PRE-MAIN SEQUENCE EVOLUTIONS OF SOLAR ABUNDANCE LOW MASS STARS

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ABSTRACT

We present the Pre-Main Sequence (PMS) evolutionary tracks of stars with $0.065 \sim 5.0M_{\odot}$. The models were evolved from the PMS stellar birthline to the onset of hydrogen burning in the core. The convective turnover timescales which enables an observational test of theoretical model, particularly in the stellar dynamic activity, are also calculated. All models have Sun-like metal abundance, typically considered as the stars in the Galactic disk and the star formation region of Population I star. The convection phenomenon is treated by the usual mixing length approximation. All evolutionary tracks are available upon request.

Keywords: star, pre-main sequence star, evolution track, convective turnover timescale

1. INTRODUCTION

Young Stellar Objects (YSOs), mainly observed in the star formation regions, are the PMS stars located in the evolutionary stages from protostar to Zero-Age Main Sequence (ZAMS). Recent observations reveal that YSOs are the key to understand star forming regions because of their outrageous levels of X-ray activity (Feigelson et al. 1993, Casanova et al. 1995, Preibisch et al. 1996). These strong X-ray sources not only photoionize surrounding materials, also have an effect on interaction between ionized materials and magnetic fields. Moreover, apparently cool dwarf stars have more intensive X-ray emission.

Theoretically, these important characteristics of YSOs are thought to be connected directly to the stellar dynamic action, since the interaction between rotation and convection is widely considered as the important characteristics of the generation of stellar dynamics and the observed stellar magnetic activities. This is firstly supposed by Durney & Latour (1978) and tested by the number of researchers (Mangeney & Praderie 1984, Hartmann et al. 1984). In this hypothesis, the most significant concept is the Rossby number, defined as the ratio of the rotation period to the local convective turnover time. In the dynamo mechanism, the dynamic action is placed at the base of the convection region, just above the radiative layers. It makes the convective turnover timescale to the most relevant property in the evaluation of Rossby number.

The purpose of this paper is to provide the dynamic and thermal parameters of the PMS evolution tracks of stars with mass range of 0.065 to $5.0M_{\odot}$. For the implication of observational test, the local and the global convective overturn timescales, which can be served as an input parameter of Rossby

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number circulation, are also computed. All models assume to have solar-like metal abundance. The convection is handled by the mixing length approximation in usual way.

2. INPUT PHYSICS AND MODELING

The evolutionary tracks of PMS stars have been constructed by using Yale Stellar Evolution Code (Guenther et al. 1992, Guenther & Demarque 1997) with realistic physics. The opacities of Alexander & Ferguson (1994) at low temperature and the OPAL Rosseland opacities at higher temperature (Iglesias & Rogers 2001) are used. The equation of state is the OPAL equation of state (Iglesias & Rogers 1996). The energy generation rate is taken from Bahcall & Pinsonneault (1992) and the helium diffusion value is obtained from Thoul et al. (1994). The Eddington $T(\tau)$ relation is used in the atmosphere.

In the stellar model, the atmospheric regions are assumed to be grey. In the convectively unstable regions, the thermal structure is derived by the mixing length approximation (MLT). Since the computation contains the helium diffusion, the initial hydrogen abundance is different from the evolved model.

In the MLT, mixing length is assumed to be proportional to the local pressure scale height. As we mainly focused on the stars, typically formed in the Population I formation region, the PMS model is supposed to have the same metal abundance of the Sun. The initial hydrogen and the metal abundance as well as the mixing length are derived by fitting the values of luminosity, radius, and $Z/X (= 0.0244$; Grevesse et al. 1996) of the stellar models to the observed solar values. The adopted values are $(X, Z, \alpha)_{\text{initial}} = (0.7149, 0.0181, 1.7432)$. These values are then applied to all PMS models.

Operationally, all models in our evolutions are started off from the stellar birthline, where stars initially become visible objects (Palla & Stahler 1993). The stars are assumed to be spherically symmetric, and not affected by any influence of rotation or magnetic fields. The initial models constructed from the polytropic models are located in the invisible region of the H-R diagram. Because they are quite different from the real stellar model in their thermal structures, a relaxation process is required. This process is carried out by YREC. The resulting models are then evolved down along their Hayashi lines until they fulfill the mass-radius relationship, proposed by Palla & Stahler (1991). These PMS evolutionary computations are physically self-consistent (cf. Yi et al. 2001).

Since our evolutionary models, which have different age and different mass, are assumed to have same mixing ratio, the convective turnover time computed by the stellar model may be not fully correct. However, studies of convective motions with numerical methods verify that the MLT is still adequate in the deep convection zone where the temperature gradient is almost adiabatic (Kim et al. 1996). As the convective turnover timescale is measured near the base of convection zone, where the temperature gradient is fully adiabatic, our assumption and computation are probably reasonable.

3. RESULTS

The evolutionary track is computed using an iteration method for the evolution of the star, which yields some initial relaxation period of adjustment during early evolutionary phase. To avoid this uncertain stage, we present only the 2×10^{-2} Myr and on. The terminating point of the PMS phase is chosen by the property that MS stars obtain most of their luminosity from the nuclear burning process. The stars whose mass is greater than $3.0M_{\odot}$ are thought to have some non-negligible nuclear burning process just before they settle in the MS, since they have the unstable convective

Figure 1. The evolutionary tracks of theoretical PMS stars.

core and some portion of energy is generated by the CN burning in the PMS. By considering these properties, we select the terminating points of these large mass stars as the points that the energy generated by the gravity has the lowest value for the first time.

Figure 1 presents the H-R diagram of all computed PMS stars. For convenience, the reference stars with different line type are marked. The first position of each track is uncertain, since it depends on the choice of the first time step of each evolution. The evolutionary sequences are begun from the stellar birthline and then evolved along the Hayashi track before they reach the ZAMS. As shown in Figure 1, stars with different mass experience quite distinct PMS evolutionary stages. It is originated from the different magnitude of the gravitational contraction. The timescale of the stellar evolution is mainly relied on the mass of the star. The more mass presents, the faster is the evolution of the star through the fuel consuming processes.

The PMS stage is characterized by the gravitational contraction. During the evolution stage of the protostar, with the hydrostatic equilibrium, the stellar radius is decreased by the gravitational contraction. This accreting protostar heats up in its interior. The increase of the central temperature T_c yields the ionization of materials in the core that the central core becomes opaque. It builds the temperature gradient in the interior, to transport the contraction energy outward. Consequently the central convection is set on. As the protostar evolves, the core convection is expanded to the envelope.

The stars $M \leq 1.3M_\odot$, originated from the low mass protostars, are fully convective when they arrive at the stellar birth line (the top of the Hayashi line). These fully convective objects contract continuously until T_c is an order of 10^6 K. On the condition of the contraction combined with the convection, the luminosity is rapidly decreased, while the effective temperature T_{eff} is a roughly

constant. It is compensated with the transfer downward along the nearly vertical path known as the Hayashi track. At the T_c of about 10^6 K, the full ionization of H in the core decreases the central opacity. Simultaneously, all the ^{12}C begin to burn into ^{14}N , and the first reaction of pp chain becomes relevant. Thus, the portion of the energy transport by radiation gradually exceeds the contraction energy, which slows down the rate of contraction. This is appeared in Figure 1 as the increasing luminosity and increasing T_{eff} . Subsequently, with the depletion of ^{12}C in the central region, the convective core is disappeared and the evolution is dominated by radiative transport, a phase which continues until T_c reaches about 10^8 K. At that point, ordinary hydrogen ignites at the centre and gradually outward. For the stars $M \leq 0.5M_\odot$, because the radiative core grows to include the most of stellar mass (i.e. Virial Theorem), the luminosity does not rise appreciably before they reach the MS. Note that the star, which has lower mass than the critical mass $0.08M_\odot$, never reaches the central nuclear burning phase, since the central temperature is not sufficient to ignite the hydrogen.

The massive stars evolve faster, because of their strong gravitational contraction that results in the higher central temperature. Therefore, by the time they appear in the stellar birth line, their central regions are already developed to the radiative core. They also contract continuously until the central hydrogen burns. In contrast to the low mass star, however, the strong contraction makes the central temperature of massive stars approach to about 10^6 K quickly. This is the reason why the more massive star leaves the Hayashi track more rapidly. In addition, as the radiative energy formed in the core exceeds the gravitational energy, the envelope convection is diminished, and finally disappeared. After this detachment, the principal source of opacity during the later contraction is now the electron scattering. Since this type of opacity is independent of temperature and density, the luminosity along the PMS track remains roughly constant as the result of increased T_{eff} . The central core is transformed into the convective one, because the nuclear burning for the equilibrium of ^{12}C depletion is governed by the CNO cycle instead of the pp chain.

Table 1 summarized the detailed characteristics of theoretical PMS models with several physical quantities at fixed ages from the 2×10^{-2} Myr to the terminating point of each PMS star. This table also can be used to derive isochrones, but more complete evolutionary data are available for the astronomers upon request. The columns are mostly self-explanatory. Columns (5) in the first row gives the gravitational acceleration. The Y_c is the helium abundance in the central core. The energy generation rates by PP1 cycle and gravity are provided at Columns (7) and (8), respectively. The absences of global and local convective turnover times in Columns (10) and (11) mean that no convection in the envelope was driven.

To describe the characteristics of surface convection, two parameters, the local and the global turnover time, have been computed. The local convective turnover timescale, used to explain the convective overturn, was calculated at each time step. The time scale was estimated based on the local convective velocity at a distance of a half the mixing length above the base of the convection region (Gilliland 1986). The nonlocal (or global) convective turnover time was also derived at each time step using the equation

$$\tau_{gc} = \int_{R_b}^{R_*} \frac{dr}{v} \quad (1)$$

where R_b is the location of the bottom of the surface convection region, R_* is the total radius of the stellar model, and v is the local convective velocity (Kim & Demarque 1996). If the MLT describes the deep convection phenomenon with reasonable implementation, these two timescales have identical results except for some scaling factor.

The evolution of the global and the local timescale are shown in Figure 2. In the PMS phase, the thermal equilibrium between the contraction and the central pressure modifies the thermal structure within the Kelvin-Helmholtz time. It causes the rapid change of both convective time. Moreover,

Figure 2. The global (or nonlocal) and local convective time scale vs age for some reference stars. Both time scales are nearly constant in the vicinity of the main sequence for a given mass. The local value is almost same with the one-half of the global value.

the timescales of massive stars are less than that of low mass stars, because they have more shallow envelope convection regions. At the T_{eff} of about 4000K encountered during the early contraction, the absorption by the H^- that releases the free electron increases the opacity of the photospheric layer. It brings about the swell of stellar radius which, in turn, affects on the turnover time. This is the reason that intermediate mass stars experience the increase of the convective turnover time in the early PMS stage. As the amount of the H^- in the envelope decreases, stars start to contract again and the corresponding overturn time is also diminished. For the star which has the convective envelope in near the main sequence, both time scales remain almost constant and may be a function of mass. Since MS stars do not change their thermal structures before the end of their long phase of central hydrogen burning.

The different PMS evolutionary tracks are constructed by D'Antona & Mazzitelli (1994) with different evolution code and input physics. In particular, they examine the effect of the convection treatment between the MLT and the semi-analytical turbulent convection model proposed by Canuto & Mazzitelli (CM) (1991, 1992). From their approach, it is found that T_{eff} values are dependent on the choice of the opacity and the convection treatment. According to this test, the best reasonable model is the Alexander opacity and the CM set. However, considering the large uncertainties embedded in the theoretical assumptions and the input physics, it is somewhat meaningless to determine what model is more reasonable. Instead, the agreement between the model and the observation may be a criterion to verify the usefulness of the model. The application of updated input physics and

physical parameters may also enhance the reliableness of the theoretical data. For our cases, based on the most updated input physics and solar calibration, Yi et al. (2001) already testifies the validity through the comparison with not only the observational globular cluster 47 Tuc also the open cluster IC 2391 and Pleiades.

4. SUMMARY

We computed the several evolution tracks of the pre-main sequence stars based on the up-to-date input physics. With fixed age steps, the fundamental dynamic and thermal parameters are presented. The metal abundance is assumed to be that of the Sun. Since the PMS stars are considered to have the convection motion in their envelope, we also provide the two time scales, the global and the local convective turnover timescales. These time scales can be applied to an observational test of theoretical model. The full computed tracks of all PMS stars with more detailed thermal and dynamic variables are also available upon request.

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Table 1. Evolutionary properties of PMS stars.

