Table 1. SIMBAD objects and sign captions as displayed in the ratio maps, Figs. 1a-v

IR source:	☆
Maser:	★
HII region:	✙
HH–object:	✡
X–ray source:	⊕
Observed position:	+

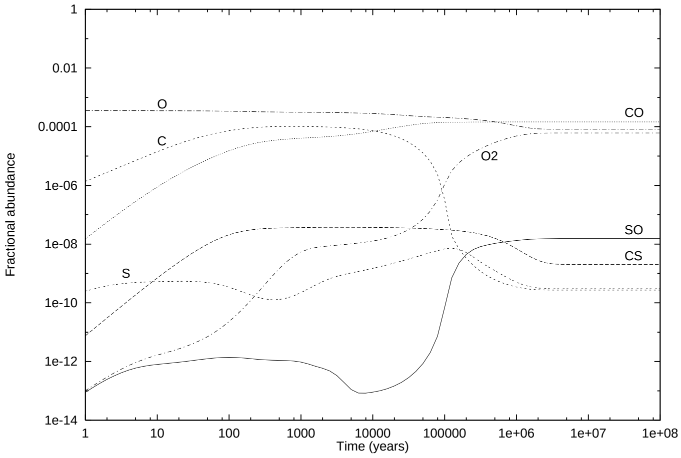

Fig. 4. Species abundances vs time ($O/C^+ = 2.4$)

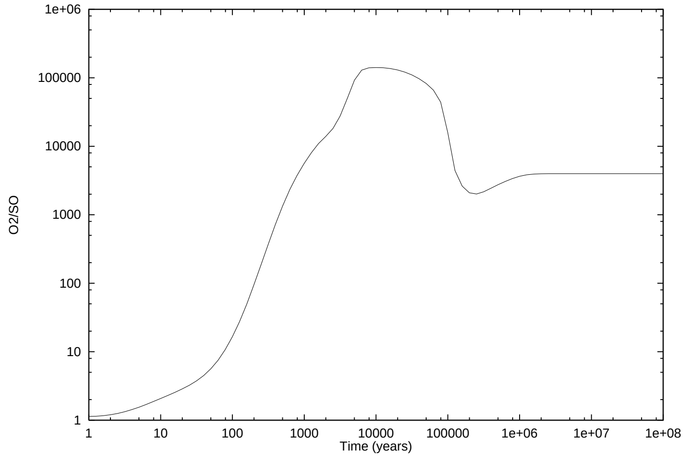

Fig. 7. O_2/SO abundance ratio vs time ($O/C^+ = 2.4$)

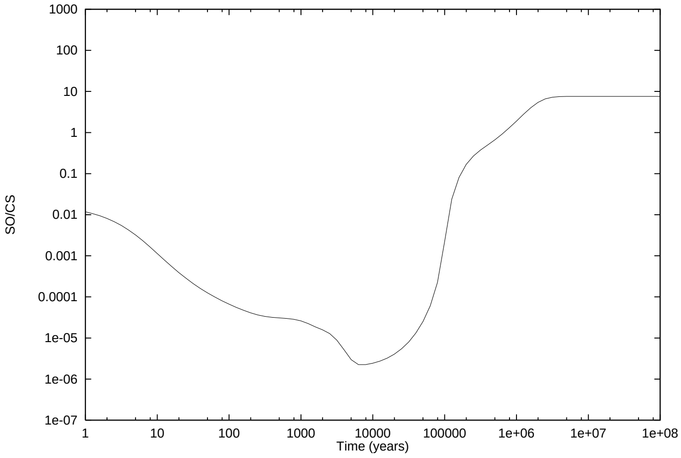

Fig. 5. SO/CS abundance ratio vs time ($O/C^+ = 2.4$)

