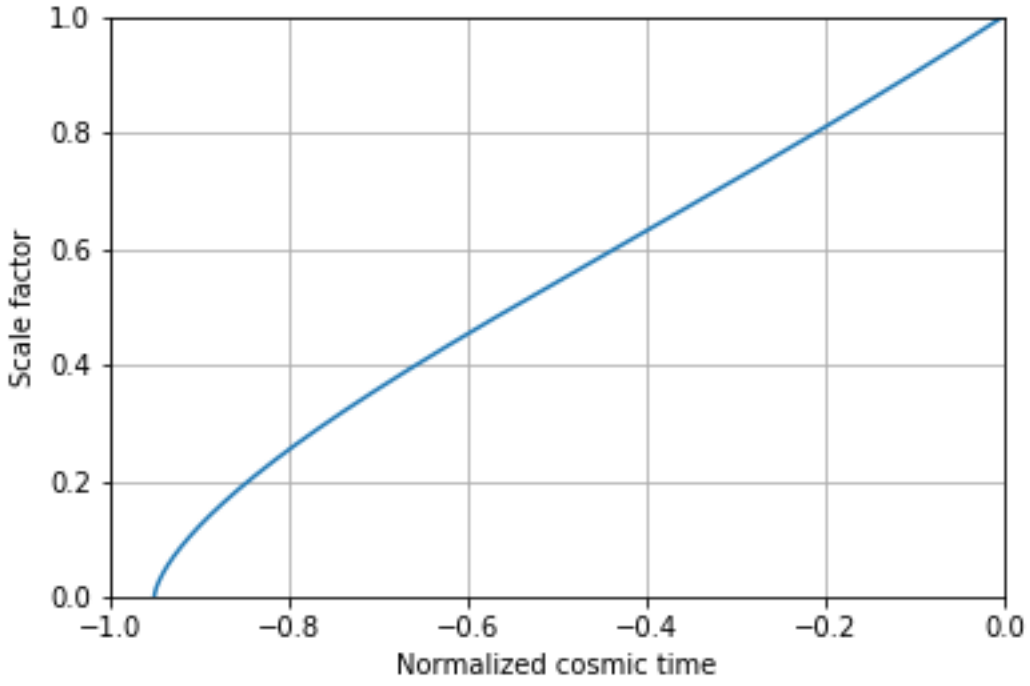
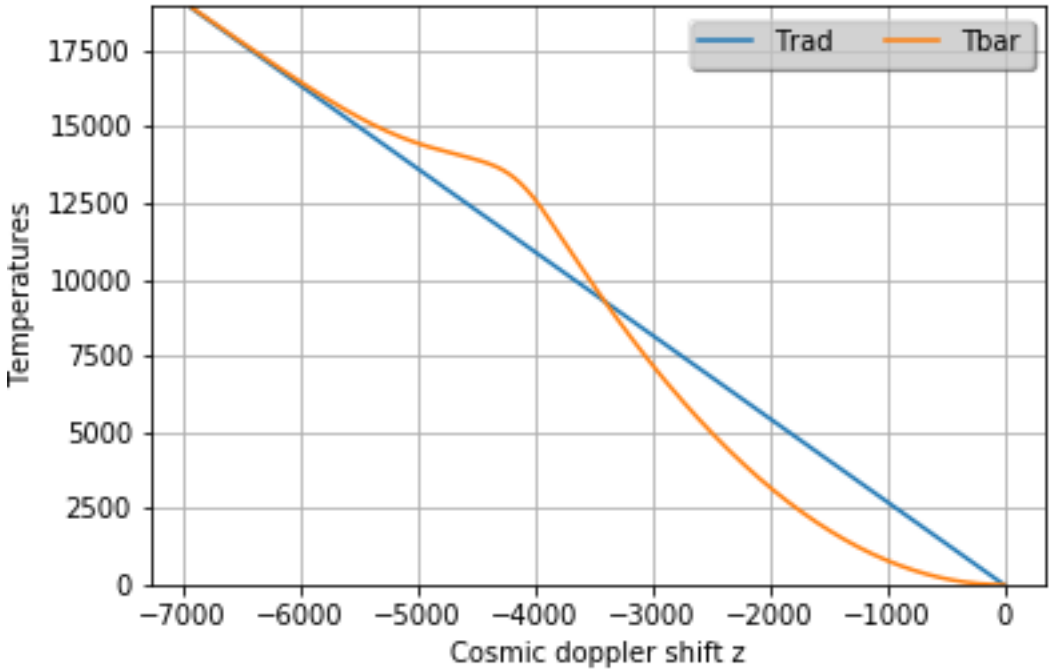
Equations différentielles utilisées