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.065 $M_{\odot}$										
0.00002	3.3837	-0.2884	2.8502×10^{11}	1.0620×10^2	0.26700050	0.0000	1.0000	0.7149	4.7221×10^2	2.0956×10^2
0.00010	3.4360	-0.8188	1.2159×10^{11}	5.8351×10^2	0.26700050	0.0000	1.0000	0.7149	4.1012×10^2	1.9251×10^2
0.00020	3.4507	-1.0168	9.0504×10^{10}	1.0532×10^3	0.26700050	0.0000	1.0000	0.7149	3.9465×10^2	1.8749×10^2
0.00030	3.4578	-1.1322	7.6687×10^{10}	1.4670×10^3	0.26700050	0.0000	1.0000	0.7149	3.8719×10^2	1.8493×10^2
0.00050	3.4649	-1.2800	6.2605×10^{10}	2.2011×10^3	0.26700050	0.0000	1.0000	0.7149	3.8007×10^2	1.8241×10^2
0.00070	3.4687	-1.3778	5.4965×10^{10}	2.8556×10^3	0.26700050	0.0000	1.0000	0.7149	3.7641×10^2	1.8112×10^2
0.00100	3.4720	-1.4822	4.8006×10^{10}	3.7434×10^3	0.26700050	0.0000	1.0000	0.7149	3.7332×10^2	1.8005×10^2
0.00200	3.4767	-1.6869	3.7121×10^{10}	6.2607×10^3	0.26700050	0.0000	1.0000	0.7149	3.6885×10^2	1.7866×10^2
0.00300	3.4785	-1.8075	3.2039×10^{10}	8.4044×10^3	0.26700050	0.0000	1.0000	0.7149	3.6656×10^2	1.7768×10^2
0.00500	3.4797	-1.9607	2.6709×10^{10}	1.2094×10^4	0.26700050	0.0000	1.0000	0.7149	3.6521×10^2	1.7750×10^2
0.00700	3.4800	-2.0619	2.3740×10^{10}	1.5308×10^4	0.26700050	0.0000	1.0000	0.7149	3.6513×10^2	1.7766×10^2
0.01000	3.4797	-2.1706	2.0975×10^{10}	1.9610×10^4	0.26700050	0.0000	1.0000	0.7149	3.6715×10^2	1.7863×10^2
0.02000	3.4768	-2.3871	1.6567×10^{10}	3.1431×10^4	0.26700050	0.0000	1.0000	0.7149	3.7004×10^2	1.8106×10^2
0.03000	3.4740	-2.5150	1.4486×10^{10}	4.1109×10^4	0.26700050	0.0000	1.0000	0.7149	3.7284×10^2	1.8306×10^2
0.05000	3.4695	-2.6758	1.2288×10^{10}	5.7134×10^4	0.26700050	0.0000	1.0000	0.7149	3.7870×10^2	1.8605×10^2
0.07000	3.4636	-2.7928	1.1038×10^{10}	7.0813×10^4	0.26700050	0.0000	1.0000	0.7149	3.8632×10^2	1.9047×10^2
0.08900	3.4564	-2.8918	1.0177×10^{10}	8.3303×10^4	0.26700050	0.0000	1.0000	0.7149	3.9506×10^2	1.9474×10^2
0.066 $M_{\odot}$										
0.00002	3.3858	-0.2910	2.8138×10^{11}	1.1064×10^2	0.26700050	0.0000	1.0000	0.7149	4.7156×10^2	2.0977×10^2
0.00010	3.4368	-0.8110	1.2229×10^{11}	5.8575×10^2	0.26700050	0.0000	1.0000	0.7149	4.1120×10^2	1.9304×10^2
0.00020	3.4512	-1.0084	9.1146×10^{10}	1.0544×10^3	0.26700050	0.0000	1.0000	0.7149	3.9583×10^2	1.8806×10^2
0.00030	3.4584	-1.1234	7.7268×10^{10}	1.4672×10^3	0.26700050	0.0000	1.0000	0.7149	3.8840×10^2	1.8550×10^2
0.00050	3.4654	-1.2710	6.3102×10^{10}	2.1999×10^3	0.26700050	0.0000	1.0000	0.7149	3.8130×10^2	1.8299×10^2
0.00070	3.4692	-1.3689	5.5403×10^{10}	2.8538×10^3	0.26700050	0.0000	1.0000	0.7149	3.7759×10^2	1.8171×10^2
0.00100	3.4725	-1.4732	4.8393×10^{10}	3.7404×10^3	0.26700050	0.0000	1.0000	0.7149	3.7455×10^2	1.8063×10^2
0.00200	3.4772	-1.6776	3.7433×10^{10}	6.2515×10^3	0.26700050	0.0000	1.0000	0.7149	3.7003×10^2	1.7923×10^2
0.00300	3.4790	-1.7982	3.2308×10^{10}	8.3921×10^3	0.26700050	0.0000	1.0000	0.7149	3.6777×10^2	1.7828×10^2
0.00500	3.4802	-1.9512	2.6934×10^{10}	1.2075×10^4	0.26700050	0.0000	1.0000	0.7149	3.6641×10^2	1.7806×10^2
0.00700	3.4806	-2.0524	2.3933×10^{10}	1.5293×10^4	0.26700050	0.0000	1.0000	0.7149	3.6627×10^2	1.7817×10^2
0.01000	3.4803	-2.1610	2.1147×10^{10}	1.9588×10^4	0.26700050	0.0000	1.0000	0.7149	3.6821×10^2	1.7910×10^2
0.02000	3.4776	-2.3770	1.6700×10^{10}	3.1409×10^4	0.26700050	0.0000	1.0000	0.7149	3.7093×10^2	1.8149×10^2
0.03000	3.4748	-2.5048	1.4600×10^{10}	4.1092×10^4	0.26700050	0.0000	1.0000	0.7149	3.7369×10^2	1.8342×10^2
0.05000	3.4704	-2.6656	1.2380×10^{10}	5.7152×10^4	0.26700050	0.0000	1.0000	0.7149	3.7946×10^2	1.8628×10^2
0.07000	3.4653	-2.7793	1.1123×10^{10}	7.0804×10^4	0.26700050	0.0000	1.0000	0.7149	3.8609×10^2	1.9026×10^2
0.08861	3.4581	-2.8751	1.0297×10^{10}	8.2611×10^4	0.26700050	0.0000	1.0000	0.7149	3.9490×10^2	1.9419×10^2
0.067 $M_{\odot}$										
0.00002	3.3879	-0.2938	2.7777×10^{11}	1.1525×10^2	0.26700050	0.0000	1.0000	0.7149	4.7078×10^2	2.0989×10^2
0.00010	3.4374	-0.8035	1.2296×10^{11}	5.8816×10^2	0.26700050	0.0000	1.0000	0.7149	4.1228×10^2	1.9357×10^2
0.00020	3.4518	-1.0001	9.1777×10^{10}	1.0557×10^3	0.26700050	0.0000	1.0000	0.7149	3.9702×10^2	1.8860×10^2
0.00030	3.4589	-1.1148	7.7853×10^{10}	1.4671×10^3	0.26700050	0.0000	1.0000	0.7149	3.8963×10^2	1.8607×10^2
0.00050	3.4659	-1.2621	6.3598×10^{10}	2.1985×10^3	0.26700050	0.0000	1.0000	0.7149	3.8253×10^2	1.8358×10^2
0.00070	3.4697	-1.3599	5.5851×10^{10}	2.8507×10^3	0.26700050	0.0000	1.0000	0.7149	3.7884×10^2	1.8222×10^2
0.00100	3.4730	-1.4642	4.8786×10^{10}	3.7362×10^3	0.26700050	0.0000	1.0000	0.7149	3.7577×10^2	1.8120×10^2
0.00200	3.4777	-1.6684	3.7743×10^{10}	6.2425×10^3	0.26700050	0.0000	1.0000	0.7149	3.7121×10^2	1.7977×10^2
0.00300	3.4795	-1.7889	3.2580×10^{10}	8.3776×10^3	0.26700050	0.0000	1.0000	0.7149	3.6899×10^2	1.7886×10^2
0.00500	3.4808	-1.9420	2.7155×10^{10}	1.2059×10^4	0.26700050	0.0000	1.0000	0.7149	3.6760×10^2	1.7861×10^2
0.00700	3.4812	-2.0430	2.4130×10^{10}	1.5272×10^4	0.26700050	0.0000	1.0000	0.7149	3.6740×10^2	1.7870×10^2
0.01000	3.4809	-2.1513	2.1323×10^{10}	1.9558×10^4	0.26700050	0.0000	1.0000	0.7149	3.6922×10^2	1.7956×10^2
0.02000	3.4784	-2.3671	1.6831×10^{10}	3.1392×10^4	0.26700050	0.0000	1.0000	0.7149	3.7188×10^2	1.8194×10^2
0.03000	3.4756	-2.4947	1.4716×10^{10}	4.1065×10^4	0.26700050	0.0000	1.0000	0.7149	3.7451×10^2	1.8376×10^2
0.05000	3.4713	-2.6555	1.2474×10^{10}	5.7150×10^4	0.26700050	0.0000	1.0000	0.7149	3.8024×10^2	1.8656×10^2
0.07000	3.4667	-2.7671	1.1206×10^{10}	7.0808×10^4	0.26700050	0.0000	1.0000	0.7149	3.8621×10^2	1.9028×10^2
0.09262	3.4588	-2.8791	1.0216×10^{10}	8.5205×10^4	0.26700050	0.0000	1.0000	0.7149	3.9548×10^2	1.9444×10^2
0.068 $M_{\odot}$										
0.00002	3.3899	-0.2964	2.7443×10^{11}	1.1984×10^2	0.26700050	0.0000	1.0000	0.7149	4.7042×10^2	2.1019×10^2
0.00010	3.4381	-0.7962	1.2361×10^{11}	5.9065×10^2	0.26700050	0.0000	1.0000	0.7149	4.1337×10^2	1.9410×10^2
0.00020	3.4524	-0.9918	9.2408×10^{10}	1.0569×10^3	0.26700050	0.0000	1.0000	0.7149	3.9819×10^2	1.8915×10^2
0.00030	3.4594	-1.1064	7.8409×10^{10}	1.4680×10^3	0.26700050	0.0000	1.0000	0.7149	3.9085×10^2	1.8662×10^2
0.00050	3.4665	-1.2535	6.4086×10^{10}	2.1975×10^3	0.26700050	0.0000	1.0000	0.7149	3.8373×10^2	1.8416×10^2
0.00070	3.4702	-1.3511	5.6289×10^{10}	2.8484×10^3	0.26700050	0.0000	1.0000	0.7149	3.8003×10^2	1.8278×10^2
0.00100	3.4735	-1.4553	4.9179×10^{10}	3.7315×10^3	0.26700050	0.0000	1.0000	0.7149	3.7703×10^2	1.8173×10^2
0.00200	3.4782	-1.6592	3.8053×10^{10}	6.2327×10^3	0.26700050	0.0000	1.0000	0.7149	3.7231×10^2	1.8029×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PPI)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00300	3.4800	-1.7798	3.2848×10^{10}	8.3645×10^3	0.26700050	0.0000	1.0000	0.7149	3.7023×10^2	1.7943×10^2
0.00500	3.4813	-1.9328	2.7377×10^{10}	1.2042×10^4	0.26700050	0.0000	1.0000	0.7149	3.6886×10^2	1.7909×10^2
0.00700	3.4817	-2.0336	2.4329×10^{10}	1.5248×10^4	0.26700050	0.0000	1.0000	0.7149	3.6853×10^2	1.7921×10^2
0.01000	3.4816	-2.1417	2.1500×10^{10}	1.9524×10^4	0.26700050	0.0000	1.0000	0.7149	3.7021×10^2	1.8002×10^2
0.02000	3.4792	-2.3569	1.6967×10^{10}	3.1351×10^4	0.26700050	0.0000	1.0000	0.7149	3.7271×10^2	1.8234×10^2
0.03000	3.4765	-2.4845	1.4832×10^{10}	4.1027×10^4	0.26700050	0.0000	1.0000	0.7149	3.7530×10^2	1.8408×10^2
0.05000	3.4722	-2.6455	1.2568×10^{10}	5.7137×10^4	0.26700050	0.0000	1.0000	0.7149	3.8098×10^2	1.8682×10^2
0.07000	3.4681	-2.7549	1.1291×10^{10}	7.0790×10^4	0.26700050	0.0000	1.0000	0.7149	3.8640×10^2	1.9019×10^2
0.09552	3.4594	-2.8771	1.0209×10^{10}	8.6592×10^4	0.26700050	0.0000	1.0000	0.7149	3.9709×10^2	1.9493×10^2
0.069 $M_{\odot}$										
0.00002	3.3916	-0.2996	2.7122×10^{11}	1.2449×10^2	0.26700050	0.0000	1.0000	0.7149	4.7038×10^2	2.1060×10^2
0.00010	3.4388	-0.7891	1.2424×10^{11}	5.9328×10^2	0.26700050	0.0000	1.0000	0.7149	4.1446×10^2	1.9464×10^2
0.00020	3.4529	-0.9839	9.3024×10^{10}	1.0583×10^3	0.26700050	0.0000	1.0000	0.7149	3.9937×10^2	1.8970×10^2
0.00030	3.4599	-1.0981	7.8978×10^{10}	1.4682×10^3	0.26700050	0.0000	1.0000	0.7149	3.9207×10^2	1.8721×10^2
0.00050	3.4669	-1.2450	6.4568×10^{10}	2.1966×10^3	0.26700050	0.0000	1.0000	0.7149	3.8491×10^2	1.8473×10^2
0.00070	3.4707	-1.3425	5.6723×10^{10}	2.8463×10^3	0.26700050	0.0000	1.0000	0.7149	3.8122×10^2	1.8337×10^2
0.00100	3.4740	-1.4466	4.9560×10^{10}	3.7285×10^3	0.26700050	0.0000	1.0000	0.7149	3.7818×10^2	1.8231×10^2
0.00200	3.4787	-1.6502	3.8359×10^{10}	6.2238×10^3	0.26700050	0.0000	1.0000	0.7149	3.7343×10^2	1.8083×10^2
0.00300	3.4805	-1.7709	3.3111×10^{10}	8.3530×10^3	0.26700050	0.0000	1.0000	0.7149	3.7142×10^2	1.8000×10^2
0.00500	3.4818	-1.9236	2.7602×10^{10}	1.2021×10^4	0.26700050	0.0000	1.0000	0.7149	3.7000×10^2	1.7964×10^2
0.00700	3.4823	-2.0244	2.4528×10^{10}	1.5222×10^4	0.26700050	0.0000	1.0000	0.7149	3.6966×10^2	1.7972×10^2
0.01000	3.4822	-2.1322	2.1675×10^{10}	1.9493×10^4	0.26700050	0.0000	1.0000	0.7149	3.7120×10^2	1.8049×10^2
0.02000	3.4799	-2.3472	1.7098×10^{10}	3.1327×10^4	0.26700050	0.0000	1.0000	0.7149	3.7371×10^2	1.8277×10^2
0.03000	3.4773	-2.4745	1.4945×10^{10}	4.1004×10^4	0.26700050	0.0000	1.0000	0.7149	3.7607×10^2	1.8442×10^2