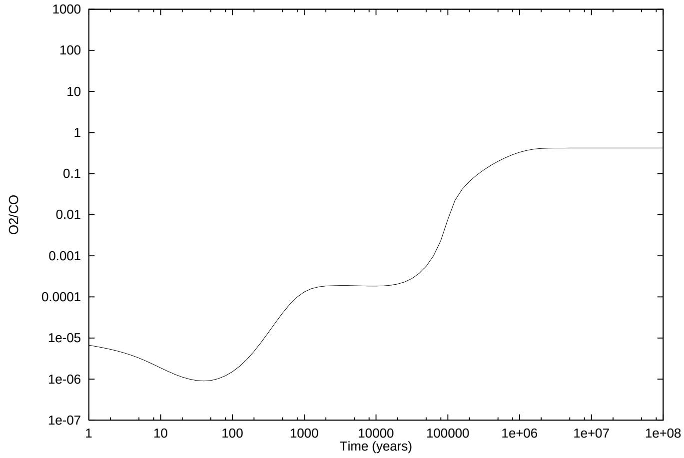

Fig. 8. O_2/CO abundance ratio vs time ($O/C^+ = 2.4$)

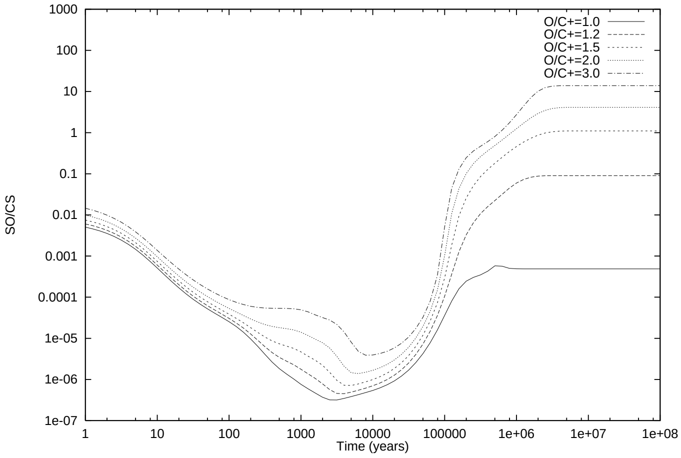

Fig. 6. SO/CS abundance ratio vs time for different O/C^+ ratios

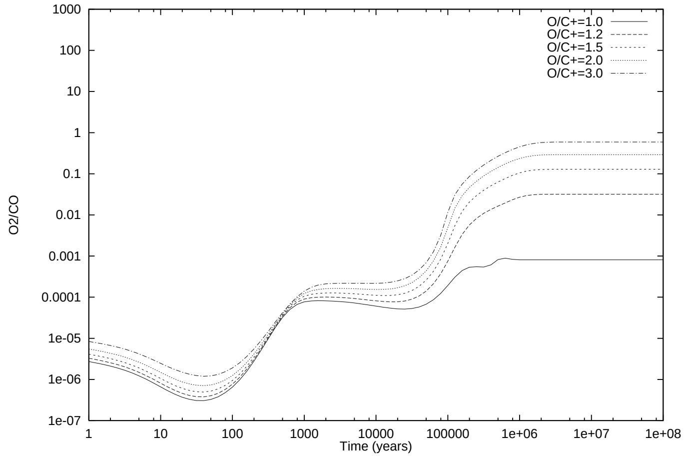

Fig. 9. O_2/CO abundance ratio vs time for different O/C^+ ratios

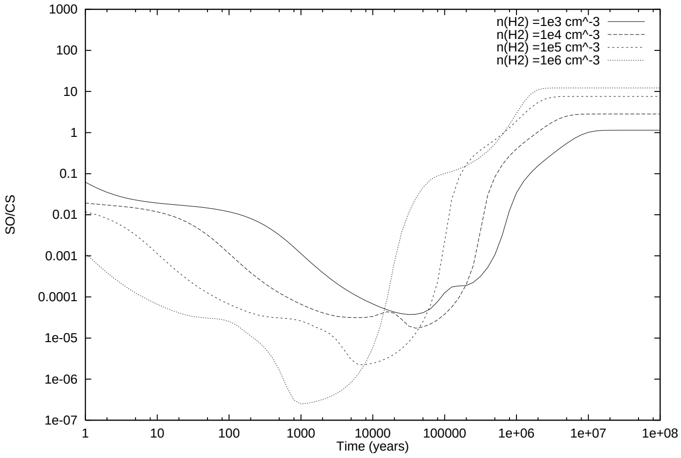

Fig. 10. SO/CS abundance ratio vs time for different cloud densities

