## Appendix D

## History plots for the formation of $C_2$ and $C_3$

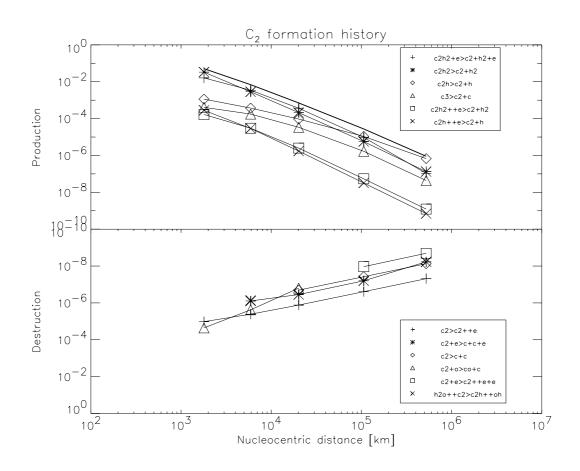


Figure D.1:  $C_2$  formation at 3.78 AU

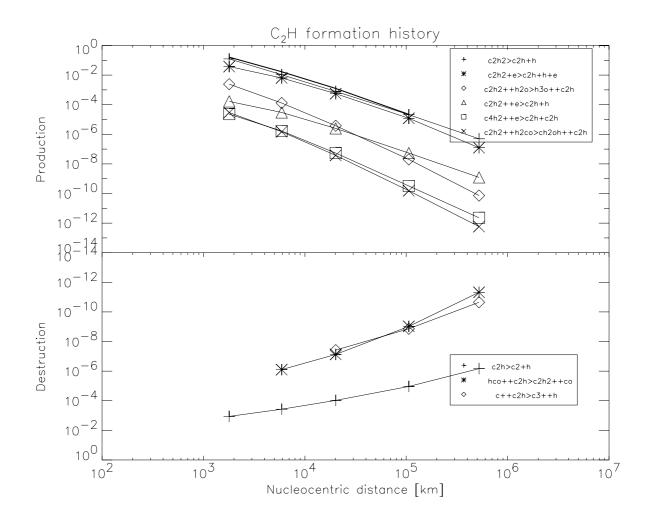


Figure D.2:  $CH_2$  formation at 3.78 AU

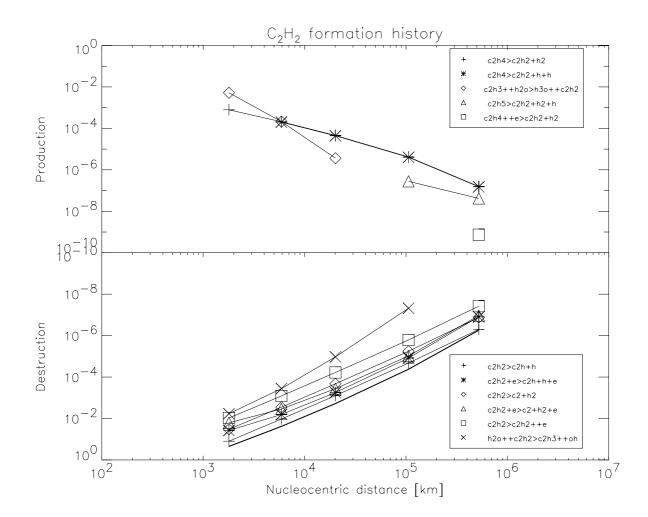


