Cosmography

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H0=65km/s/Mpc Omega_m=0.3, Omega_Lambda=0.7

z	d_M Gpc	V(<z) Gpc^3	tlook Gyr	age Gyr t	Mass of star with $t_{MS} = \frac{1}{2} t$ $(z=z_0)$
0	0	0	0	14.5	1.2 $M_\odot$
0.1	4.5064E-01	3.8334E-01	1.4014E+00	13.1	
0.5	2.0339E+00	3.5244E+01	5.4284E+00	9.1	1.3
1.0	3.5580E+00	1.8867E+02	8.3088E+00	6.2	1.5
2.0	5.5783E+00	7.2711E+02	1.1028E+01	3.5	1.75
3.0	6.8446E+00	1.3432E+03	1.2228E+01	2.3	2.0
5.0	8.3735E+00	2.4593E+03	1.3259E+01	1.2	2.7
10.0	1.0166E+01	4.4014E+03	1.4001E+01	0.5	3.6
1000	1.4711E+01	1.3337E+04	1.4502E+01		

Note d_M is proper motion distance, and gravitational wave amplitude
h \propto 1/d_M.

Note luminosity distance d_L=d_M*(1+z).

Redshift z: 1+z=\lambda_r/\lambda_e =\nu_e/\nu_r
(e=measured in cosmic rest frame at emission, r=measured in cosmic rest frame at reception at solar system barycenter)

As of Feb 2002, most distant known quasar is at z=6.3

Astronomer's flux
\nu_r F_\nu_r = \nu_e L_\nu_e/(4\pi d_L^2), and

distance modulus for magnitudes m-M (difference between apparent and absolute magnitudes)
m-M=5 log_{10}(D_L/10 pc)

Sun:
M_bol=4.75
M_U=5.61
M_B=5.48
M_V=4.83
M_J=3.73
M_K=3.41
M_{K_s}=3.39

1AU = semimajor axis of earth's orbit around sun
1pc=60*60*(180/pi) AU (distance of star with parallax of 1 arcsec)
  =3.086E18 cm
1Mpc=10^6pc
1Gpc=10^9pc
Hubble 'constant' H_0=100h km/s/Mpc; h=0.65+/-0.05
1/H_0=15Gyr
c/H_0=4.6Gpc