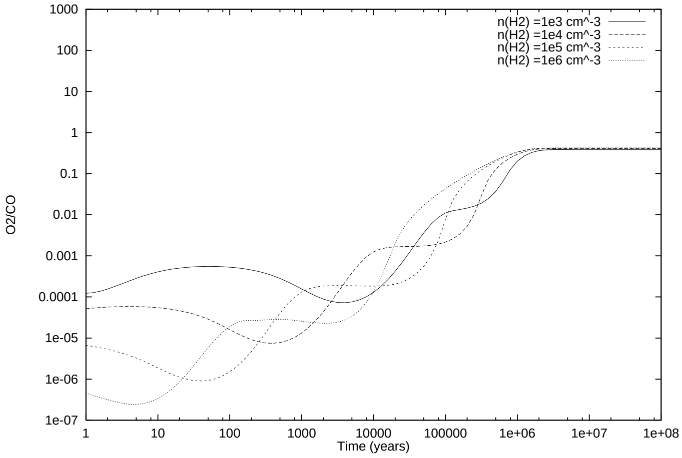

Fig. 13. O_2/CO abundance ratio vs time for different cloud densities

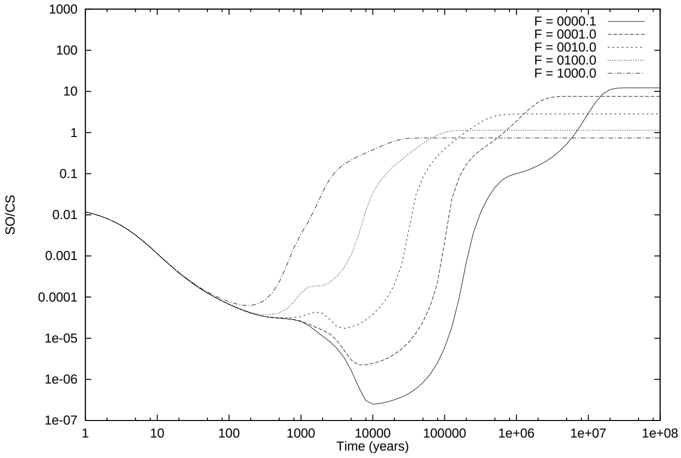

Fig. 11. SO/CS abundance ratio vs time for different ionization rate scaling factors F, $F = 1$ for standard C.R. flux

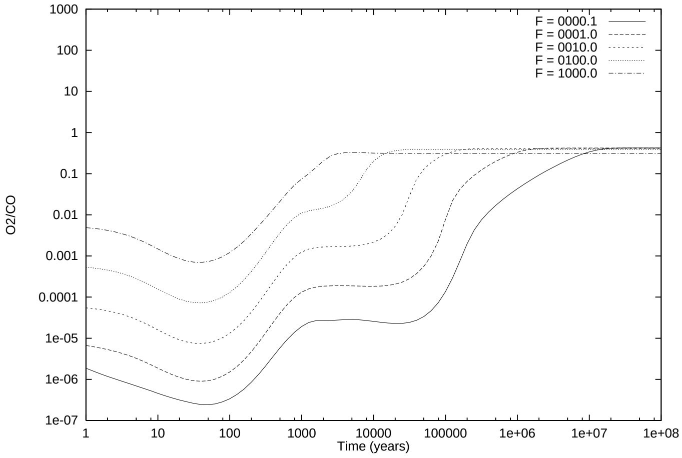

Fig. 14. O_2/CO abundance ratio vs time for different ionization rate scaling factors F