Figure D.3:  $C_2H_2$  formation at 3.78 AU

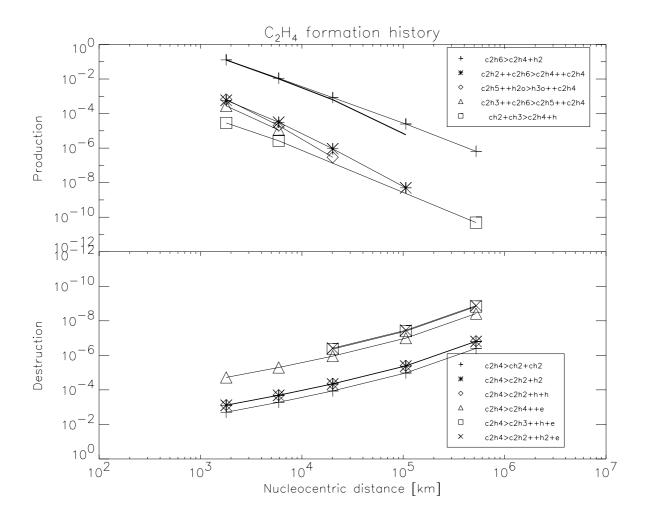


Figure D.4:  $C_2H_4$  formation at 3.78 AU

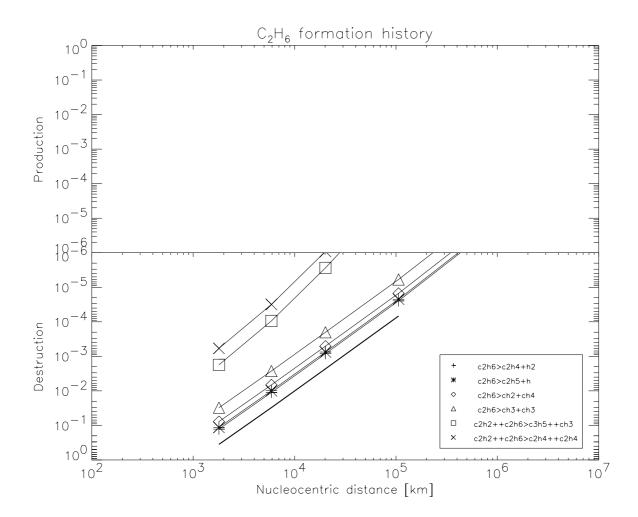


Figure D.5:  $C_2H_6$  formation at 3.78 AU

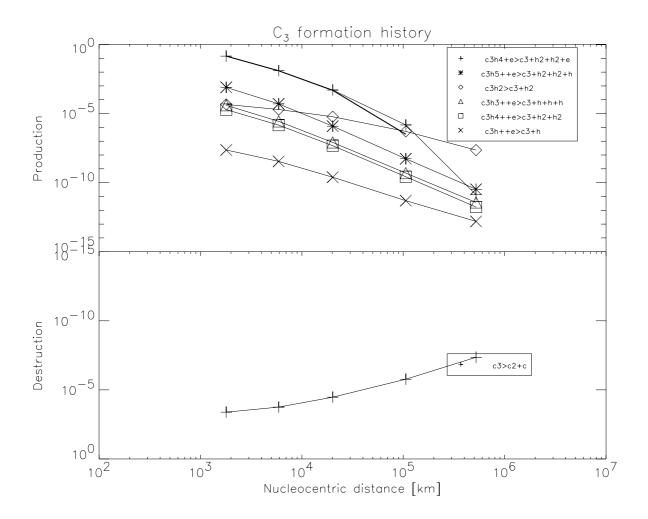


Figure D.6:  $C_3$  formation at 3.78 AU

