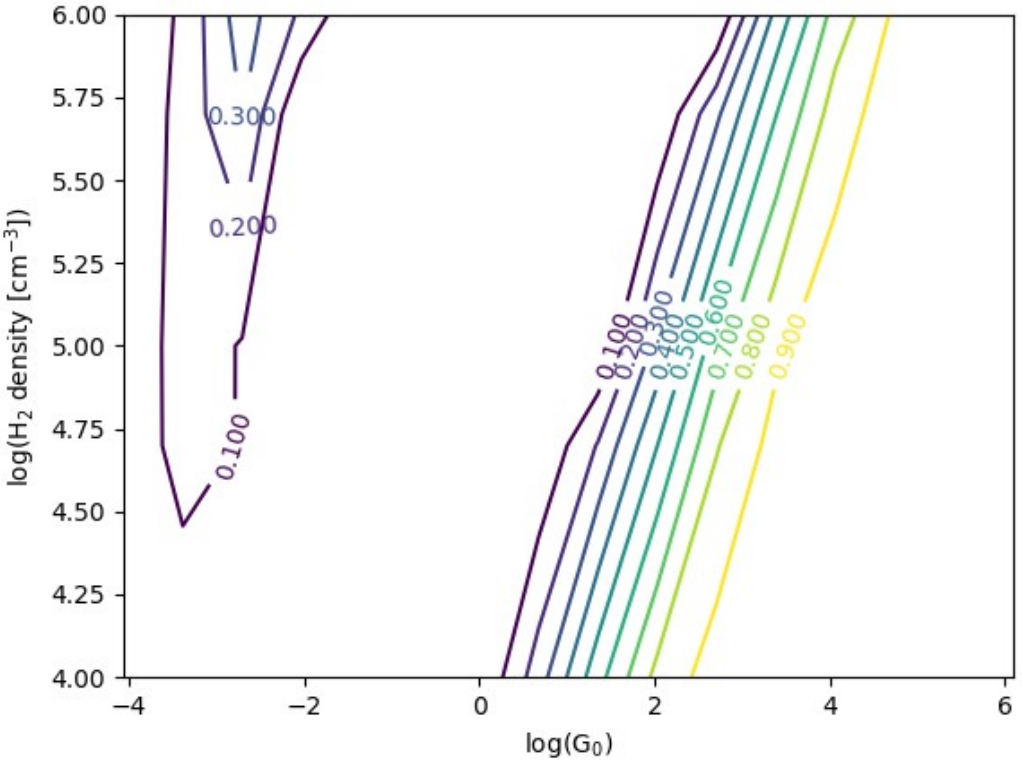


HCN+ + e- → H + CN

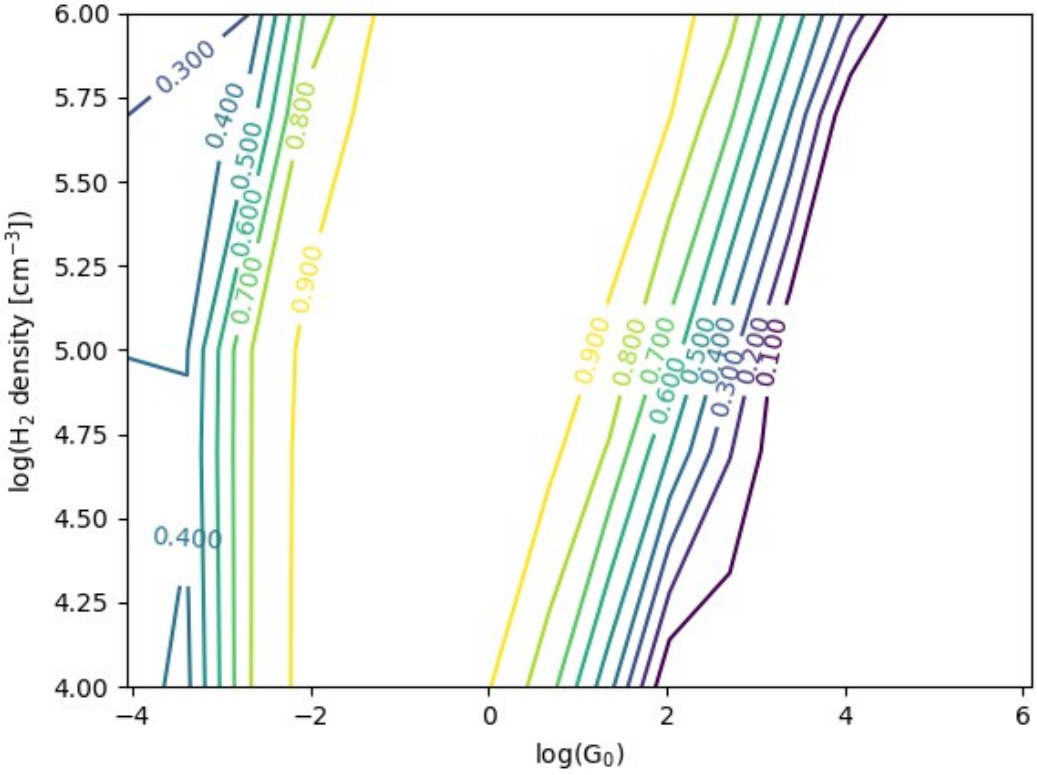


Rozpad HCN:

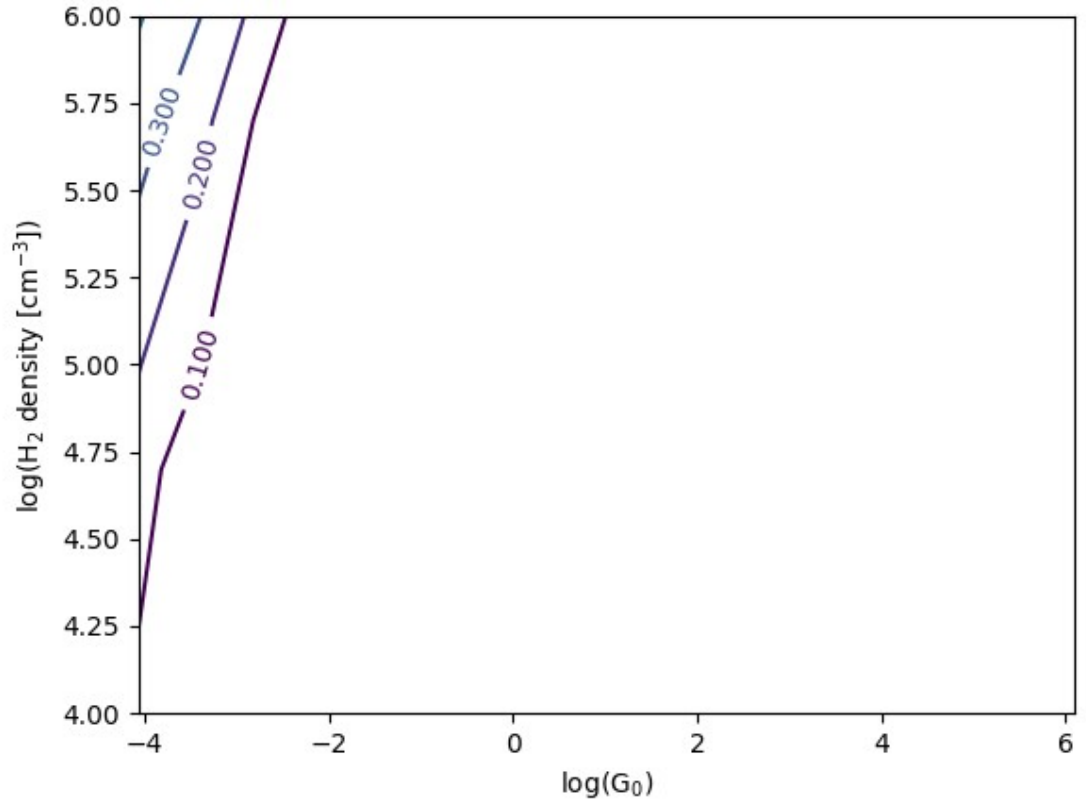
HCN + ph → H + CN



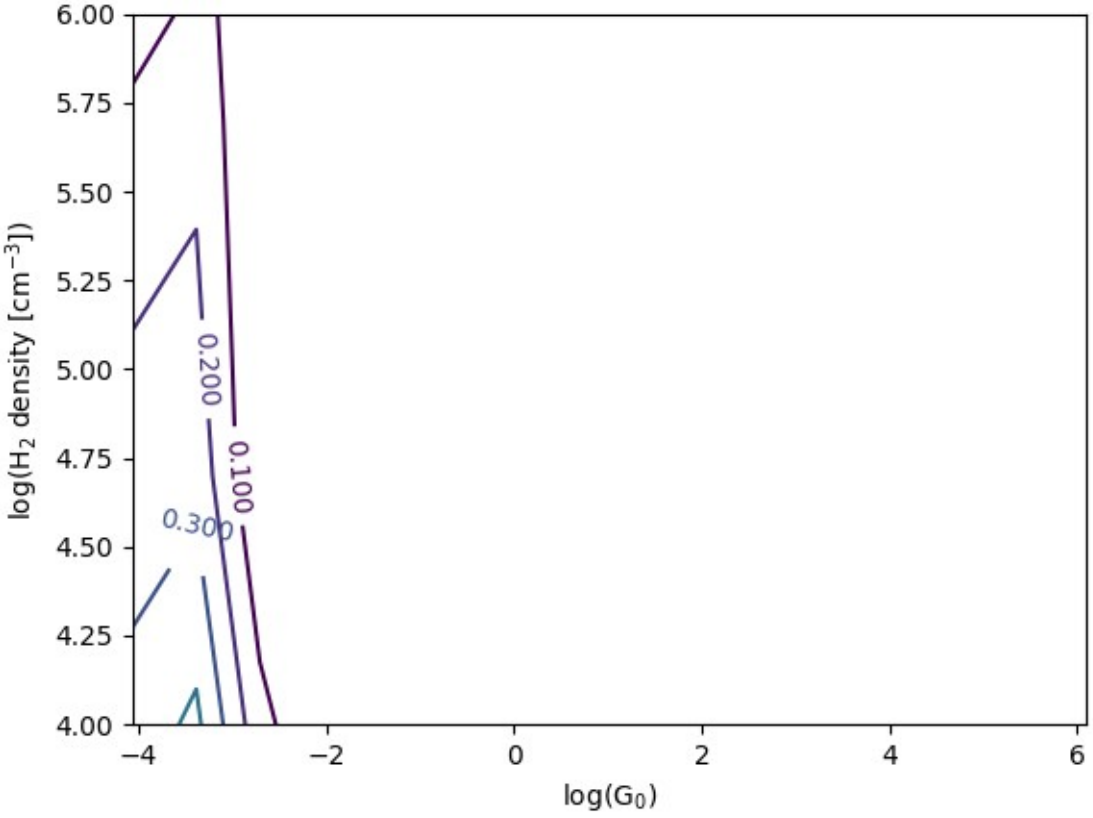
HCN + C+ → H + CNC+