0.05000	3.4730	-2.6357	1.2661×10^{10}	5.7130×10^4	0.26700050	0.0000	1.0000	0.7149	3.8176×10^2	1.8711×10^2
0.07000	3.4694	-2.7433	1.1376×10^{10}	7.0769×10^4	0.26700050	0.0000	1.0000	0.7149	3.8666×10^2	1.9021×10^2
0.10000	3.4601	-2.8825	1.0115×10^{10}	8.9516×10^4	0.26700050	0.0000	1.0000	0.7149	3.9795×10^2	1.9556×10^2
0.10265	3.4597	-2.8931	1.0012×10^{10}	9.1361×10^4	0.26700050	0.0000	1.0000	0.7149	3.9933×10^2	1.9658×10^2
0.070 $M_{\odot}$										
0.00002	3.3937	-0.3011	2.6823×10^{11}	1.2913×10^2	0.26700050	0.0000	1.0000	0.7149	4.7017×10^2	2.1094×10^2
0.00010	3.4394	-0.7822	1.2486×10^{11}	5.9589×10^2	0.26700050	0.0000	1.0000	0.7149	4.1556×10^2	1.9519×10^2
0.00020	3.4535	-0.9760	9.3631×10^{10}	1.0598×10^3	0.26700050	0.0000	1.0000	0.7149	4.0052×10^2	1.9025×10^2
0.00030	3.4604	-1.0901	7.9527×10^{10}	1.4690×10^3	0.26700050	0.0000	1.0000	0.7149	3.9325×10^2	1.8776×10^2
0.00050	3.4674	-1.2367	6.5040×10^{10}	2.1963×10^3	0.26700050	0.0000	1.0000	0.7149	3.8607×10^2	1.8530×10^2
0.00070	3.4712	-1.3340	5.7152×10^{10}	2.8443×10^3	0.26700050	0.0000	1.0000	0.7149	3.8239×10^2	1.8393×10^2
0.00100	3.4745	-1.4380	4.9943×10^{10}	3.7247×10^3	0.26700050	0.0000	1.0000	0.7149	3.7940×10^2	1.8281×10^2
0.00200	3.4792	-1.6417	3.8653×10^{10}	6.2185×10^3	0.26700050	0.0000	1.0000	0.7149	3.7464×10^2	1.8137×10^2
0.00300	3.4810	-1.7623	3.3366×10^{10}	8.3450×10^3	0.26700050	0.0000	1.0000	0.7149	3.7261×10^2	1.8056×10^2
0.00500	3.4824	-1.9149	2.7814×10^{10}	1.2009×10^4	0.26700050	0.0000	1.0000	0.7149	3.7112×10^2	1.8015×10^2
0.00700	3.4828	-2.0154	2.4721×10^{10}	1.5202×10^4	0.26700050	0.0000	1.0000	0.7149	3.7077×10^2	1.8023×10^2
0.01000	3.4827	-2.1232	2.1844×10^{10}	1.9471×10^4	0.26700050	0.0000	1.0000	0.7149	3.7227×10^2	1.8097×10^2
0.02000	3.4806	-2.3377	1.7230×10^{10}	3.1294×10^4	0.26700050	0.0000	1.0000	0.7149	3.7469×10^2	1.8325×10^2
0.03000	3.4780	-2.4652	1.5056×10^{10}	4.0986×10^4	0.26700050	0.0000	1.0000	0.7149	3.7700×10^2	1.8478×10^2
0.05000	3.4739	-2.6259	1.2753×10^{10}	5.7122×10^4	0.26700050	0.0000	1.0000	0.7149	3.8251×10^2	1.8739×10^2
0.07000	3.4705	-2.7323	1.1460×10^{10}	7.0745×10^4	0.26700050	0.0000	1.0000	0.7149	3.8704×10^2	1.9028×10^2
0.09670	3.4618	-2.8567	1.0340×10^{10}	8.6890×10^4	0.26700050	0.0000	1.0000	0.7149	3.9893×10^2	1.9532×10^2
0.071 $M_{\odot}$										
0.00002	3.3956	-0.3026	2.6537×10^{11}	1.3381×10^2	0.26700050	0.0000	1.0000	0.7149	4.6943×10^2	2.1095×10^2
0.00010	3.4401	-0.7755	1.2546×10^{11}	5.9865×10^2	0.26700050	0.0000	1.0000	0.7149	4.1665×10^2	1.9574×10^2
0.00020	3.4541	-0.9682	9.4230×10^{10}	1.0613×10^3	0.26700050	0.0000	1.0000	0.7149	4.0162×10^2	1.9077×10^2
0.00030	3.4609	-1.0819	8.0082×10^{10}	1.4694×10^3	0.26700050	0.0000	1.0000	0.7149	3.9439×10^2	1.8830×10^2
0.00050	3.4679	-1.2284	6.5521×10^{10}	2.1951×10^3	0.26700050	0.0000	1.0000	0.7149	3.8725×10^2	1.8586×10^2
0.00070	3.4716	-1.3257	5.7581×10^{10}	2.8421×10^3	0.26700050	0.0000	1.0000	0.7149	3.8356×10^2	1.8449×10^2
0.00100	3.4749	-1.4295	5.0328×10^{10}	3.7204×10^3	0.26700050	0.0000	1.0000	0.7149	3.8055×10^2	1.8336×10^2
0.00200	3.4796	-1.6330	3.8960×10^{10}	6.2082×10^3	0.26700050	0.0000	1.0000	0.7149	3.7573×10^2	1.8195×10^2
0.00300	3.4814	-1.7535	3.3631×10^{10}	8.3313×10^3	0.26700050	0.0000	1.0000	0.7149	3.7391×10^2	1.8109×10^2
0.00500	3.4829	-1.9059	2.8035×10^{10}	1.1990×10^4	0.26700050	0.0000	1.0000	0.7149	3.7221×10^2	1.8064×10^2
0.00700	3.4833	-2.0064	2.4917×10^{10}	1.5178×10^4	0.26700050	0.0000	1.0000	0.7149	3.7188×10^2	1.8074×10^2
0.01000	3.4833	-2.1142	2.2013×10^{10}	1.9446×10^4	0.26700050	0.0000	1.0000	0.7149	3.7330×10^2	1.8143×10^2
0.02000	3.4813	-2.3284	1.7363×10^{10}	3.1258×10^4	0.26700050	0.0000	1.0000	0.7149	3.7566×10^2	1.8371×10^2
0.03000	3.4788	-2.4560	1.5166×10^{10}	4.0969×10^4	0.26700050	0.0000	1.0000	0.7149	3.7789×10^2	1.8516×10^2
0.05000	3.4748	-2.6164	1.2844×10^{10}	5.7124×10^4	0.26700050	0.0000	1.0000	0.7149	3.8323×10^2	1.8766×10^2
0.07000	3.4716	-2.7218	1.1542×10^{10}	7.0741×10^4	0.26700050	0.0000	1.0000	0.7149	3.8746×10^2	1.9039×10^2
0.10000	3.4624	-2.8573	1.0305×10^{10}	8.8742×10^4	0.26700050	0.0000	1.0000	0.7149	4.0015×10^2	1.9587×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.072 $M_{\odot}$										
0.10578	3.4616	-2.8788	1.0086×10^{10}	9.2629×10^4	0.26700050	0.0000	1.0000	0.7149	4.0042×10^2	1.9660×10^2
0.00002	3.3975	-0.3040	2.6269×10^{11}	1.3848×10^2	0.26700050	0.0000	1.0000	0.7149	4.6845×10^2	2.1083×10^2
0.00010	3.4407	-0.7689	1.2606×10^{11}	6.0135×10^2	0.26700050	0.0000	1.0000	0.7149	4.1774×10^2	1.9626×10^2
0.00020	3.4546	-0.9603	9.4837×10^{10}	1.0625×10^3	0.26700050	0.0000	1.0000	0.7149	4.0266×10^2	1.9129×10^2
0.00030	3.4615	-1.0739	8.0627×10^{10}	1.4700×10^3	0.26700050	0.0000	1.0000	0.7149	3.9546×10^2	1.8880×10^2
0.00050	3.4684	-1.2202	6.6003×10^{10}	2.1936×10^3	0.26700050	0.0000	1.0000	0.7149	3.8848×10^2	1.8634×10^2
0.00070	3.4721	-1.3175	5.8007×10^{10}	2.8400×10^3	0.26700050	0.0000	1.0000	0.7149	3.8469×10^2	1.8507×10^2
0.00100	3.4754	-1.4212	5.0709×10^{10}	3.7163×10^3	0.26700050	0.0000	1.0000	0.7149	3.8170×10^2	1.8391×10^2
0.00200	3.4801	-1.6246	3.9262×10^{10}	6.1992×10^3	0.26700050	0.0000	1.0000	0.7149	3.7690×10^2	1.8249×10^2
0.00300	3.4819	-1.7449	3.3896×10^{10}	8.3174×10^3	0.26700050	0.0000	1.0000	0.7149	3.7501×10^2	1.8163×10^2
0.00500	3.4834	-1.8969	2.8257×10^{10}	1.1968×10^4	0.26700050	0.0000	1.0000	0.7149	3.7324×10^2	1.8113×10^2
0.00700	3.4839	-1.9976	2.5112×10^{10}	1.5154×10^4	0.26700050	0.0000	1.0000	0.7149	3.7297×10^2	1.8123×10^2
0.01000	3.4839	-2.1053	2.2184×10^{10}	1.9418×10^4	0.26700050	0.0000	1.0000	0.7149	3.7427×10^2	1.8189×10^2
0.02000	3.4820	-2.3192	1.7494×10^{10}	3.1223×10^4	0.26700050	0.0000	1.0000	0.7149	3.7662×10^2	1.8417×10^2
0.03000	3.4795	-2.4467	1.5279×10^{10}	4.0936×10^4	0.26700050	0.0000	1.0000	0.7149	3.7878×10^2	1.8552×10^2
0.05000	3.4756	-2.6067	1.2936×10^{10}	5.7102×10^4	0.26700050	0.0000	1.0000	0.7149	3.8395×10^2	1.8792×10^2
0.07000	3.4726	-2.7120	1.1620×10^{10}	7.0769×10^4	0.26700050	0.0000	1.0000	0.7149	3.8821×10^2	1.9065×10^2
0.10000	3.4639	-2.8450	1.0377×10^{10}	8.8739×10^4	0.26700050	0.0000	1.0000	0.7149	4.0010×10^2	1.9575×10^2
0.10417	3.4627	-2.8609	1.0244×10^{10}	9.1056×10^4	0.26700050	0.0000	1.0000	0.7149	4.0213×10^2	1.9682×10^2
0.073 $M_{\odot}$										
0.00002	3.3992	-0.3050	2.6032×10^{11}	1.4297×10^2	0.26700050	0.0000	1.0000	0.7149	4.6889×10^2	2.1136×10^2
0.00010	3.4414	-0.7620	1.2667×10^{11}	6.0385×10^2	0.26700050	0.0000	1.0000	0.7149	4.1867×10^2	1.9672×10^2
0.00020	3.4552	-0.9528	9.5414×10^{10}	1.0643×10^3	0.26700050	0.0000	1.0000	0.7149	4.0374×10^2	1.9178×10^2
0.00030	3.4620	-1.0659	8.1166×10^{10}	1.4707×10^3	0.26700050	0.0000	1.0000	0.7149	3.9651×10^2	1.8932×10^2
0.00050	3.4688	-1.2123	6.6459×10^{10}	2.1936×10^3	0.26700050	0.0000	1.0000	0.7149	3.8963×10^2	1.8688×10^2
0.00070	3.4725	-1.3095	5.8423×10^{10}	2.8386×10^3	0.26700050	0.0000	1.0000	0.7149	3.8585×10^2	1.8561×10^2
0.00100	3.4758	-1.4131	5.1080×10^{10}	3.7133×10^3	0.26700050	0.0000	1.0000	0.7149	3.8284×10^2	1.8447×10^2
0.00200	3.4805	-1.6163	3.9558×10^{10}	6.1915×10^3	0.26700050	0.0000	1.0000	0.7149	3.7807×10^2	1.8302×10^2
0.00300	3.4824	-1.7363	3.4153×10^{10}	8.3063×10^3	0.26700050	0.0000	1.0000	0.7149	3.7610×10^2	1.8213×10^2
0.00500	3.4839	-1.8883	2.8472×10^{10}	1.1952×10^4	0.26700050	0.0000	1.0000	0.7149	3.7430×10^2	1.8165×10^2
0.00700	3.4844	-1.9889	2.5303×10^{10}	1.5133×10^4	0.26700050	0.0000	1.0000	0.7149	3.7403×10^2	1.8173×10^2
0.01000	3.4844	-2.0966	2.2350×10^{10}	1.9396×10^4	0.26700050	0.0000	1.0000	0.7149	3.7533×10^2	1.8236×10^2
0.02000	3.4826	-2.3101	1.7626×10^{10}	3.1187×10^4	0.26700050	0.0000	1.0000	0.7149	3.7754×10^2	1.8462×10^2
0.03000	3.4802	-2.4375	1.5391×10^{10}	4.0901×10^4	0.26700050	0.0000	1.0000	0.7149	3.7966×10^2	1.8587×10^2
0.05000	3.4764	-2.5974	1.3029×10^{10}	5.7077×10^4	0.26700050	0.0000	1.0000	0.7149	3.8477×10^2	1.8822×10^2
0.07000	3.4733	-2.7029	1.1702×10^{10}	7.0756×10^4	0.26700050	0.0000	1.0000	0.7149	3.8910×10^2	1.9098×10^2
0.10000	3.4658	-2.8312	1.0451×10^{10}	8.8708×10^4	0.26700050	0.0000	1.0000	0.7149	3.9963×10^2	1.9542×10^2
0.12458	3.4611	-2.9180	9.6650×10^9	1.0372×10^5	0.26700050	0.0000	1.0000	0.7149	4.0633×10^2	2.0023×10^2
0.074 $M_{\odot}$										
0.00002	3.4008	-0.3074	2.5772×10^{11}	1.4787×10^2	0.26700050	0.0000	1.0000	0.7149	4.6886×10^2	2.1165×10^2
0.00010	3.4421	-0.7553	1.2723×10^{11}	6.0671×10^2	0.26700050	0.0000	1.0000	0.7149	4.1954×10^2	1.9717×10^2
0.00020	3.4558	-0.9454	9.5984×10^{10}	1.0661×10^3	0.26700050	0.0000	1.0000	0.7149	4.0479×10^2	1.9230×10^2
0.00030	3.4625	-1.0583	8.1687×10^{10}	1.4719×10^3	0.26700050	0.0000	1.0000	0.7149	3.9760×10^2	1.8980×10^2
0.00050	3.4693	-1.2044	6.6919×10^{10}	2.1932×10^3	0.26700050	0.0000	1.0000	0.7149	3.9073×10^2	1.8740×10^2
0.00070	3.4730	-1.3015	5.8842×10^{10}	2.8367×10^3	0.26700050	0.0000	1.0000	0.7149	3.8703×10^2	1.8612×10^2
0.00100	3.4762	-1.4051	5.1448×10^{10}	3.7105×10^3	0.26700050	0.0000	1.0000	0.7149	3.8395×10^2	1.8503×10^2