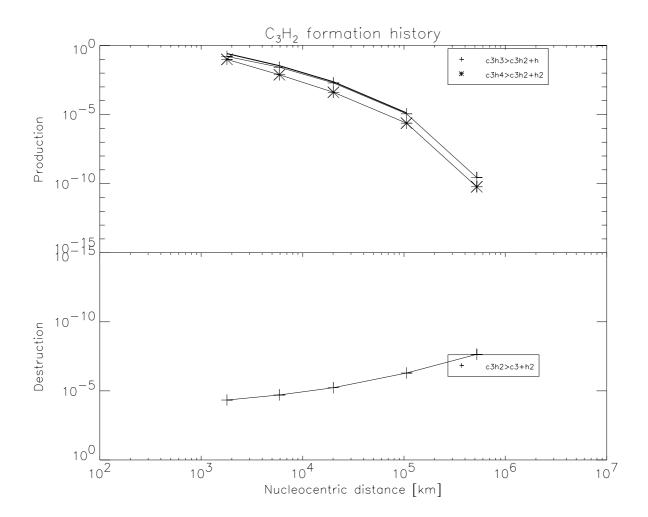


Figure D.7:  $C_3H_2$  formation at 3.78 AU

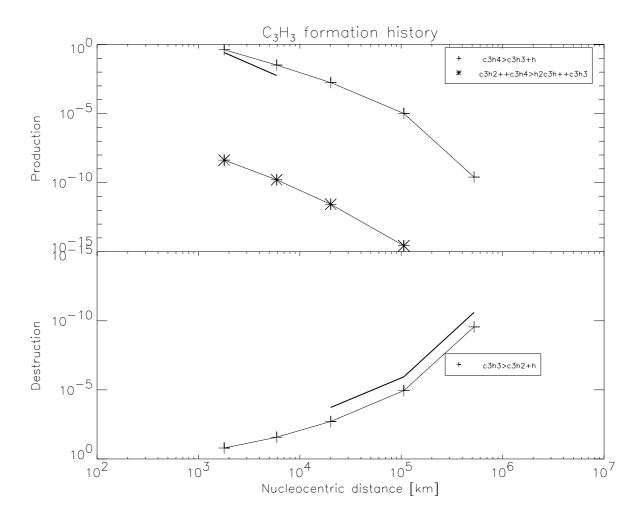


Figure D.8:  $C_3H_3$  formation at 3.78 AU

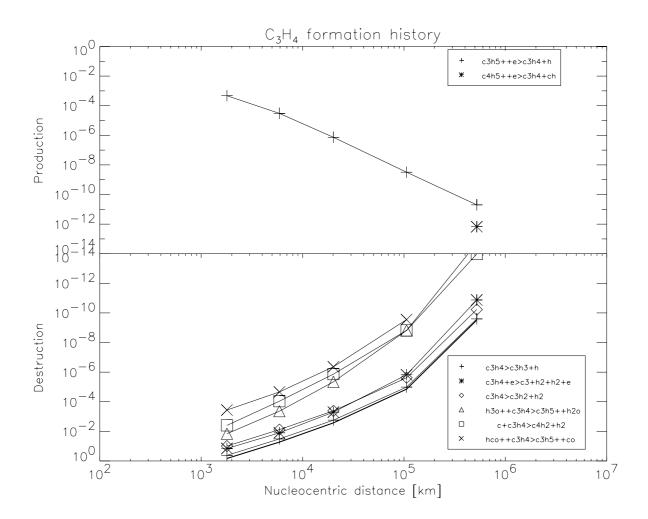


Figure D.9: C<sub>3</sub>H<sub>4</sub> formation at 3.78 AU

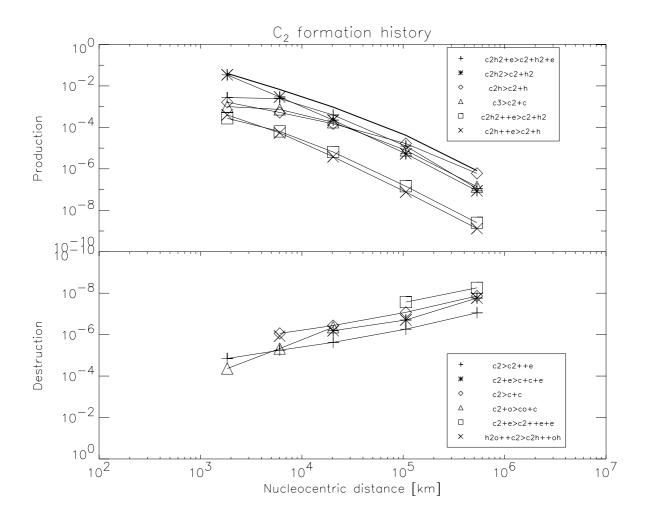