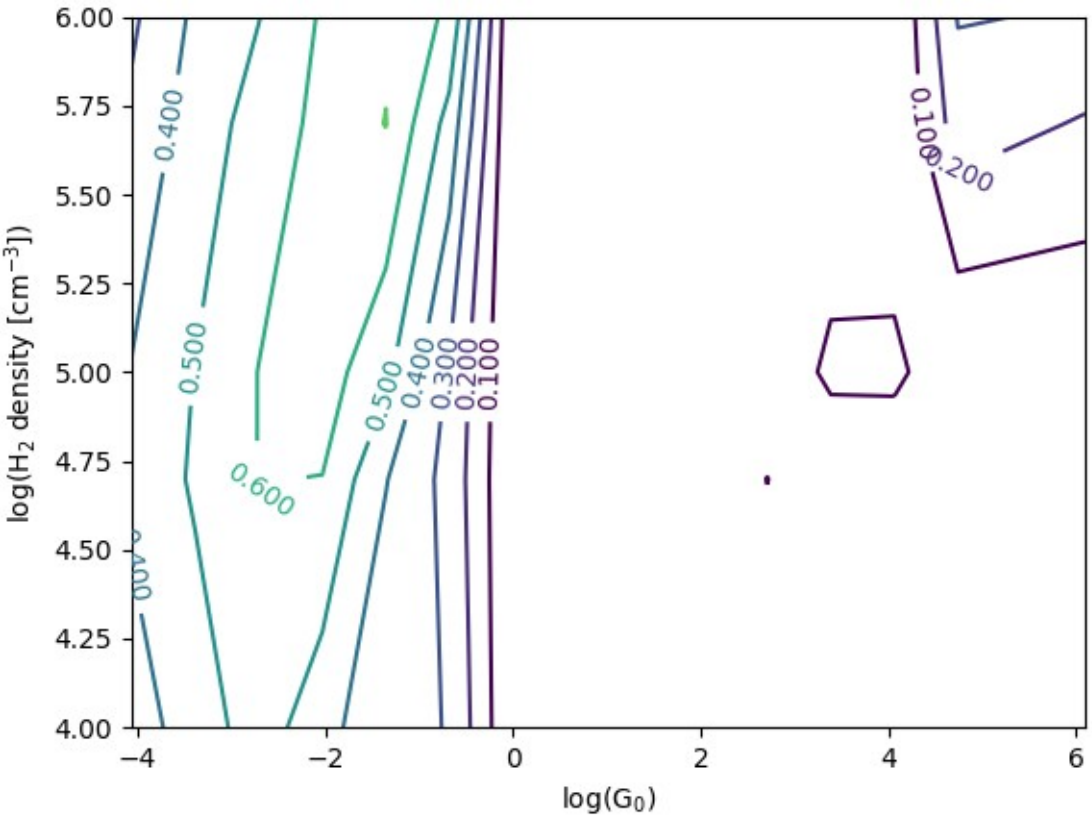
HCN + HCO+ → CO + HCNH+



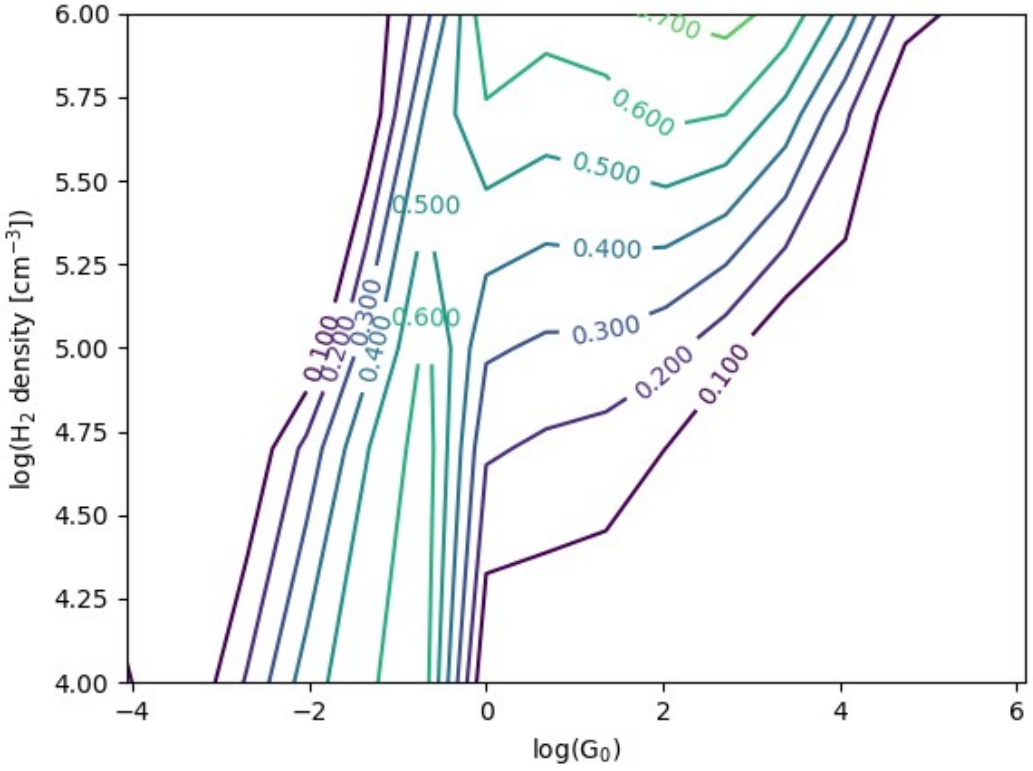