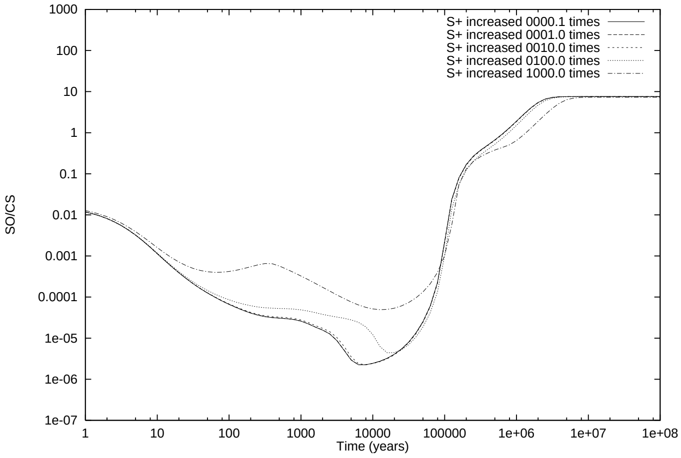

Fig. 12. SO/CS abundance ratio vs time for different initial S^+ abundances

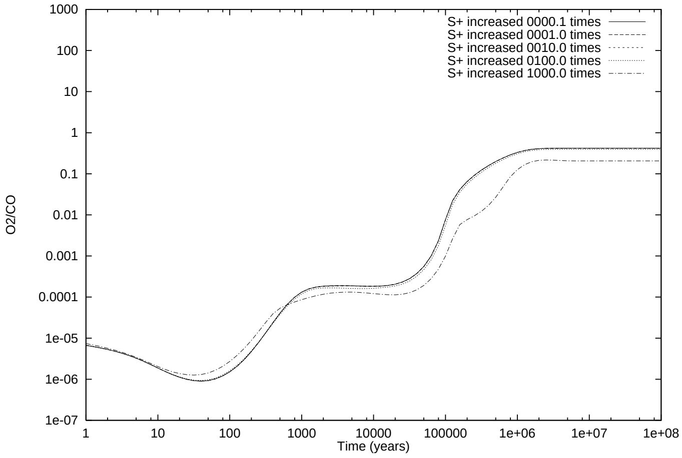

Fig. 15. O_2/CO abundance ratio vs time for different initial S^+ abundances

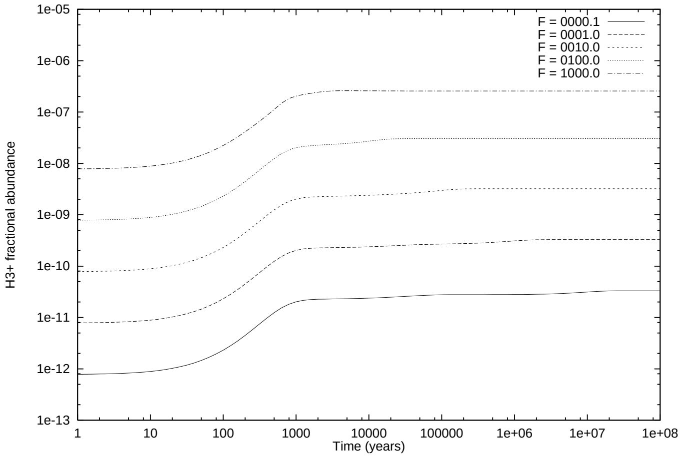

Fig. 16. H_3^+ fractional abundance vs time for different ionization rate scaling factors F, $F = 1$ for standard C.R. flux

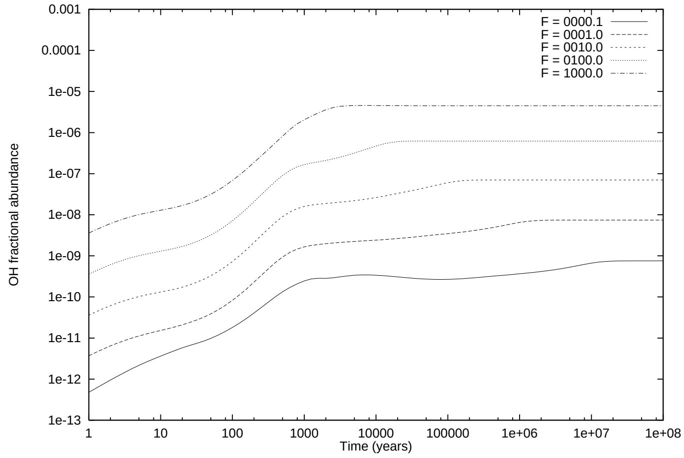

Fig. 19. OH fractional abundance vs time for different ionization rate scaling factors F