0.00200	3.4809	-1.6082	3.9848×10^{10}	6.1853×10^3	0.26700050	0.0000	1.0000	0.7149	3.7922×10^2	1.8355×10^2
0.00300	3.4829	-1.7279	3.4406×10^{10}	8.2967×10^3	0.26700050	0.0000	1.0000	0.7149	3.7721×10^2	1.8263×10^2
0.00500	3.4844	-1.8799	2.8683×10^{10}	1.1938×10^4	0.26700050	0.0000	1.0000	0.7149	3.7536×10^2	1.8218×10^2
0.00700	3.4849	-1.9804	2.5492×10^{10}	1.5114×10^4	0.26700050	0.0000	1.0000	0.7149	3.7509×10^2	1.8222×10^2
0.01000	3.4849	-2.0880	2.2518×10^{10}	1.9370×10^4	0.26700050	0.0000	1.0000	0.7149	3.7631×10^2	1.8281×10^2
0.02000	3.4833	-2.3011	1.7755×10^{10}	3.1155×10^4	0.26700050	0.0000	1.0000	0.7149	3.7844×10^2	1.8506×10^2
0.03000	3.4809	-2.4284	1.5501×10^{10}	4.0873×10^4	0.26700050	0.0000	1.0000	0.7149	3.8050×10^2	1.8623×10^2
0.05000	3.4772	-2.5882	1.3122×10^{10}	5.7043×10^4	0.26700050	0.0000	1.0000	0.7149	3.8552×10^2	1.8855×10^2
0.07000	3.4741	-2.6940	1.1784×10^{10}	7.0728×10^4	0.26700050	0.0000	1.0000	0.7149	3.8994×10^2	1.9129×10^2
0.10000	3.4677	-2.8176	1.0522×10^{10}	8.8703×10^4	0.26700050	0.0000	1.0000	0.7149	3.9915×10^2	1.9511×10^2
0.11731	3.4630	-2.8836	9.9699×10^9	9.8810×10^4	0.26700050	0.0000	1.0000	0.7149	4.0515×10^2	1.9870×10^2
0.075 $M_{\odot}$										
0.00002	3.4023	-0.3095	2.5534×10^{11}	1.5268×10^2	0.26700050	0.0000	1.0000	0.7149	4.6864×10^2	2.1183×10^2
0.00010	3.4428	-0.7487	1.2779×10^{11}	6.0957×10^2	0.26700050	0.0000	1.0000	0.7149	4.2046×10^2	1.9762×10^2
0.00020	3.4563	-0.9382	9.6548×10^{10}	1.0679×10^3	0.26700050	0.0000	1.0000	0.7149	4.0587×10^2	1.9283×10^2
0.00030	3.4630	-1.0507	8.2229×10^{10}	1.4722×10^3	0.26700050	0.0000	1.0000	0.7149	3.9869×10^2	1.9034×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00050	3.4698	-1.1966	6.7379×10^{10}	2.1926×10^3	0.26700050	0.0000	1.0000	0.7149	3.9183×10^2	1.8792×10^2
0.00070	3.4734	-1.2937	5.9253×10^{10}	2.8352×10^3	0.26700050	0.0000	1.0000	0.7149	3.8821×10^2	1.8665×10^2
0.00100	3.4767	-1.3971	5.1819×10^{10}	3.7071×10^3	0.26700050	0.0000	1.0000	0.7149	3.8507×10^2	1.8558×10^2
0.00200	3.4814	-1.6003	4.0133×10^{10}	6.1802×10^3	0.26700050	0.0000	1.0000	0.7149	3.8043×10^2	1.8405×10^2
0.00300	3.4834	-1.7198	3.4656×10^{10}	8.2879×10^3	0.26700050	0.0000	1.0000	0.7149	3.7827×10^2	1.8318×10^2
0.00500	3.4849	-1.8717	2.8894×10^{10}	1.1923×10^4	0.26700050	0.0000	1.0000	0.7149	3.7647×10^2	1.8268×10^2
0.00700	3.4854	-1.9721	2.5677×10^{10}	1.5098×10^4	0.26700050	0.0000	1.0000	0.7149	3.7613×10^2	1.8272×10^2
0.01000	3.4855	-2.0796	2.2682×10^{10}	1.9348×10^4	0.26700050	0.0000	1.0000	0.7149	3.7727×10^2	1.8326×10^2
0.02000	3.4839	-2.2924	1.7881×10^{10}	3.1133×10^4	0.26700050	0.0000	1.0000	0.7149	3.7935×10^2	1.8550×10^2
0.03000	3.4816	-2.4194	1.5611×10^{10}	4.0844×10^4	0.26700050	0.0000	1.0000	0.7149	3.8130×10^2	1.8659×10^2
0.05000	3.4779	-2.5792	1.3213×10^{10}	5.7018×10^4	0.26700050	0.0000	1.0000	0.7149	3.8632×10^2	1.8887×10^2
0.07000	3.4748	-2.6852	1.1864×10^{10}	7.0716×10^4	0.26700050	0.0000	1.0000	0.7149	3.9073×10^2	1.9157×10^2
0.10000	3.4693	-2.8057	1.0591×10^{10}	8.8742×10^4	0.26700050	0.0000	1.0000	0.7149	3.9917×10^2	1.9501×10^2
0.12329	3.4632	-2.8913	9.8703×10^9	1.0218×10^5	0.26700050	0.0000	1.0000	0.7149	4.0708×10^2	1.9972×10^2
0.076 $M_{\odot}$										
0.00002	3.4050	-0.3082	2.5252×10^{11}	1.5819×10^2	0.26700050	0.0000	1.0000	0.7149	4.6752×10^2	2.1166×10^2
0.00010	3.4434	-0.7425	1.2832×10^{11}	6.1262×10^2	0.26700050	0.0000	1.0000	0.7149	4.2136×10^2	1.9808×10^2
0.00020	3.4568	-0.9311	9.7099×10^{10}	1.0699×10^3	0.26700050	0.0000	1.0000	0.7149	4.0692×10^2	1.9334×10^2
0.00030	3.4635	-1.0432	8.2744×10^{10}	1.4733×10^3	0.26700050	0.0000	1.0000	0.7149	3.9976×10^2	1.9084×10^2
0.00050	3.4702	-1.1889	6.7837×10^{10}	2.1919×10^3	0.26700050	0.0000	1.0000	0.7149	3.9294×10^2	1.8844×10^2
0.00070	3.4739	-1.2860	5.9661×10^{10}	2.8339×10^3	0.26700050	0.0000	1.0000	0.7149	3.8931×10^2	1.8714×10^2
0.00100	3.4771	-1.3894	5.2180×10^{10}	3.7047×10^3	0.26700050	0.0000	1.0000	0.7149	3.8619×10^2	1.8611×10^2
0.00200	3.4818	-1.5923	4.0427×10^{10}	6.1719×10^3	0.26700050	0.0000	1.0000	0.7149	3.8154×10^2	1.8460×10^2
0.00300	3.4838	-1.7116	3.4915×10^{10}	8.2746×10^3	0.26700050	0.0000	1.0000	0.7149	3.7940×10^2	1.8367×10^2
0.00500	3.4853	-1.8635	2.9108×10^{10}	1.1905×10^4	0.26700050	0.0000	1.0000	0.7149	3.7754×10^2	1.8319×10^2
0.00700	3.4859	-1.9640	2.5860×10^{10}	1.5084×10^4	0.26700050	0.0000	1.0000	0.7149	3.7718×10^2	1.8323×10^2
0.01000	3.4860	-2.0712	2.2847×10^{10}	1.9324×10^4	0.26700050	0.0000	1.0000	0.7149	3.7822×10^2	1.8370×10^2
0.02000	3.4845	-2.2839	1.8007×10^{10}	3.1109×10^4	0.26700050	0.0000	1.0000	0.7149	3.8024×10^2	1.8592×10^2
0.03000	3.4823	-2.4106	1.5720×10^{10}	4.0818×10^4	0.26700050	0.0000	1.0000	0.7149	3.8206×10^2	1.8693×10^2
0.05000	3.4786	-2.5703	1.3303×10^{10}	5.6996×10^4	0.26700050	0.0000	1.0000	0.7149	3.8712×10^2	1.8919×10^2
0.07000	3.4756	-2.6762	1.1943×10^{10}	7.0716×10^4	0.26700050	0.0000	1.0000	0.7149	3.9146×10^2	1.9180×10^2
0.10000	3.4706	-2.7948	1.0661×10^{10}	8.8745×10^4	0.26700050	0.0000	1.0000	0.7149	3.9951×10^2	1.9511×10^2
0.12819	3.4639	-2.8931	9.8176×10^9	1.0465×10^5	0.26700050	0.0000	1.0000	0.7149	4.0821×10^2	2.0018×10^2
0.077 $M_{\odot}$										
0.00002	3.4069	-0.3083	2.5026×10^{11}	1.6317×10^2	0.26700050	0.0000	1.0000	0.7149	4.6695×10^2	2.1167×10^2
0.00010	3.4441	-0.7363	1.2884×10^{11}	6.1563×10^2	0.26700050	0.0000	1.0000	0.7149	4.2230×10^2	1.9854×10^2
0.00020	3.4573	-0.9242	9.7643×10^{10}	1.0719×10^3	0.26700050	0.0000	1.0000	0.7149	4.0796×10^2	1.9381×10^2
0.00030	3.4640	-1.0359	8.3262×10^{10}	1.4742×10^3	0.26700050	0.0000	1.0000	0.7149	4.0084×10^2	1.9138×10^2
0.00050	3.4707	-1.1814	6.8289×10^{10}	2.1915×10^3	0.26700050	0.0000	1.0000	0.7149	3.9403×10^2	1.8898×10^2
0.00070	3.4743	-1.2783	6.0070×10^{10}	2.8322×10^3	0.26700050	0.0000	1.0000	0.7149	3.9039×10^2	1.8765×10^2
0.00100	3.4775	-1.3818	5.2544×10^{10}	3.7016×10^3	0.26700050	0.0000	1.0000	0.7149	3.8731×10^2	1.8663×10^2
0.00200	3.4822	-1.5844	4.0716×10^{10}	6.1645×10^3	0.26700050	0.0000	1.0000	0.7149	3.8262×10^2	1.8509×10^2
0.00300	3.4842	-1.7035	3.5170×10^{10}	8.2619×10^3	0.26700050	0.0000	1.0000	0.7149	3.8047×10^2	1.8419×10^2
0.00500	3.4858	-1.8554	2.9319×10^{10}	1.1889×10^4	0.26700050	0.0000	1.0000	0.7149	3.7864×10^2	1.8368×10^2
0.00700	3.4864	-1.9557	2.6050×10^{10}	1.5060×10^4	0.26700050	0.0000	1.0000	0.7149	3.7823×10^2	1.8370×10^2
0.01000	3.4865	-2.0627	2.3017×10^{10}	1.9290×10^4	0.26700050	0.0000	1.0000	0.7149	3.7915×10^2	1.8414×10^2
0.02000	3.4851	-2.2752	1.8137×10^{10}	3.1066×10^4	0.26700050	0.0000	1.0000	0.7149	3.8115×10^2	1.8636×10^2
0.03000	3.4830	-2.4018	1.5829×10^{10}	4.0790×10^4	0.26700050	0.0000	1.0000	0.7149	3.8292×10^2	1.8729×10^2
0.05000	3.4794	-2.5615	1.3394×10^{10}	5.6969×10^4	0.26700050	0.0000	1.0000	0.7149	3.8794×10^2	1.8952×10^2
0.07000	3.4764	-2.6671	1.2024×10^{10}	7.0691×10^4	0.26700050	0.0000	1.0000	0.7149	3.9213×10^2	1.9202×10^2
0.10000	3.4718	-2.7844	1.0730×10^{10}	8.8759×10^4	0.26700050	0.0000	1.0000	0.7149	3.9998×10^2	1.9529×10^2
0.15190	3.4627	-2.9436	9.3142×10^9	1.1780×10^5	0.26700049	0.0046	0.9954	0.7149	4.0617×10^2	2.0321×10^2
0.078 $M_{\odot}$										
0.00002	3.4084	-0.3092	2.4832×10^{11}	1.6788×10^2	0.26700050	0.0000	1.0000	0.7149	4.6677×10^2	2.1183×10^2
0.00010	3.4447	-0.7304	1.2936×10^{11}	6.1868×10^2	0.26700050	0.0000	1.0000	0.7149	4.2323×10^2	1.9901×10^2
0.00020	3.4579	-0.9172	9.8192×10^{10}	1.0737×10^3	0.26700050	0.0000	1.0000	0.7149	4.0898×10^2	1.9430×10^2
0.00030	3.4645	-1.0288	8.3762×10^{10}	1.4755×10^3	0.26700050	0.0000	1.0000	0.7149	4.0193×10^2	1.9187×10^2
0.00050	3.4711	-1.1739	6.8738×10^{10}	2.1910×10^3	0.26700050	0.0000	1.0000	0.7149	3.9511×10^2	1.8950×10^2
0.00070	3.4747	-1.2706	6.0479×10^{10}	2.8303×10^3	0.26700050	0.0000	1.0000	0.7149	3.9147×10^2	1.8816×10^2
0.00100	3.4779	-1.3741	5.2910×10^{10}	3.6980×10^3	0.26700050	0.0000	1.0000	0.7149	3.8849×10^2	1.8710×10^2
0.00200	3.4827	-1.5763	4.1009×10^{10}	6.1557×10^3	0.26700050	0.0000	1.0000	0.7149	3.8364×10^2	1.8558×10^2
0.00300	3.4847	-1.6956	3.5424×10^{10}	8.2498×10^3	0.26700050	0.0000	1.0000	0.7149	3.8162×10^2	1.8466×10^2
0.00500	3.4862	-1.8475	2.9526×10^{10}	1.1875×10^4	0.26700050	0.0000	1.0000	0.7149	3.7976×10^2	1.8416×10^2
0.00700	3.4868	-1.9477	2.6232×10^{10}	1.5044×10^4	0.26700050	0.0000	1.0000	0.7149	3.7925×10^2	1.8420×10^2
0.01000	3.4870	-2.0545	2.3180×10^{10}	1.9267×10^4	0.26700050	0.0000	1.0000	0.7149	3.8008×10^2	1.8460×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.02000	3.4857	-2.2668	1.8264×10^{10}	3.1036×10^4	0.26700050	0.0000	1.0000	0.7149	3.8206×10^2	1.8681×10^2
0.03000	3.4837	-2.3933	1.5938×10^{10}	4.0756×10^4	0.26700050	0.0000	1.0000	0.7149	3.8378×10^2	1.8767×10^2
0.05000	3.4801	-2.5530	1.3481×10^{10}	5.6959×10^4	0.26700050	0.0000	1.0000	0.7149	3.8873×10^2	1.8985×10^2
0.07000	3.4772	-2.6583	1.2102×10^{10}	7.0689×10^4	0.26700050	0.0000	1.0000	0.7149	3.9281×10^2	1.9227×10^2
0.10000	3.4729	-2.7745	1.0800×10^{10}	8.8757×10^4	0.26700050	0.0000	1.0000	0.7149	4.0041×10^2	1.9547×10^2
0.14455	3.4637	-2.9179	9.5523×10^9	1.1346×10^5	0.26700050	0.0049	0.9951	0.7149	4.0627×10^2	2.0237×10^2