HCN + H+ → H + HNC+



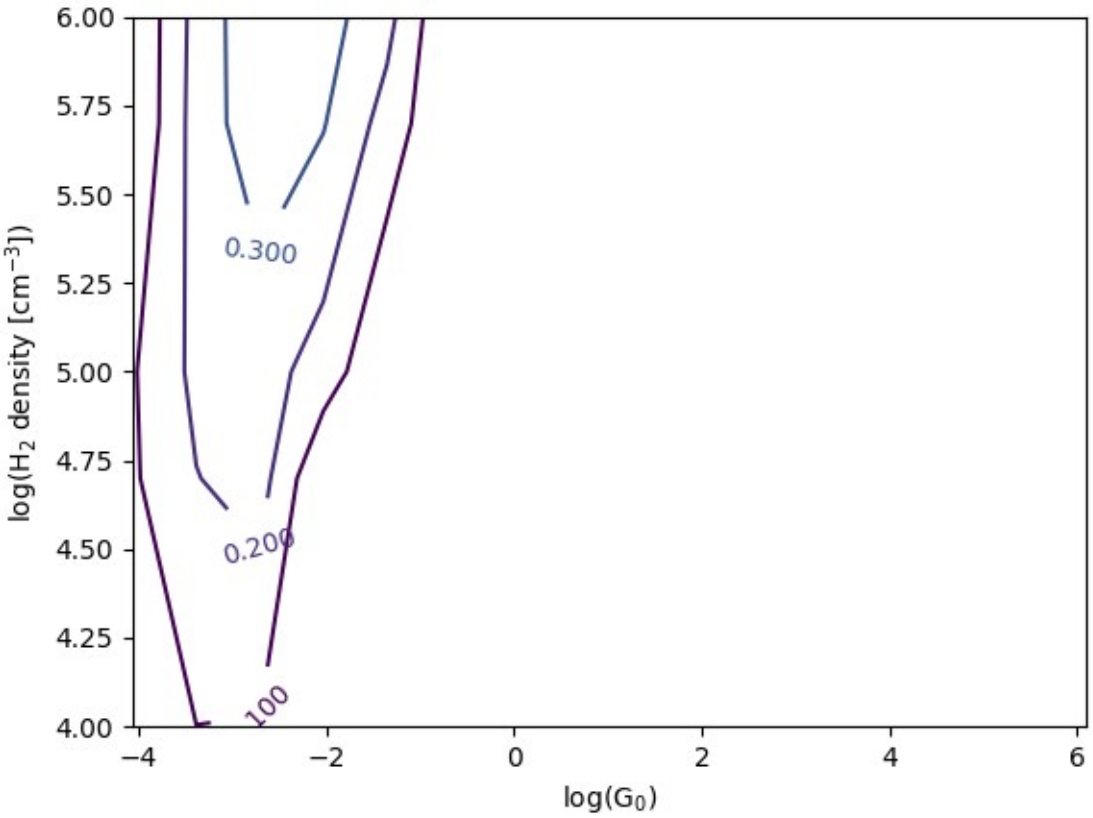
Produkcja HCN:
$N + CH_2 \rightarrow H + HCN$