Figure D.10:  $C_2$  formation at 2.86 AU

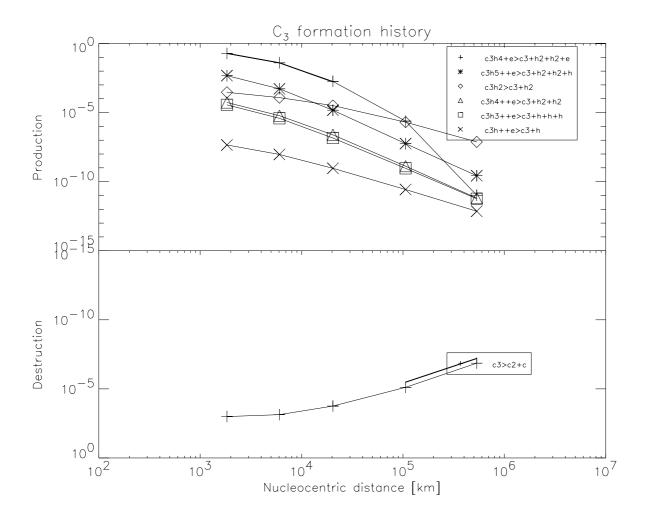


Figure D.11:  $C_3$  formation at 2.86 AU

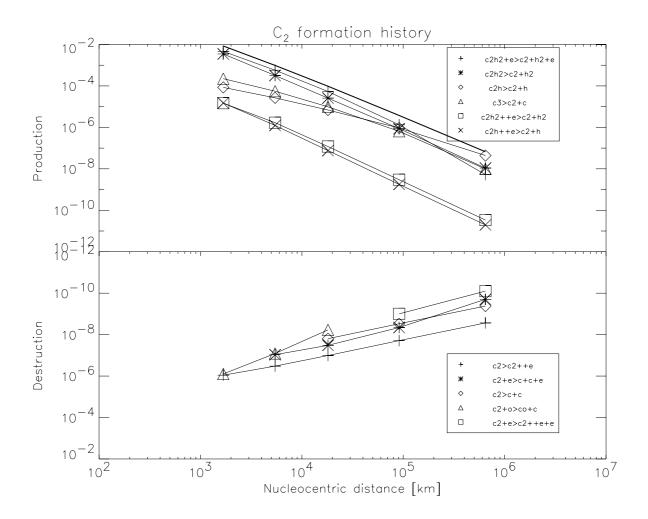


Figure D.12:  $C_2$  formation at 4.74 AU

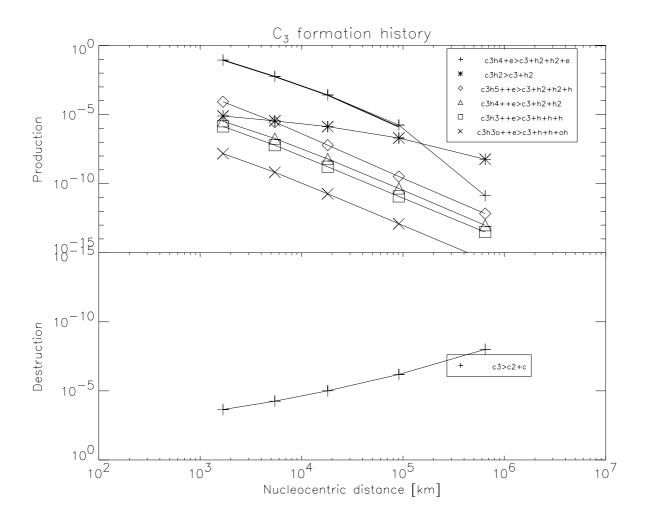


Figure D.13:  $C_3$  formation at 4.74 AU