0.079 $M_{\odot}$										
0.00002	3.4080	-0.3002	2.5135×10^{11}	1.6597×10^2	0.26700050	0.0000	1.0000	0.7149	4.6862×10^2	2.1257×10^2
0.00010	3.4451	-0.7224	1.3029×10^{11}	6.1764×10^2	0.26700050	0.0000	1.0000	0.7149	4.2443×10^2	1.9956×10^2
0.00020	3.4583	-0.9091	9.8898×10^{10}	1.0720×10^3	0.26700050	0.0000	1.0000	0.7149	4.1001×10^2	1.9481×10^2
0.00030	3.4648	-1.0212	8.4362×10^{10}	1.4733×10^3	0.26700050	0.0000	1.0000	0.7149	4.0307×10^2	1.9240×10^2
0.00050	3.4716	-1.1659	6.9227×10^{10}	2.1879×10^3	0.26700050	0.0000	1.0000	0.7149	3.9615×10^2	1.8996×10^2
0.00070	3.4752	-1.2628	6.0907×10^{10}	2.8265×10^3	0.26700050	0.0000	1.0000	0.7149	3.9252×10^2	1.8865×10^2
0.00100	3.4783	-1.3664	5.3284×10^{10}	3.6930×10^3	0.26700050	0.0000	1.0000	0.7149	3.8957×10^2	1.8762×10^2
0.00200	3.4831	-1.5687	4.1299×10^{10}	6.1474×10^3	0.26700050	0.0000	1.0000	0.7149	3.8480×10^2	1.8609×10^2
0.00300	3.4851	-1.6878	3.5673×10^{10}	8.2393×10^3	0.26700050	0.0000	1.0000	0.7149	3.8259×10^2	1.8520×10^2
0.00500	3.4867	-1.8395	2.9738×10^{10}	1.1856×10^4	0.26700050	0.0000	1.0000	0.7149	3.8080×10^2	1.8467×10^2
0.00700	3.4873	-1.9395	2.6425×10^{10}	1.5016×10^4	0.26700050	0.0000	1.0000	0.7149	3.8031×10^2	1.8461×10^2
0.01000	3.4875	-2.0464	2.3345×10^{10}	1.9239×10^4	0.26700050	0.0000	1.0000	0.7149	3.8109×10^2	1.8505×10^2
0.02000	3.4863	-2.2583	1.8395×10^{10}	3.0987×10^4	0.26700050	0.0000	1.0000	0.7149	3.8305×10^2	1.8720×10^2
0.03000	3.4843	-2.3848	1.6048×10^{10}	4.0712×10^4	0.26700050	0.0000	1.0000	0.7149	3.8463×10^2	1.8804×10^2
0.05000	3.4808	-2.5441	1.3576×10^{10}	5.6890×10^4	0.26700050	0.0000	1.0000	0.7149	3.8946×10^2	1.9016×10^2
0.07000	3.4779	-2.6496	1.2183×10^{10}	7.0644×10^4	0.26700050	0.0000	1.0000	0.7149	3.9354×10^2	1.9254×10^2
0.10000	3.4742	-2.7632	1.0873×10^{10}	8.8692×10^4	0.26700050	0.0000	1.0000	0.7149	4.0051×10^2	1.9545×10^2
0.16418	3.4639	-2.9491	9.2051×10^9	1.2374×10^5	0.26700050	0.0140	0.9860	0.7149	4.0396×10^2	2.0357×10^2
0.080 $M_{\odot}$										
0.00002	3.4088	-0.2941	2.5223×10^{11}	1.6689×10^2	0.26700050	0.0000	1.0000	0.7149	4.6940×10^2	2.1301×10^2
0.00010	3.4456	-0.7151	1.3109×10^{11}	6.1789×10^2	0.26700050	0.0000	1.0000	0.7149	4.2547×10^2	2.0006×10^2
0.00020	3.4588	-0.9016	9.9547×10^{10}	1.0715×10^3	0.26700050	0.0000	1.0000	0.7149	4.1108×10^2	1.9531×10^2
0.00030	3.4653	-1.0137	8.4922×10^{10}	1.4723×10^3	0.26700050	0.0000	1.0000	0.7149	4.0417×10^2	1.9291×10^2
0.00050	3.4720	-1.1584	6.9696×10^{10}	2.1858×10^3	0.26700050	0.0000	1.0000	0.7149	3.9725×10^2	1.9049×10^2
0.00070	3.4756	-1.2552	6.1327×10^{10}	2.8231×10^3	0.26700050	0.0000	1.0000	0.7149	3.9359×10^2	1.8916×10^2
0.00100	3.4787	-1.3589	5.3644×10^{10}	3.6897×10^3	0.26700050	0.0000	1.0000	0.7149	3.9057×10^2	1.8817×10^2
0.00200	3.4835	-1.5609	4.1586×10^{10}	6.1396×10^3	0.26700050	0.0000	1.0000	0.7149	3.8582×10^2	1.8657×10^2
0.00300	3.4855	-1.6803	3.5915×10^{10}	8.2316×10^3	0.26700050	0.0000	1.0000	0.7149	3.8365×10^2	1.8569×10^2
0.00500	3.4871	-1.8319	2.9941×10^{10}	1.1844×10^4	0.26700050	0.0000	1.0000	0.7149	3.8190×10^2	1.8515×10^2
0.00700	3.4878	-1.9317	2.6607×10^{10}	1.4998×10^4	0.26700050	0.0000	1.0000	0.7149	3.8136×10^2	1.8508×10^2
0.01000	3.4880	-2.0385	2.3507×10^{10}	1.9216×10^4	0.26700050	0.0000	1.0000	0.7149	3.8204×10^2	1.8549×10^2
0.02000	3.4868	-2.2502	1.8521×10^{10}	3.0952×10^4	0.26700050	0.0000	1.0000	0.7149	3.8395×10^2	1.8762×10^2
0.03000	3.4849	-2.3765	1.6157×10^{10}	4.0676×10^4	0.26700050	0.0000	1.0000	0.7149	3.8548×10^2	1.8843×10^2
0.05000	3.4815	-2.5356	1.3664×10^{10}	5.6868×10^4	0.26700050	0.0000	1.0000	0.7149	3.9020×10^2	1.9051×10^2
0.07000	3.4787	-2.6411	1.2260×10^{10}	7.0641×10^4	0.26700050	0.0000	1.0000	0.7149	3.9430×10^2	1.9283×10^2
0.10000	3.4751	-2.7539	1.0944×10^{10}	8.8647×10^4	0.26700050	0.0000	1.0000	0.7149	4.0106×10^2	1.9571×10^2
0.13580	3.4668	-2.8707	9.9393×10^9	1.0748×10^5	0.26700050	0.0060	0.9940	0.7149	4.0575×10^2	2.0074×10^2
0.081 $M_{\odot}$										
0.00002	3.4095	-0.2882	2.5311×10^{11}	1.6780×10^2	0.26700050	0.0000	1.0000	0.7149	4.7026×10^2	2.1348×10^2
0.00010	3.4461	-0.7080	1.3187×10^{11}	6.1823×10^2	0.26700050	0.0000	1.0000	0.7149	4.2653×10^2	2.0056×10^2
0.00020	3.4592	-0.8943	1.0018×10^{11}	1.0711×10^3	0.26700050	0.0000	1.0000	0.7149	4.1216×10^2	1.9581×10^2
0.00030	3.4657	-1.0063	8.5484×10^{10}	1.4712×10^3	0.26700050	0.0000	1.0000	0.7149	4.0526×10^2	1.9343×10^2
0.00050	3.4724	-1.1510	7.0166×10^{10}	2.1837×10^3	0.26700050	0.0000	1.0000	0.7149	3.9832×10^2	1.9101×10^2
0.00070	3.4760	-1.2477	6.1744×10^{10}	2.8199×10^3	0.26700050	0.0000	1.0000	0.7149	3.9467×10^2	1.8968×10^2
0.00100	3.4791	-1.3512	5.4014×10^{10}	3.6849×10^3	0.26700050	0.0000	1.0000	0.7149	3.9158×10^2	1.8865×10^2
0.00200	3.4839	-1.5532	4.1872×10^{10}	6.1317×10^3	0.26700050	0.0000	1.0000	0.7149	3.8683×10^2	1.8706×10^2
0.00300	3.4859	-1.6727	3.6163×10^{10}	8.2204×10^3	0.26700050	0.0000	1.0000	0.7149	3.8479×10^2	1.8616×10^2
0.00500	3.4875	-1.8242	3.0146×10^{10}	1.1830×10^4	0.26700050	0.0000	1.0000	0.7149	3.8287×10^2	1.8567×10^2
0.00700	3.4882	-1.9239	2.6791×10^{10}	1.4978×10^4	0.26700050	0.0000	1.0000	0.7149	3.8236×10^2	1.8555×10^2
0.01000	3.4885	-2.0306	2.3667×10^{10}	1.9193×10^4	0.26700050	0.0000	1.0000	0.7149	3.8299×10^2	1.8596×10^2
0.02000	3.4874	-2.2421	1.8648×10^{10}	3.0915×10^4	0.26700050	0.0000	1.0000	0.7149	3.8485×10^2	1.8803×10^2
0.03000	3.4855	-2.3683	1.6265×10^{10}	4.0637×10^4	0.26700050	0.0000	1.0000	0.7149	3.8631×10^2	1.8881×10^2
0.05000	3.4821	-2.5276	1.3751×10^{10}	5.6852×10^4	0.26700050	0.0000	1.0000	0.7149	3.9111×10^2	1.9088×10^2
0.07000	3.4794	-2.6328	1.2338×10^{10}	7.0619×10^4	0.26700050	0.0000	1.0000	0.7149	3.9509×10^2	1.9313×10^2
0.10000	3.4759	-2.7454	1.1013×10^{10}	8.8642×10^4	0.26700050	0.0003	0.9997	0.7149	4.0086×10^2	1.9600×10^2
0.15457	3.4652	-2.9120	9.5479×10^9	1.1793×10^5	0.26700050	0.0160	0.9840	0.7149	4.0471×10^2	2.0263×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.083 $M_{\odot}$										
0.00002	3.4108	-0.2767	2.5489×10^{11}	1.6956×10^2	0.26700050	0.0000	1.0000	0.7149	4.7211×10^2	2.1446×10^2
0.00010	3.4471	-0.6940	1.3341×10^{11}	6.1890×10^2	0.26700050	0.0000	1.0000	0.7149	4.2857×10^2	2.0154×10^2
0.00020	3.4602	-0.8794	1.0145×10^{11}	1.0704×10^3	0.26700050	0.0000	1.0000	0.7149	4.1402×10^2	1.9671×10^2
0.00030	3.4666	-0.9918	8.6571×10^{10}	1.4699×10^3	0.26700050	0.0000	1.0000	0.7149	4.0733×10^2	1.9444×10^2
0.00050	3.4732	-1.1366	7.1086×10^{10}	2.1800×10^3	0.26700050	0.0000	1.0000	0.7149	4.0042×10^2	1.9206×10^2
0.00070	3.4767	-1.2331	6.2569×10^{10}	2.8139×10^3	0.26700050	0.0000	1.0000	0.7149	3.9681×10^2	1.9071×10^2
0.00100	3.4800	-1.3363	5.4745×10^{10}	3.6756×10^3	0.26700050	0.0000	1.0000	0.7149	3.9367×10^2	1.8956×10^2
0.00200	3.4847	-1.5383	4.2439×10^{10}	6.1162×10^3	0.26700050	0.0000	1.0000	0.7149	3.8891×10^2	1.8809×10^2
0.00300	3.4867	-1.6577	3.6662×10^{10}	8.1960×10^3	0.26700050	0.0000	1.0000	0.7149	3.8687×10^2	1.8714×10^2
0.00500	3.4884	-1.8087	3.0563×10^{10}	1.1793×10^4	0.26700050	0.0000	1.0000	0.7149	3.8489×10^2	1.8655×10^2
0.00700	3.4891	-1.9086	2.7158×10^{10}	1.4936×10^4	0.26700050	0.0000	1.0000	0.7149	3.8436×10^2	1.8647×10^2
0.01000	3.4894	-2.0155	2.3982×10^{10}	1.9154×10^4	0.26700050	0.0000	1.0000	0.7149	3.8502×10^2	1.8686×10^2
0.02000	3.4884	-2.2262	1.8899×10^{10}	3.0843×10^4	0.26700050	0.0000	1.0000	0.7149	3.8662×10^2	1.8884×10^2
0.03000	3.4867	-2.3521	1.6479×10^{10}	4.0565×10^4	0.26700050	0.0000	1.0000	0.7149	3.8792×10^2	1.8957×10^2
0.05000	3.4833	-2.5118	1.3927×10^{10}	5.6796×10^4	0.26700050	0.0000	1.0000	0.7149	3.9275×10^2	1.9165×10^2
0.07000	3.4807	-2.6166	1.2494×10^{10}	7.0576×10^4	0.26700050	0.0000	1.0000	0.7149	3.9663×10^2	1.9377×10^2
0.10000	3.4777	-2.7274	1.1151×10^{10}	8.8585×10^4	0.26700050	0.0014	0.9986	0.7149	4.0047×10^2	1.9638×10^2
0.16486	3.4659	-2.9152	9.4836×10^9	1.2248×10^5	0.26700050	0.0288	0.9712	0.7149	4.0327×10^2	2.0260×10^2
0.085 $M_{\odot}$										
0.00002	3.4128	-0.2636	2.5643×10^{11}	1.7156×10^2	0.26700050	0.0000	1.0000	0.7149	4.7285×10^2	2.1494×10^2
0.00010	3.4482	-0.6799	1.3492×10^{11}	6.1978×10^2	0.26700050	0.0000	1.0000	0.7149	4.3039×10^2	2.0242×10^2
0.00020	3.4612	-0.8652	1.0267×10^{11}	1.0703×10^3	0.26700050	0.0000	1.0000	0.7149	4.1592×10^2	1.9761×10^2
0.00030	3.4675	-0.9775	8.7647×10^{10}	1.4686×10^3	0.26700050	0.0000	1.0000	0.7149	4.0925×10^2	1.9533×10^2
0.00050	3.4740	-1.1225	7.1991×10^{10}	2.1768×10^3	0.26700050	0.0000	1.0000	0.7149	4.0249×10^2	1.9304×10^2
0.00070	3.4775	-1.2192	6.3359×10^{10}	2.8102×10^3	0.26700050	0.0000	1.0000	0.7149	3.9887×10^2	1.9175×10^2
0.00100	3.4807	-1.3219	5.5458×10^{10}	3.6680×10^3	0.26700050	0.0000	1.0000	0.7149	3.9569×10^2	1.9051×10^2
0.00200	3.4855	-1.5239	4.2999×10^{10}	6.1017×10^3	0.26700050	0.0000	1.0000	0.7149	3.9102×10^2	1.8907×10^2
0.00300	3.4875	-1.6429	3.7145×10^{10}	8.1762×10^3	0.26700050	0.0000	1.0000	0.7149	3.8880×10^2	1.8801×10^2
0.00500	3.4893	-1.7936	3.0970×10^{10}	1.1762×10^4	0.26700050	0.0000	1.0000	0.7149	3.8680×10^2	1.8746×10^2
0.00700	3.4900	-1.8939	2.7513×10^{10}	1.4904×10^4	0.26700050	0.0000	1.0000	0.7149	3.8631×10^2	1.8738×10^2