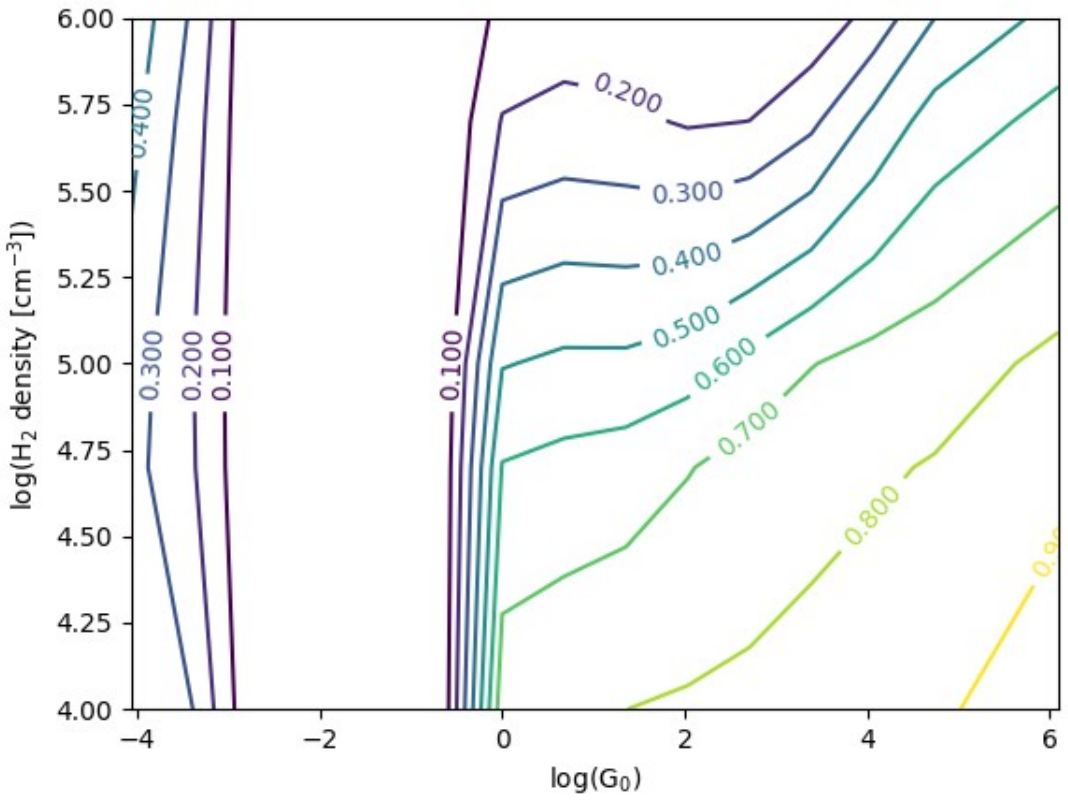
$H + CCN \rightarrow C + HCN$



C + HNC → C + HCN

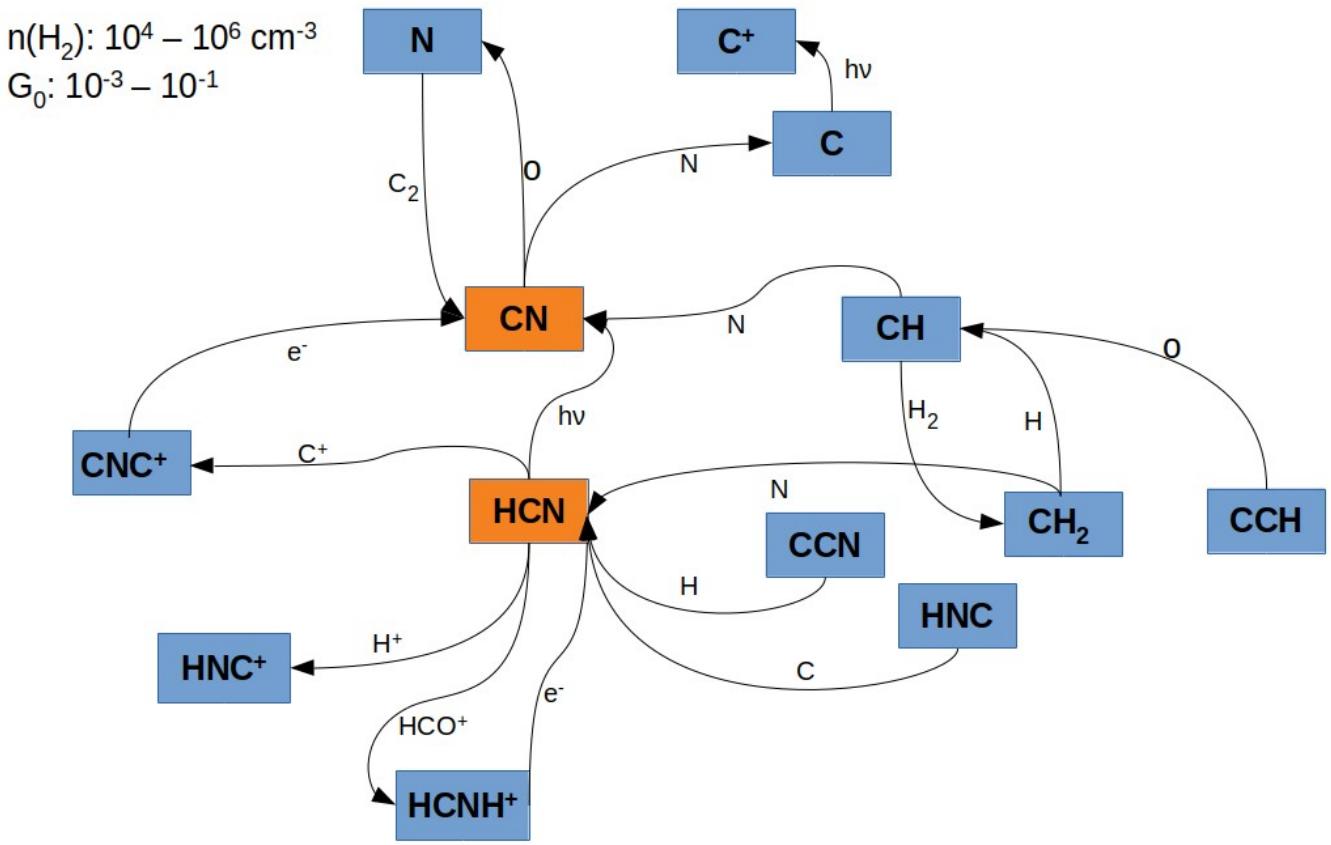


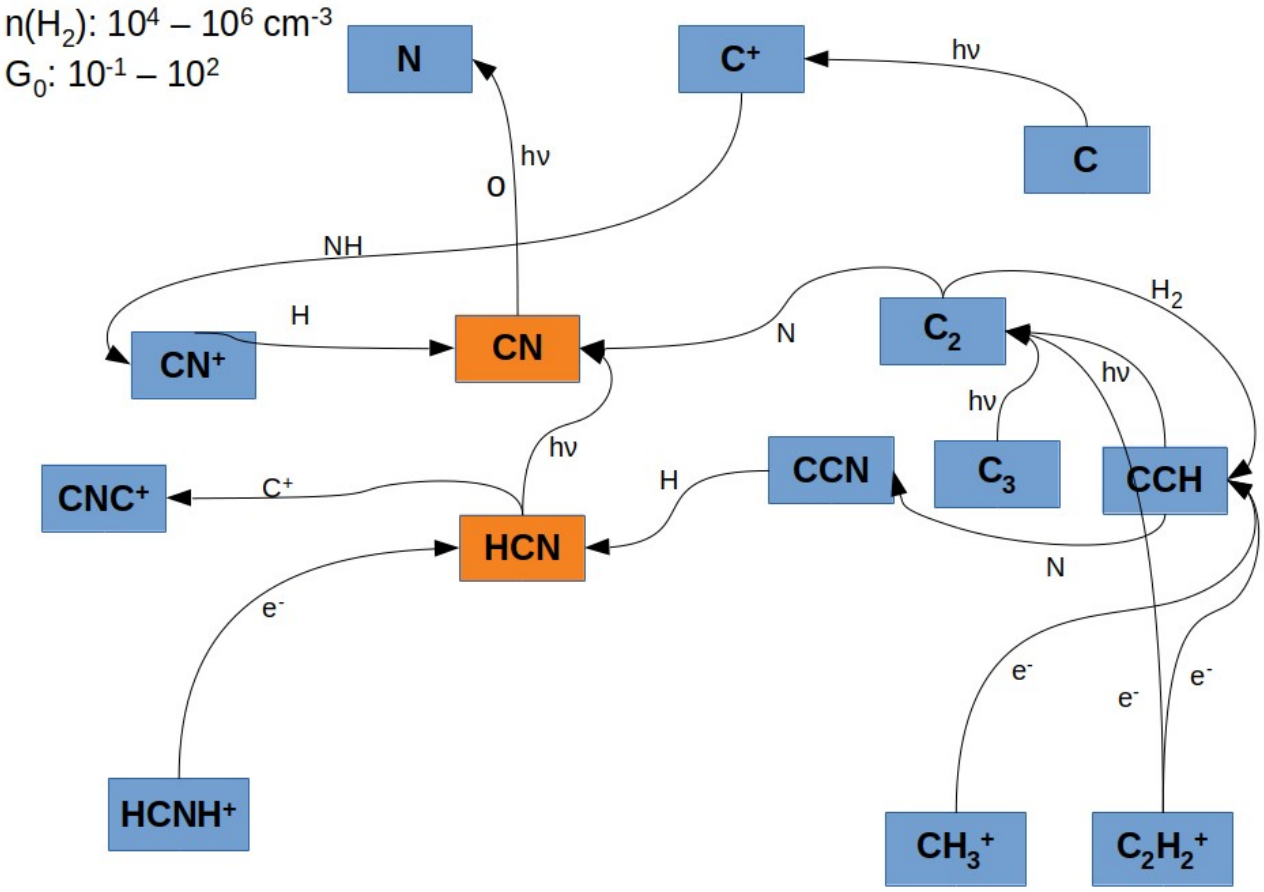
HCNH+ + e- → H + HCN

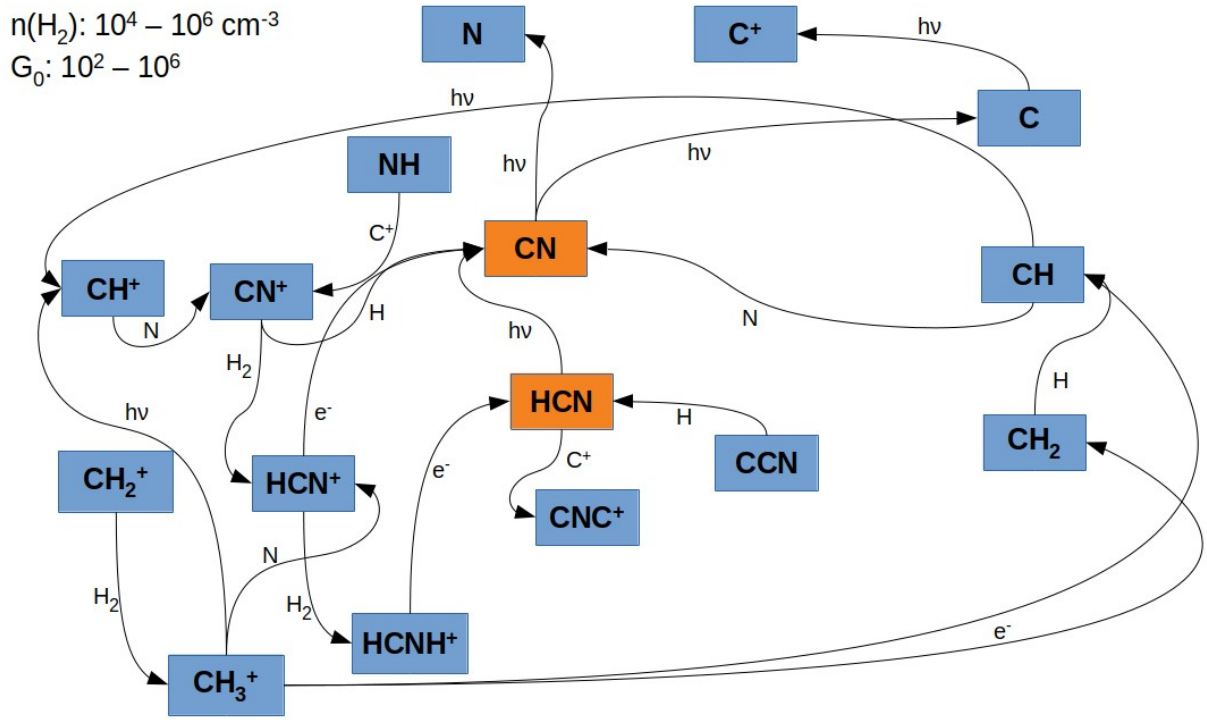


Dominujące reakcje:

Małe pola UV (10^{-3}-10^{-1} G_0)	Średnie pola UV (10^{-1}-10^{2} G_0)	Duże pola UV (10^{2}-10^{6} G_0)
Produkcja CN		