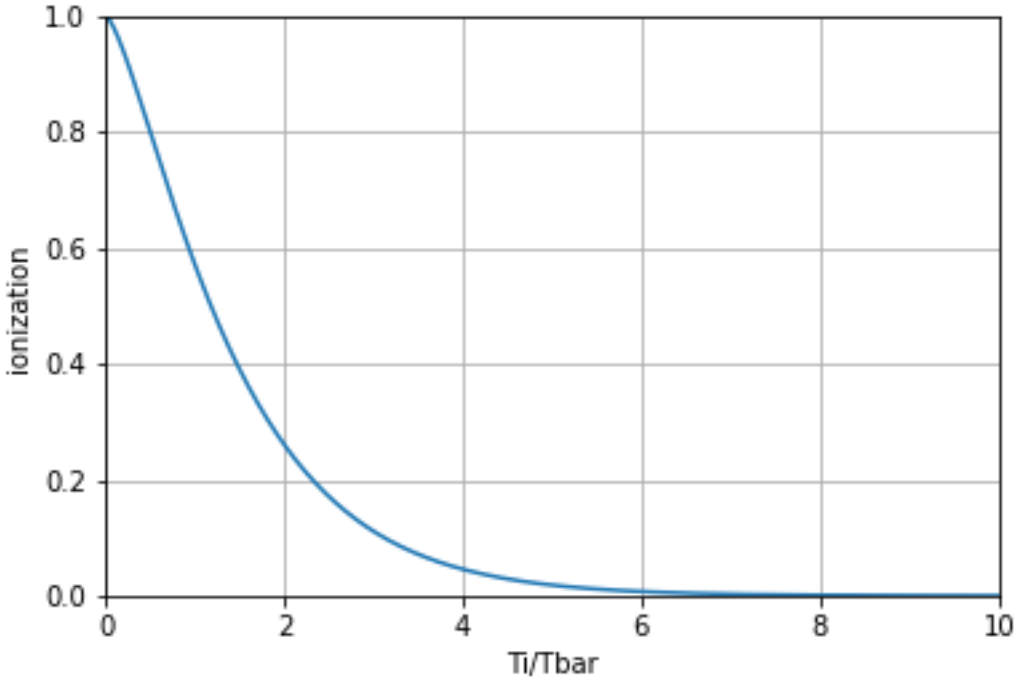
$t' = H_0 * t \ , \ k = 0 => \Omega_K = 0$
$a(t_0) = 1 \ , \ t_0 = 0 = now$
$da/dt' = \sqrt{\Omega_\lambda * a^2 + \Omega_{m0}/a + \Omega_{ro}/a^2}$



$dT_{bar}/dt' = -2\frac{da}{dt'}\frac{1}{a}T_{bar} - \frac{8\sigma_T a}{3m_e c H_0}\ T^4_{rad_0}(T_{rad_0}/a - T_{bar})\frac{1}{a^4}\ X_E(T_I/T_{bar})$
$T_I = 13.6ev/k_b$



$$X_E(x) = 1 - erf(\sqrt{x}) + 2 * \sqrt{x} * \exp(-x)/\sqrt{\pi}$$


1.0
0.8
0.6
0.4
0.2
0.0
ionization
0
2
4
6
8
10
Ti/Tbar