0.01000	3.4903	-2.0006	2.4297×10^{10}	1.9110×10^4	0.26700050	0.0000	1.0000	0.7149	3.8692×10^2	1.8774×10^2
0.02000	3.4895	-2.2108	1.9143×10^{10}	3.0787×10^4	0.26700050	0.0000	1.0000	0.7149	3.8840×10^2	1.8965×10^2
0.03000	3.4879	-2.3366	1.6687×10^{10}	4.0515×10^4	0.26700050	0.0000	1.0000	0.7149	3.8961×10^2	1.9031×10^2
0.05000	3.4845	-2.4961	1.4100×10^{10}	5.6741×10^4	0.26700050	0.0000	1.0000	0.7149	3.9440×10^2	1.9237×10^2
0.07000	3.4820	-2.6008	1.2648×10^{10}	7.0526×10^4	0.26700050	0.0000	1.0000	0.7149	3.9816×10^2	1.9445×10^2
0.10000	3.4792	-2.7107	1.1289×10^{10}	8.8528×10^4	0.26700050	0.0027	0.9973	0.7149	4.0102×10^2	1.9687×10^2
0.15514	3.4697	-2.8683	9.8386×10^9	1.1655×10^5	0.26700050	0.0285	0.9715	0.7149	4.0278×10^2	2.0091×10^2
0.087 $M_{\odot}$										
0.00002	3.4149	-0.2509	2.5778×10^{11}	1.7377×10^2	0.26700050	0.0000	1.0000	0.7149	4.7343×10^2	2.1535×10^2
0.00010	3.4493	-0.6665	1.3635×10^{11}	6.2113×10^2	0.26700050	0.0000	1.0000	0.7149	4.3216×10^2	2.0329×10^2
0.00020	3.4621	-0.8516	1.0385×10^{11}	1.0706×10^3	0.26700050	0.0000	1.0000	0.7149	4.1784×10^2	1.9851×10^2
0.00030	3.4683	-0.9637	8.8696×10^{10}	1.4678×10^3	0.26700050	0.0000	1.0000	0.7149	4.1117×10^2	1.9626×10^2
0.00050	3.4748	-1.1084	7.2885×10^{10}	2.1736×10^3	0.26700050	0.0000	1.0000	0.7149	4.0451×10^2	1.9388×10^2
0.00070	3.4782	-1.2053	6.4170×10^{10}	2.8042×10^3	0.26700050	0.0000	1.0000	0.7149	4.0104×10^2	1.9269×10^2
0.00100	3.4815	-1.3078	5.6170×10^{10}	3.6598×10^3	0.26700050	0.0000	1.0000	0.7149	3.9769×10^2	1.9149×10^2
0.00200	3.4862	-1.5099	4.3552×10^{10}	6.0876×10^3	0.26700050	0.0000	1.0000	0.7149	3.9322×10^2	1.9001×10^2
0.00300	3.4884	-1.6284	3.7625×10^{10}	8.1565×10^3	0.26700050	0.0000	1.0000	0.7149	3.9067×10^2	1.8893×10^2
0.00500	3.4902	-1.7794	3.1362×10^{10}	1.1740×10^4	0.26700050	0.0000	1.0000	0.7149	3.8873×10^2	1.8844×10^2
0.00700	3.4908	-1.8794	2.7868×10^{10}	1.4868×10^4	0.26700050	0.0000	1.0000	0.7149	3.8817×10^2	1.8828×10^2
0.01000	3.4912	-1.9858	2.4613×10^{10}	1.9060×10^4	0.26700050	0.0000	1.0000	0.7149	3.8877×10^2	1.8860×10^2
0.02000	3.4905	-2.1956	1.9390×10^{10}	3.0711×10^4	0.26700050	0.0000	1.0000	0.7149	3.9000×10^2	1.9038×10^2
0.03000	3.4890	-2.3212	1.6898×10^{10}	4.0441×10^4	0.26700050	0.0000	1.0000	0.7149	3.9124×10^2	1.9104×10^2
0.05000	3.4858	-2.4805	1.4276×10^{10}	5.6659×10^4	0.26700050	0.0000	1.0000	0.7149	3.9590×10^2	1.9307×10^2
0.07000	3.4833	-2.5850	1.2802×10^{10}	7.0453×10^4	0.26700050	0.0000	1.0000	0.7149	3.9955×10^2	1.9507×10^2
0.10000	3.4806	-2.6947	1.1427×10^{10}	8.8434×10^4	0.26700050	0.0044	0.9956	0.7149	4.0168×10^2	1.9737×10^2
0.17558	3.4693	-2.8939	9.5693×10^9	1.2610×10^5	0.26700050	0.0558	0.9442	0.7149	3.9957×10^2	2.0050×10^2
0.089 $M_{\odot}$										
0.00002	3.4166	-0.2390	2.5921×10^{11}	1.7580×10^2	0.26700050	0.0000	1.0000	0.7149	4.7432×10^2	2.1590×10^2
0.00010	3.4503	-0.6533	1.3776×10^{11}	6.2240×10^2	0.26700050	0.0000	1.0000	0.7149	4.3387×10^2	2.0410×10^2
0.00020	3.4630	-0.8383	1.0503×10^{11}	1.0708×10^3	0.26700050	0.0000	1.0000	0.7149	4.1980×10^2	1.9945×10^2
0.00030	3.4692	-0.9502	8.9747×10^{10}	1.4665×10^3	0.26700050	0.0000	1.0000	0.7149	4.1312×10^2	1.9717×10^2
0.00050	3.4755	-1.0948	7.3775×10^{10}	2.1703×10^3	0.26700050	0.0000	1.0000	0.7149	4.0647×10^2	1.9481×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{\text{gc}}(\text{day})$	$\tau_{1c}(\text{day})$
0.00070	3.4790	-1.1917	6.4952×10^{10}	2.7999×10^3	0.26700050	0.0000	1.0000	0.7149	4.0290×10^2	1.9365×10^2
0.00100	3.4822	-1.2945	5.6855×10^{10}	3.6543×10^3	0.26700050	0.0000	1.0000	0.7149	3.9970×10^2	1.9248×10^2
0.00200	3.4869	-1.4963	4.4093×10^{10}	6.0757×10^3	0.26700050	0.0000	1.0000	0.7149	3.9523×10^2	1.9096×10^2
0.00300	3.4891	-1.6145	3.8096×10^{10}	8.1391×10^3	0.26700050	0.0000	1.0000	0.7149	3.9259×10^2	1.8988×10^2
0.00500	3.4909	-1.7654	3.1758×10^{10}	1.1712×10^4	0.26700050	0.0000	1.0000	0.7149	3.9070×10^2	1.8937×10^2
0.00700	3.4917	-1.8650	2.8218×10^{10}	1.4835×10^4	0.26700050	0.0000	1.0000	0.7149	3.9000×10^2	1.8912×10^2
0.01000	3.4920	-1.9714	2.4925×10^{10}	1.9014×10^4	0.26700050	0.0000	1.0000	0.7149	3.9056×10^2	1.8945×10^2
0.02000	3.4915	-2.1809	1.9634×10^{10}	3.0643×10^4	0.26700050	0.0000	1.0000	0.7149	3.9177×10^2	1.9113×10^2
0.03000	3.4900	-2.3062	1.7110×10^{10}	4.0350×10^4	0.26700050	0.0000	1.0000	0.7149	3.9294×10^2	1.9181×10^2
0.05000	3.4870	-2.4651	1.4449×10^{10}	5.6581×10^4	0.26700050	0.0000	1.0000	0.7149	3.9733×10^2	1.9375×10^2
0.07000	3.4846	-2.5696	1.2953×10^{10}	7.0401×10^4	0.26700050	0.0000	1.0000	0.7149	4.0091×10^2	1.9569×10^2
0.10000	3.4817	-2.6803	1.1557×10^{10}	8.8437×10^4	0.26700050	0.0061	0.9939	0.7149	4.0281×10^2	1.9803×10^2
0.19019	3.4700	-2.9014	9.4563×10^9	1.3210×10^5	0.26700050	0.0847	0.9153	0.7149	3.9635×10^2	1.9909×10^2
0.090 $M_{\odot}$										
0.00002	3.4174	-0.2329	2.6011×10^{11}	1.7656×10^2	0.26700050	0.0000	1.0000	0.7149	4.7490×10^2	2.1622×10^2
0.00010	3.4508	-0.6467	1.3848×10^{11}	6.2286×10^2	0.26700050	0.0000	1.0000	0.7149	4.3475×10^2	2.0453×10^2
0.00020	3.4634	-0.8318	1.0562×10^{11}	1.0707×10^3	0.26700050	0.0000	1.0000	0.7149	4.2075×10^2	1.9992×10^2
0.00030	3.4695	-0.9435	9.0278×10^{10}	1.4656×10^3	0.26700050	0.0000	1.0000	0.7149	4.1409×10^2	1.9762×10^2
0.00050	3.4759	-1.0880	7.4224×10^{10}	2.1682×10^3	0.26700050	0.0000	1.0000	0.7149	4.0745×10^2	1.9528×10^2
0.00070	3.4794	-1.1848	6.5351×10^{10}	2.7969×10^3	0.26700050	0.0000	1.0000	0.7149	4.0388×10^2	1.9405×10^2
0.00100	3.4825	-1.2877	5.7210×10^{10}	3.6496×10^3	0.26700050	0.0000	1.0000	0.7149	4.0080×10^2	1.9289×10^2
0.00200	3.4873	-1.4892	4.4370×10^{10}	6.0676×10^3	0.26700050	0.0000	1.0000	0.7149	3.9615×10^2	1.9138×10^2
0.00300	3.4895	-1.6076	3.8335×10^{10}	8.1284×10^3	0.26700050	0.0000	1.0000	0.7149	3.9357×10^2	1.9034×10^2
0.00500	3.4913	-1.7584	3.1960×10^{10}	1.1694×10^4	0.26700050	0.0000	1.0000	0.7149	3.9169×10^2	1.8983×10^2
0.00700	3.4921	-1.8580	2.8394×10^{10}	1.4816×10^4	0.26700050	0.0000	1.0000	0.7149	3.9096×10^2	1.8953×10^2
0.01000	3.4924	-1.9643	2.5082×10^{10}	1.8988×10^4	0.26700050	0.0000	1.0000	0.7149	3.9143×10^2	1.8986×10^2
0.02000	3.4919	-2.1737	1.9756×10^{10}	3.0605×10^4	0.26700050	0.0000	1.0000	0.7149	3.9263×10^2	1.9150×10^2
0.03000	3.4906	-2.2988	1.7215×10^{10}	4.0306×10^4	0.26700050	0.0000	1.0000	0.7149	3.9377×10^2	1.9219×10^2
0.05000	3.4876	-2.4580	1.4530×10^{10}	5.6576×10^4	0.26700050	0.0000	1.0000	0.7149	3.9817×10^2	1.9411×10^2
0.07000	3.4852	-2.5623	1.3028×10^{10}	7.0377×10^4	0.26700050	0.0002	0.9998	0.7149	4.0137×10^2	1.9603×10^2
0.10000	3.4822	-2.6735	1.1623×10^{10}	8.8420×10^4	0.26700050	0.0071	0.9929	0.7149	4.0336×10^2	1.9836×10^2
0.20339	3.4699	-2.9136	9.3283×10^9	1.3727×10^5	0.26700050	0.1107	0.8893	0.7149	3.9348×10^2	1.9778×10^2
0.091 $M_{\odot}$										
0.00002	3.4185	-0.2268	2.6065×10^{11}	1.7777×10^2	0.26700050	0.0000	1.0000	0.7149	4.7504×10^2	2.1636×10^2
0.00010	3.4513	-0.6406	1.3916×10^{11}	6.2371×10^2	0.26700050	0.0000	1.0000	0.7149	4.3562×10^2	2.0495×10^2
0.00020	3.4638	-0.8255	1.0619×10^{11}	1.0711×10^3	0.26700050	0.0000	1.0000	0.7149	4.2170×10^2	2.0036×10^2
0.00030	3.4699	-0.9370	9.0791×10^{10}	1.4652×10^3	0.26700050	0.0000	1.0000	0.7149	4.1506×10^2	1.9809×10^2
0.00050	3.4763	-1.0814	7.4665×10^{10}	2.1665×10^3	0.26700050	0.0000	1.0000	0.7149	4.0843×10^2	1.9577×10^2
0.00070	3.4798	-1.1780	6.5744×10^{10}	2.7943×10^3	0.26700050	0.0000	1.0000	0.7149	4.0485×10^2	1.9447×10^2
0.00100	3.4829	-1.2812	5.7558×10^{10}	3.6456×10^3	0.26700050	0.0000	1.0000	0.7149	4.0181×10^2	1.9339×10^2
0.00200	3.4878	-1.4823	4.4643×10^{10}	6.0600×10^3	0.26700050	0.0000	1.0000	0.7149	3.9703×10^2	1.9180×10^2
0.00300	3.4899	-1.6008	3.8571×10^{10}	8.1182×10^3	0.26700050	0.0000	1.0000	0.7149	3.9460×10^2	1.9077×10^2
0.00500	3.4917	-1.7515	3.2157×10^{10}	1.1679×10^4	0.26700050	0.0000	1.0000	0.7149	3.9275×10^2	1.9024×10^2
0.00700	3.4925	-1.8511	2.8568×10^{10}	1.4799×10^4	0.26700050	0.0000	1.0000	0.7149	3.9189×10^2	1.8996×10^2
0.01000	3.4929	-1.9573	2.5235×10^{10}	1.8966×10^4	0.26700050	0.0000	1.0000	0.7149	3.9229×10^2	1.9027×10^2
0.02000	3.4924	-2.1665	1.9878×10^{10}	3.0567×10^4	0.26700050	0.0000	1.0000	0.7149	3.9344×10^2	1.9186×10^2
0.03000	3.4911	-2.2915	1.7320×10^{10}	4.0263×10^4	0.26700050	0.0000	1.0000	0.7149	3.9459×10^2	1.9256×10^2
0.05000	3.4881	-2.4506	1.4617×10^{10}	5.6526×10^4	0.26700050	0.0000	1.0000	0.7149	3.9895×10^2	1.9447×10^2
0.07000	3.4858	-2.5549	1.3105×10^{10}	7.0329×10^4	0.26700050	0.0004	0.9996	0.7149	4.0173×10^2	1.9636×10^2
0.10000	3.4827	-2.6665	1.1690×10^{10}	8.8384×10^4	0.26700050	0.0080	0.9920	0.7149	4.0386×10^2	1.9858×10^2
0.20000	3.4710	-2.8981	9.4499×10^9	1.3525×10^5	0.26700050	0.1117	0.8883	0.7149	3.9359×10^2	1.9739×10^2
0.22219	3.4694	-2.9335	9.1378×10^9	1.4464×10^5	0.26700050	0.1506	0.8494	0.7149	3.8925×10^2	1.9591×10^2
0.092 $M_{\odot}$										
0.00002	3.4197	-0.2201	2.6119×10^{11}	1.7898×10^2	0.26700050	0.0000	1.0000	0.7149	4.7495×10^2	2.1640×10^2
0.00010	3.4518	-0.6345	1.3983×10^{11}	6.2454×10^2	0.26700050	0.0000	1.0000	0.7149	4.3651×10^2	2.0538×10^2