$N + CH \rightarrow H + CN$ $CNC^+ + e^- \rightarrow C + CN$ $N + C_2 \rightarrow C + CN$	$N + C_2 \rightarrow C + CN$ $H + CN^+ \rightarrow CN + H^+$	$HCN^+ + e^- \rightarrow H + CN$ $N + CH \rightarrow H + CN$ $H + CN^+ \rightarrow CN + H^+$
Rozpad HCN		
$HCN + C^+ \rightarrow H + CNC^+$ $HCN + HCO^+ \rightarrow CO + HCNH^+$ $HCN + H^+ \rightarrow H + HNC^+$ $HCN + ph \rightarrow H + CN$	$HCN + C^+ \rightarrow H + CNC^+$ $HCN + ph \rightarrow H + CN$	$HCN + ph \rightarrow H + CN$ $HCN + C^+ \rightarrow H + CNC^+$
Produkcja HCN		
$N + CH_2 \rightarrow H + HCN$ $H + CCN \rightarrow C + HCN$ $HCNH^+ + e^- \rightarrow H + HCN$ $C + HNC \rightarrow C + HCN$	$H + CCN \rightarrow C + HCN$ $HCNH^+ + e^- \rightarrow H + HCN$	$HCNH^+ + e^- \rightarrow H + HCN$ $H + CCN \rightarrow C + HCN$
Rozpad CN		
$O + CN \rightarrow N + CO$ $CN + N \rightarrow C + N_2$	$CN + ph \rightarrow C + N$ $O + CN \rightarrow N + CO$	$CN + ph \rightarrow C + N$




n(H2): 10^4 – 10^6 cm^-3
G0: 10^-1 – 10^2
N
C+
hν
C
hν
O
NH
H
CN+
CN
N
C2
H2
hν
hν
hν
CNC+
C+
H
CCN
C3
CCH
HCN
N
e-
e-
e-
e-
HCNH+
CH3+
C2H2+


n(H2): 10^4 – 10^6 cm^-3
G0: 10^2 – 10^6
N
C+
hν
hν
C
NH
hν
hν
C+
CN
CH+
CN+
H
N
CH
N
hν
H2
hν
e-
HCN
H
CCN
H
CH2
CH2+
HCN+
e-
C+
CNC+
N
H2
H2
HCNH+
e-
CH3+