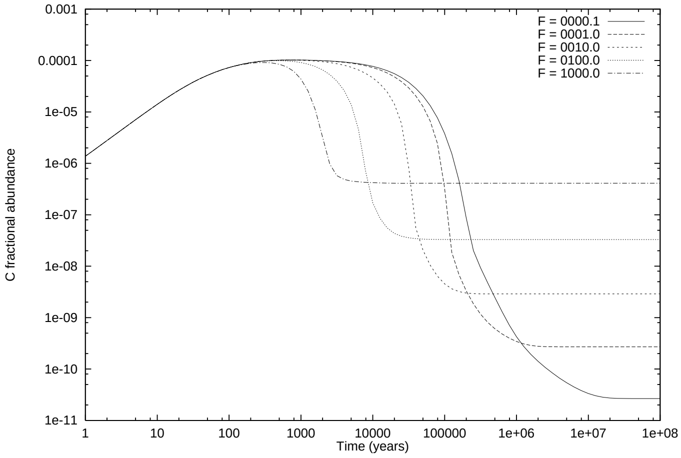

Fig. 17. C fractional abundance vs time for different ionization rate scaling factors F

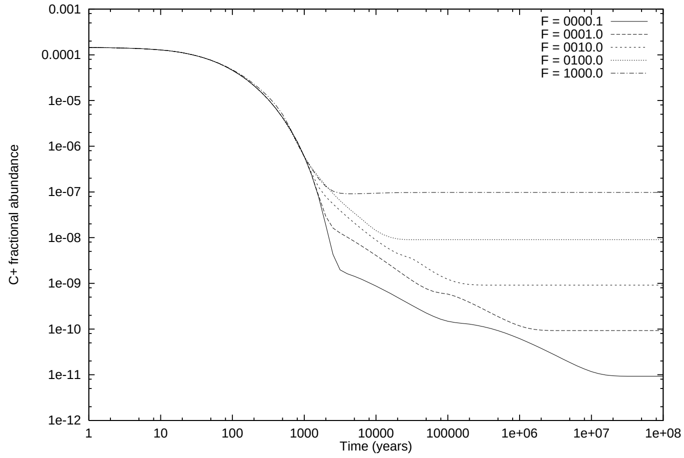

Fig. 20. C^+ fractional abundance vs time for different ionization rate scaling factors F

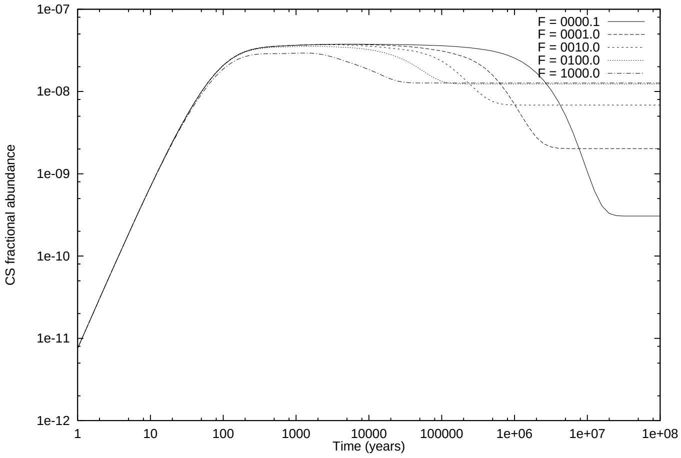

Fig. 18. CS fractional abundance vs time for different ionization rate scaling factors F

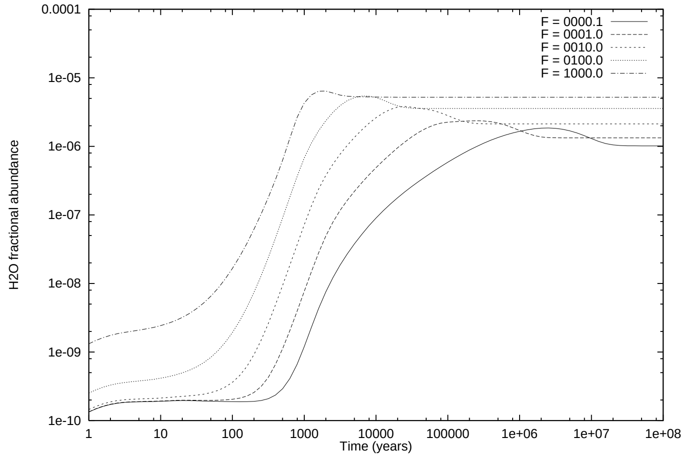

Fig. 21. H_2O fractional abundance vs time for different ionization rate scaling factors F