0.00020	3.4642	-0.8192	1.0676×10^{11}	1.0712×10^3	0.26700050	0.0000	1.0000	0.7149	4.2262×10^2	2.0080×10^2
0.00030	3.4703	-0.9307	9.1301×10^{10}	1.4648×10^3	0.26700050	0.0000	1.0000	0.7149	4.1603×10^2	1.9854×10^2
0.00050	3.4766	-1.0749	7.5101×10^{10}	2.1649×10^3	0.26700050	0.0000	1.0000	0.7149	4.0939×10^2	1.9624×10^2
0.00070	3.4801	-1.1713	6.6136×10^{10}	2.7916×10^3	0.26700050	0.0000	1.0000	0.7149	4.0578×10^2	1.9491×10^2
0.00100	3.4832	-1.2748	5.7890×10^{10}	3.6436×10^3	0.26700050	0.0000	1.0000	0.7149	4.0272×10^2	1.9390×10^2
0.00200	3.4882	-1.4755	4.4912×10^{10}	6.0535×10^3	0.26700050	0.0000	1.0000	0.7149	3.9790×10^2	1.9223×10^2
0.00300	3.4902	-1.5942	3.8801×10^{10}	8.1106×10^3	0.26700050	0.0000	1.0000	0.7149	3.9550×10^2	1.9125×10^2
0.00500	3.4920	-1.7449	3.2349×10^{10}	1.1668×10^4	0.26700050	0.0000	1.0000	0.7149	3.9366×10^2	1.9070×10^2
0.00700	3.4929	-1.8442	2.8742×10^{10}	1.4781×10^4	0.26700050	0.0000	1.0000	0.7149	3.9281×10^2	1.9039×10^2
0.01000	3.4933	-1.9505	2.5385×10^{10}	1.8949×10^4	0.26700050	0.0000	1.0000	0.7149	3.9321×10^2	1.9070×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.02000	3.4928	-2.1595	1.9996×10^{10}	3.0537×10^4	0.26700050	0.0000	1.0000	0.7149	3.9432×10^2	1.9224×10^2
0.03000	3.4916	-2.2843	1.7423×10^{10}	4.0225×10^4	0.26700050	0.0000	1.0000	0.7149	3.9537×10^2	1.9292×10^2
0.05000	3.4887	-2.4433	1.4703×10^{10}	5.6483×10^4	0.26700050	0.0000	1.0000	0.7149	3.9969×10^2	1.9482×10^2
0.07000	3.4863	-2.5476	1.3180×10^{10}	7.0290×10^4	0.26700050	0.0005	0.9995	0.7149	4.0220×10^2	1.9669×10^2
0.10000	3.4833	-2.6589	1.1759×10^{10}	8.8314×10^4	0.26700050	0.0090	0.9910	0.7149	4.0420×10^2	1.9875×10^2
0.20000	3.4718	-2.8887	9.5153×10^9	1.3486×10^5	0.26700050	0.1192	0.8808	0.7149	3.9308×10^2	1.9684×10^2
0.22162	3.4705	-2.9218	9.2171×10^9	1.4373×10^5	0.26700050	0.1582	0.8418	0.7149	3.8839×10^2	1.9502×10^2
0.093 $M_{\odot}$										
0.00002	3.4208	-0.2138	2.6172×10^{11}	1.8020×10^2	0.26700050	0.0000	1.0000	0.7149	4.7495×10^2	2.1647×10^2
0.00010	3.4523	-0.6285	1.4049×10^{11}	6.2538×10^2	0.26700050	0.0000	1.0000	0.7149	4.3739×10^2	2.0582×10^2
0.00020	3.4647	-0.8127	1.0733×10^{11}	1.0714×10^3	0.26700050	0.0000	1.0000	0.7149	4.2347×10^2	2.0121×10^2
0.00030	3.4707	-0.9245	9.1797×10^{10}	1.4648×10^3	0.26700050	0.0000	1.0000	0.7149	4.1701×10^2	1.9901×10^2
0.00050	3.4770	-1.0685	7.5532×10^{10}	2.1635×10^3	0.26700050	0.0000	1.0000	0.7149	4.1035×10^2	1.9671×10^2
0.00070	3.4805	-1.1648	6.6523×10^{10}	2.7893×10^3	0.26700050	0.0000	1.0000	0.7149	4.0671×10^2	1.9537×10^2
0.00100	3.4836	-1.2680	5.8234×10^{10}	3.6398×10^3	0.26700050	0.0000	1.0000	0.7149	4.0361×10^2	1.9431×10^2
0.00200	3.4886	-1.4688	4.5174×10^{10}	6.0486×10^3	0.26700050	0.0000	1.0000	0.7149	3.9880×10^2	1.9266×10^2
0.00300	3.4906	-1.5879	3.9020×10^{10}	8.1068×10^3	0.26700050	0.0000	1.0000	0.7149	3.9646×10^2	1.9171×10^2
0.00500	3.4924	-1.7384	3.2533×10^{10}	1.1662×10^4	0.26700050	0.0000	1.0000	0.7149	3.9460×10^2	1.9110×10^2
0.00700	3.4933	-1.8376	2.8911×10^{10}	1.4768×10^4	0.26700050	0.0000	1.0000	0.7149	3.9371×10^2	1.9082×10^2
0.01000	3.4937	-1.9439	2.5532×10^{10}	1.8934×10^4	0.26700050	0.0000	1.0000	0.7149	3.9409×10^2	1.9112×10^2
0.02000	3.4933	-2.1526	2.0115×10^{10}	3.0505×10^4	0.26700050	0.0000	1.0000	0.7149	3.9513×10^2	1.9260×10^2
0.03000	3.4921	-2.2772	1.7526×10^{10}	4.0187×10^4	0.26700050	0.0000	1.0000	0.7149	3.9618×10^2	1.9329×10^2
0.05000	3.4892	-2.4362	1.4788×10^{10}	5.6440×10^4	0.26700050	0.0000	1.0000	0.7149	4.0046×10^2	1.9517×10^2
0.07000	3.4869	-2.5405	1.3256×10^{10}	7.0248×10^4	0.26700050	0.0008	0.9992	0.7149	4.0279×10^2	1.9703×10^2
0.10000	3.4840	-2.6511	1.1826×10^{10}	8.8251×10^4	0.26700050	0.0099	0.9901	0.7149	4.0450×10^2	1.9889×10^2
0.20519	3.4722	-2.8879	9.5091×10^9	1.3651×10^5	0.26700050	0.1360	0.8640	0.7149	3.9151×10^2	1.9580×10^2
0.094 $M_{\odot}$										
0.00002	3.4219	-0.2078	2.6226×10^{11}	1.8139×10^2	0.26700050	0.0000	1.0000	0.7149	4.7506×10^2	2.1659×10^2
0.00010	3.4528	-0.6223	1.4116×10^{11}	6.2609×10^2	0.26700050	0.0000	1.0000	0.7149	4.3818×10^2	2.0620×10^2
0.00020	3.4652	-0.8062	1.0789×10^{11}	1.0718×10^3	0.26700050	0.0000	1.0000	0.7149	4.2425×10^2	2.0158×10^2
0.00030	3.4711	-0.9183	9.2283×10^{10}	1.4650×10^3	0.26700050	0.0000	1.0000	0.7149	4.1793×10^2	1.9944×10^2
0.00050	3.4774	-1.0623	7.5952×10^{10}	2.1627×10^3	0.26700050	0.0000	1.0000	0.7149	4.1133×10^2	1.9714×10^2
0.00070	3.4809	-1.1583	6.6905×10^{10}	2.7871×10^3	0.26700050	0.0000	1.0000	0.7149	4.0763×10^2	1.9581×10^2
0.00100	3.4840	-1.2614	5.8572×10^{10}	3.6365×10^3	0.26700050	0.0000	1.0000	0.7149	4.0450×10^2	1.9473×10^2
0.00200	3.4889	-1.4623	4.5433×10^{10}	6.0440×10^3	0.26700050	0.0000	1.0000	0.7149	3.9969×10^2	1.9313×10^2
0.00300	3.4909	-1.5812	3.9258×10^{10}	8.0949×10^3	0.26700050	0.0000	1.0000	0.7149	3.9754×10^2	1.9214×10^2
0.00500	3.4929	-1.7314	3.2733×10^{10}	1.1644×10^4	0.26700050	0.0000	1.0000	0.7149	3.9545×10^2	1.9150×10^2
0.00700	3.4937	-1.8308	2.9085×10^{10}	1.4748×10^4	0.26700050	0.0000	1.0000	0.7149	3.9462×10^2	1.9125×10^2
0.01000	3.4941	-1.9372	2.5683×10^{10}	1.8914×10^4	0.26700050	0.0000	1.0000	0.7149	3.9498×10^2	1.9155×10^2
0.02000	3.4937	-2.1458	2.0234×10^{10}	3.0471×10^4	0.26700050	0.0000	1.0000	0.7149	3.9596×10^2	1.9297×10^2
0.03000	3.4925	-2.2702	1.7628×10^{10}	4.0151×10^4	0.26700050	0.0000	1.0000	0.7149	3.9701×10^2	1.9366×10^2
0.05000	3.4897	-2.4291	1.4872×10^{10}	5.6404×10^4	0.26700050	0.0000	1.0000	0.7149	4.0122×10^2	1.9551×10^2
0.07000	3.4874	-2.5334	1.3330×10^{10}	7.0211×10^4	0.26700050	0.0010	0.9990	0.7149	4.0344×10^2	1.9737×10^2
0.10000	3.4847	-2.6436	1.1893×10^{10}	8.8203×10^4	0.26700050	0.0108	0.9892	0.7149	4.0482×10^2	1.9904×10^2
0.20000	3.4735	-2.8706	9.6408×10^9	1.3423×10^5	0.26700050	0.1315	0.8685	0.7149	3.9200×10^2	1.9572×10^2
0.20738	3.4727	-2.8824	9.5452×10^9	1.3693×10^5	0.26700050	0.1477	0.8523	0.7149	3.9075×10^2	1.9516×10^2
0.095 $M_{\odot}$										
0.00002	3.4229	-0.2020	2.6279×10^{11}	1.8258×10^2	0.26700050	0.0000	1.0000	0.7149	4.7524×10^2	2.1675×10^2
0.00010	3.4534	-0.6159	1.4181×10^{11}	6.2694×10^2	0.26700050	0.0000	1.0000	0.7149	4.3887×10^2	2.0654×10^2
0.00020	3.4656	-0.7999	1.0843×10^{11}	1.0724×10^3	0.26700050	0.0000	1.0000	0.7149	4.2505×10^2	2.0197×10^2
0.00030	3.4715	-0.9120	9.2769×10^{10}	1.4651×10^3	0.26700050	0.0000	1.0000	0.7149	4.1879×10^2	1.9987×10^2
0.00050	3.4777	-1.0561	7.6375×10^{10}	2.1616×10^3	0.26700050	0.0000	1.0000	0.7149	4.1226×10^2	1.9760×10^2
0.00070	3.4813	-1.1520	6.7283×10^{10}	2.7852×10^3	0.26700050	0.0000	1.0000	0.7149	4.0855×10^2	1.9626×10^2
0.00100	3.4844	-1.2549	5.8909×10^{10}	3.6333×10^3	0.26700050	0.0000	1.0000	0.7149	4.0543×10^2	1.9508×10^2
0.00200	3.4893	-1.4558	4.5703×10^{10}	6.0365×10^3	0.26700050	0.0000	1.0000	0.7149	4.0061×10^2	1.9356×10^2
0.00300	3.4913	-1.5748	3.9488×10^{10}	8.0862×10^3	0.26700050	0.0000	1.0000	0.7149	3.9847×10^2	1.9260×10^2
0.00500	3.4933	-1.7247	3.2927×10^{10}	1.1630×10^4	0.26700050	0.0000	1.0000	0.7149	3.9627×10^2	1.9190×10^2
0.00700	3.4941	-1.8242	2.9256×10^{10}	1.4732×10^4	0.26700050	0.0000	1.0000	0.7149	3.9552×10^2	1.9167×10^2
0.01000	3.4945	-1.9307	2.5830×10^{10}	1.8898×10^4	0.26700050	0.0000	1.0000	0.7149	3.9591×10^2	1.9194×10^2
0.02000	3.4942	-2.1391	2.0350×10^{10}	3.0446×10^4	0.26700050	0.0000	1.0000	0.7149	3.9680×10^2	1.9334×10^2
0.03000	3.4930	-2.2634	1.7727×10^{10}	4.0124×10^4	0.26700050	0.0000	1.0000	0.7149	3.9786×10^2	1.9402×10^2
0.05000	3.4903	-2.4221	1.4955×10^{10}	5.6376×10^4	0.26700050	0.0000	1.0000	0.7149	4.0199×10^2	1.9583×10^2
0.07000	3.4880	-2.5264	1.3404×10^{10}	7.0178×10^4	0.26700050	0.0013	0.9987	0.7149	4.0409×10^2	1.9770×10^2
0.10000	3.4853	-2.6362	1.1960×10^{10}	8.8153×10^4	0.26700050	0.0119	0.9881	0.7149	4.0516×10^2	1.9919×10^2
0.20000	3.4749	-2.8598	9.6981×10^9	1.3406×10^5	0.26700050	0.1389	0.8611	0.7149	3.9071×10^2	1.9491×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{cnv}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.24607	3.4718	-2.9233	9.1436×10^9	1.5081×10^5	0.26700050	0.2386	0.7614	0.7149	3.8028×10^2	1.8974×10^2
0.096 $M_{\odot}$										
0.00002	3.4238	-0.1964	2.6335×10^{11}	1.8372×10^2	0.26700050	0.0000	1.0000	0.7149	4.7546×10^2	2.1693×10^2
0.00010	3.4539	-0.6098	1.4245×10^{11}	6.2786×10^2	0.26700050	0.0000	1.0000	0.7149	4.3958×10^2	2.0689×10^2
0.00020	3.4661	-0.7937	1.0897×10^{11}	1.0729×10^3	0.26700050	0.0000	1.0000	0.7149	4.2585×10^2	2.0235×10^2
0.00030	3.4719	-0.9057	9.3256×10^{10}	1.4651×10^3	0.26700050	0.0000	1.0000	0.7149	4.1961×10^2	2.0028×10^2
0.00050	3.4780	-1.0501	7.6788×10^{10}	2.1609×10^3	0.26700050	0.0000	1.0000	0.7149	4.1323×10^2	1.9804×10^2
0.00070	3.4816	-1.1458	6.7655×10^{10}	2.7837×10^3	0.26700050	0.0000	1.0000	0.7149	4.0947×10^2	1.9673×10^2
0.00100	3.4848	-1.2485	5.9243×10^{10}	3.6303×10^3	0.26700050	0.0000	1.0000	0.7149	4.0630×10^2	1.9550×10^2
0.00200	3.4896	-1.4494	4.5969×10^{10}	6.0297×10^3	0.26700050	0.0000	1.0000	0.7149	4.0153×10^2	1.9400×10^2
0.00300	3.4916	-1.5683	3.9715×10^{10}	8.0782×10^3	0.26700050	0.0000	1.0000	0.7149	3.9937×10^2	1.9301×10^2
0.00500	3.4937	-1.7180	3.3120×10^{10}	1.1616×10^4	0.26700050	0.0000	1.0000	0.7149	3.9712×10^2	1.9229×10^2
0.00700	3.4944	-1.8177	2.9424×10^{10}	1.4716×10^4	0.26700050	0.0000	1.0000	0.7149	3.9642×10^2	1.9209×10^2
0.01000	3.4949	-1.9240	2.5980×10^{10}	1.8878×10^4	0.26700050	0.0000	1.0000	0.7149	3.9676×10^2	1.9234×10^2
0.02000	3.4946	-2.1324	2.0465×10^{10}	3.0421×10^4	0.26700050	0.0000	1.0000	0.7149	3.9762×10^2	1.9369×10^2
0.03000	3.4935	-2.2566	1.7827×10^{10}	4.0092×10^4	0.26700050	0.0000	1.0000	0.7149	3.9864×10^2	1.9437×10^2
0.05000	3.4908	-2.4151	1.5038×10^{10}	5.6341×10^4	0.26700050	0.0000	1.0000	0.7149	4.0271×10^2	1.9615×10^2
0.07000	3.4885	-2.5196	1.3477×10^{10}	7.0146×10^4	0.26700050	0.0016	0.9984	0.7149	4.0471×10^2	1.9803×10^2
0.10000	3.4859	-2.6289	1.2026×10^{10}	8.8096×10^4	0.26700050	0.0130	0.9870	0.7149	4.0546×10^2	1.9935×10^2
0.20000	3.4762	-2.8493	9.7571×10^9	1.3384×10^5	0.26700050	0.1453	0.8547	0.7149	3.8954×10^2	1.9414×10^2
0.23065	3.4732	-2.8956	9.3798×10^9	1.4482×10^5	0.26700050	0.2156	0.7844	0.7149	3.8327×10^2	1.9092×10^2
0.097 $M_{\odot}$										
0.00002	3.4247	-0.1911	2.6384×10^{11}	1.8494×10^2	0.26700050	0.0000	1.0000	0.7149	4.7580×10^2	2.1715×10^2
0.00010	3.4545	-0.6038	1.4308×10^{11}	6.2884×10^2	0.26700050	0.0000	1.0000	0.7149	4.4032×10^2	2.0726×10^2
0.00020	3.4666	-0.7876	1.0951×10^{11}	1.0735×10^3	0.26700050	0.0000	1.0000	0.7149	4.2665×10^2	2.0274×10^2
0.00030	3.4724	-0.8996	9.3736×10^{10}	1.4652×10^3	0.26700050	0.0000	1.0000	0.7149	4.2045×10^2	2.0065×10^2
0.00050	3.4784	-1.0441	7.7197×10^{10}	2.1603×10^3	0.26700050	0.0000	1.0000	0.7149	4.1420×10^2	1.9852×10^2
0.00070	3.4819	-1.1398	6.8021×10^{10}	2.7825×10^3	0.26700050	0.0000	1.0000	0.7149	4.1039×10^2	1.9719×10^2
0.00100	3.4851	-1.2421	5.9578×10^{10}	3.6270×10^3	0.26700050	0.0000	1.0000	0.7149	4.0718×10^2	1.9592×10^2
0.00200	3.4900	-1.4431	4.6229×10^{10}	6.0240×10^3	0.26700050	0.0000	1.0000	0.7149	4.0247×10^2	1.9442×10^2
0.00300	3.4920	-1.5618	3.9942×10^{10}	8.0698×10^3	0.26700050	0.0000	1.0000	0.7149	4.0017×10^2	1.9341×10^2
0.00500	3.4940	-1.7115	3.3308×10^{10}	1.1605×10^4	0.26700050	0.0000	1.0000	0.7149	3.9794×10^2	1.9272×10^2
0.00700	3.4948	-1.8113	2.9592×10^{10}	1.4702×10^4	0.26700050	0.0000	1.0000	0.7149	3.9730×10^2	1.9252×10^2
0.01000	3.4953	-1.9175	2.6127×10^{10}	1.8860×10^4	0.26700050	0.0000	1.0000	0.7149	3.9760×10^2	1.9273×10^2
0.02000	3.4950	-2.1259	2.0580×10^{10}	3.0398×10^4	0.26700050	0.0000	1.0000	0.7149	3.9839×10^2	1.9402×10^2
0.03000	3.4940	-2.2500	1.7925×10^{10}	4.0068×10^4	0.26700050	0.0000	1.0000	0.7149	3.9941×10^2	1.9476×10^2
0.05000	3.4914	-2.4082	1.5120×10^{10}	5.6310×10^4	0.26700050	0.0000	1.0000	0.7149	4.0343×10^2	1.9647×10^2
0.07000	3.4890	-2.5128	1.3550×10^{10}	7.0116×10^4	0.26700050	0.0020	0.9980	0.7149	4.0532×10^2	1.9835×10^2
0.10000	3.4865	-2.6218	1.2092×10^{10}	8.8052×10^4	0.26700050	0.0141	0.9859	0.7149	4.0584×10^2	1.9953×10^2
0.20000	3.4775	-2.8390	9.8146×10^9	1.3365×10^5	0.26700050	0.1524	0.8476	0.7149	3.8835×10^2	1.9338×10^2
0.25243	3.4733	-2.9106	9.2168×10^9	1.5155×10^5	0.26700050	0.2787	0.7213	0.7149	3.7686×10^2	1.8703×10^2
0.098 $M_{\odot}$										
0.00002	3.4258	-0.1857	2.6428×10^{11}	1.8623×10^2	0.26700050	0.0000	1.0000	0.7149	4.7577×10^2	2.1721×10^2
0.00010	3.4550	-0.5981	1.4367×10^{11}	6.3015×10^2	0.26700050	0.0000	1.0000	0.7149	4.4106×10^2	2.0762×10^2
0.00020	3.4670	-0.7817	1.1004×10^{11}	1.0743×10^3	0.26700050	0.0000	1.0000	0.7149	4.2746×10^2	2.0313×10^2
0.00030	3.4728	-0.8936	9.4203×10^{10}	1.4657×10^3	0.26700050	0.0000	1.0000	0.7149	4.2127×10^2	2.0106×10^2
0.00050	3.4788	-1.0380	7.7601×10^{10}	2.1599×10^3	0.26700050	0.0000	1.0000	0.7149	4.1505×10^2	1.9889×10^2
0.00070	3.4823	-1.1338	6.8389×10^{10}	2.7810×10^3	0.26700050	0.0000	1.0000	0.7149	4.1133×10^2	1.9764×10^2
0.00100	3.4855	-1.2359	5.9902×10^{10}	3.6249×10^3	0.26700050	0.0000	1.0000	0.7149	4.0804×10^2	1.9636×10^2
0.00200	3.4903	-1.4369	4.6488×10^{10}	6.0186×10^3	0.26700050	0.0000	1.0000	0.7149	4.0341×10^2	1.9483×10^2
0.00300	3.4924	-1.5553	4.0166×10^{10}	8.0622×10^3	0.26700050	0.0000	1.0000	0.7149	4.0101×10^2	1.9382×10^2
0.00500	3.4944	-1.7052	3.3494×10^{10}	1.1594×10^4	0.26700050	0.0000	1.0000	0.7149	3.9880×10^2	1.9314×10^2
0.00700	3.4952	-1.8050	2.9754×10^{10}	1.4693×10^4	0.26700050	0.0000	1.0000	0.7149	3.9818×10^2	1.9293×10^2
0.01000	3.4957	-1.9111	2.6273×10^{10}	1.8843×10^4	0.26700050	0.0000	1.0000	0.7149	3.9843×10^2	1.9312×10^2
0.02000	3.4954	-2.1192	2.0699×10^{10}	3.0357×10^4	0.26700050	0.0000	1.0000	0.7149	3.9915×10^2	1.9440×10^2
0.03000	3.4944	-2.2432	1.8028×10^{10}	4.0021×10^4	0.26700050	0.0000	1.0000	0.7149	4.0023×10^2	1.9514×10^2
0.05000	3.4919	-2.4012	1.5206×10^{10}	5.6255×10^4	0.26700050	0.0000	1.0000	0.7149	4.0411×10^2	1.9678×10^2
0.07000	3.4896	-2.5060	1.3623×10^{10}	7.0082×10^4	0.26700050	0.0022	0.9978	0.7149	4.0597×10^2	1.9864×10^2
0.10000	3.4871	-2.6151	1.2155×10^{10}	8.8039×10^4	0.26700050	0.0151	0.9849	0.7149	4.0633×10^2	1.9973×10^2
0.20000	3.4788	-2.8289	9.8728×10^9	1.3344×10^5	0.26700050	0.1610	0.8390	0.7149	3.8733×10^2	1.9269×10^2
0.30000	3.4726	-2.9436	8.9015×10^9	1.6415×10^5	0.26700050	0.4109	0.5891	0.7149	3.6569×10^2	1.8056×10^2
0.32453	3.4721	-2.9609	8.7443×10^9	1.7011×10^5	0.26700050	0.4703	0.5297	0.7149	3.6096×10^2	1.7797×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
$0.099M_{\odot}$										
0.00002	3.4270	-0.1791	2.6474×10^{11}	1.8747×10^2	0.26700050	0.0000	1.0000	0.7149	4.7555×10^2	2.1717×10^2
0.00010	3.4555	-0.5925	1.4424×10^{11}	6.3152×10^2	0.26700050	0.0000	1.0000	0.7149	4.4179×10^2	2.0799×10^2
0.00020	3.4675	-0.7759	1.1055×10^{11}	1.0751×10^3	0.26700050	0.0000	1.0000	0.7149	4.2827×10^2	2.0352×10^2
0.00030	3.4732	-0.8876	9.4674×10^{10}	1.4660×10^3	0.26700050	0.0000	1.0000	0.7149	4.2211×10^2	2.0147×10^2
0.00050	3.4792	-1.0319	7.8007×10^{10}	2.1593×10^3	0.26700050	0.0000	1.0000	0.7149	4.1586×10^2	1.9930×10^2
0.00070	3.4826	-1.1279	6.8761×10^{10}	2.7791×10^3	0.26700050	0.0000	1.0000	0.7149	4.1228×10^2	1.9809×10^2
0.00100	3.4859	-1.2298	6.0229×10^{10}	3.6221×10^3	0.26700050	0.0000	1.0000	0.7149	4.0890×10^2	1.9680×10^2
0.00200	3.4906	-1.4309	4.6740×10^{10}	6.0147×10^3	0.26700050	0.0000	1.0000	0.7149	4.0429×10^2	1.9527×10^2
0.00300	3.4928	-1.5491	4.0384×10^{10}	8.0567×10^3	0.26700050	0.0000	1.0000	0.7149	4.0184×10^2	1.9425×10^2
0.00500	3.4948	-1.6990	3.3678×10^{10}	1.1585×10^4	0.26700050	0.0000	1.0000	0.7149	3.9966×10^2	1.9357×10^2
0.00700	3.4955	-1.7988	2.9918×10^{10}	1.4679×10^4	0.26700050	0.0000	1.0000	0.7149	3.9901×10^2	1.9335×10^2
0.01000	3.4961	-1.9047	2.6419×10^{10}	1.8825×10^4	0.26700050	0.0000	1.0000	0.7149	3.9925×10^2	1.9351×10^2
0.02000	3.4959	-2.1126	2.0814×10^{10}	3.0329×10^4	0.26700050	0.0000	1.0000	0.7149	3.9993×10^2	1.9473×10^2
0.03000	3.4949	-2.2366	1.8129×10^{10}	3.9978×10^4	0.26700050	0.0000	1.0000	0.7149	4.0105×10^2	1.9550×10^2
0.05000	3.4924	-2.3944	1.5288×10^{10}	5.6221×10^4	0.26700050	0.0000	1.0000	0.7149	4.0480×10^2	1.9710×10^2
0.07000	3.4901	-2.4993	1.3695×10^{10}	7.0058×10^4	0.26700050	0.0025	0.9975	0.7149	4.0666×10^2	1.9893×10^2
0.10000	3.4876	-2.6085	1.2218×10^{10}	8.8016×10^4	0.26700050	0.0162	0.9838	0.7149	4.0685×10^2	1.9996×10^2
0.20000	3.4798	-2.8202	9.9258×10^9	1.3337×10^5	0.26700050	0.1681	0.8319	0.7149	3.8648×10^2	1.9215×10^2
0.30000	3.4735	-2.9332	8.9721×10^9	1.6323×10^5	0.26700050	0.4269	0.5731	0.7149	3.6474×10^2	1.7985×10^2
0.32549	3.4730	-2.9505	8.8141×10^9	1.6913×10^5	0.26700050	0.4906	0.5094	0.7149	3.5988×10^2	1.7717×10^2
$0.100M_{\odot}$										
0.00002	3.4283	-0.1735	2.6495×10^{11}	1.8907×10^2	0.26700050	0.0000	1.0000	0.7149	4.7534×10^2	2.1715×10^2
0.00010	3.4560	-0.5871	1.4480×10^{11}	6.3298×10^2	0.26700050	0.0000	1.0000	0.7149	4.4249×10^2	2.0835×10^2
0.00020	3.4679	-0.7702	1.1106×10^{11}	1.0761×10^3	0.26700050	0.0000	1.0000	0.7149	4.2909×10^2	2.0392×10^2
0.00030	3.4736	-0.8819	9.5130×10^{10}	1.4666×10^3	0.26700050	0.0000	1.0000	0.7149	4.2295×10^2	2.0187×10^2
0.00050	3.4796	-1.0259	7.8404×10^{10}	2.1591×10^3	0.26700050	0.0000	1.0000	0.7149	4.1669×10^2	1.9969×10^2
0.00070	3.4829	-1.1221	6.9123×10^{10}	2.7778×10^3	0.26700050	0.0000	1.0000	0.7149	4.1329×10^2	1.9848×10^2
0.00100	3.4862	-1.2238	6.0553×10^{10}	3.6198×10^3	0.26700050	0.0000	1.0000	0.7149	4.0980×10^2	1.9723×10^2
0.00200	3.4910	-1.4249	4.6994×10^{10}	6.0098×10^3	0.26700050	0.0000	1.0000	0.7149	4.0527×10^2	1.9565×10^2
0.00300	3.4932	-1.5429	4.0606×10^{10}	8.0496×10^3	0.26700050	0.0000	1.0000	0.7149	4.0270×10^2	1.9467×10^2
0.00500	3.4951	-1.6928	3.3863×10^{10}	1.1574×10^4	0.26700050	0.0000	1.0000	0.7149	4.0054×10^2	1.9398×10^2
0.00700	3.4959	-1.7924	3.0084×10^{10}	1.4665×10^4	0.26700050	0.0000	1.0000	0.7149	3.9983×10^2	1.9373×10^2
0.01000	3.4964	-1.8983	2.6569×10^{10}	1.8801×10^4	0.26700050	0.0000	1.0000	0.7149	4.0006×10^2	1.9389×10^2
0.02000	3.4963	-2.1061	2.0930×10^{10}	3.0297×10^4	0.26700050	0.0000	1.0000	0.7149	4.0072×10^2	1.9507×10^2
0.03000	3.4953	-2.2300	1.8231×10^{10}	3.9934×10^4	0.26700050	0.0000	1.0000	0.7149	4.0199×10^2	1.9582×10^2
0.05000	3.4929	-2.3879	1.5367×10^{10}	5.6206×10^4	0.26700050	0.0000	1.0000	0.7149	4.0560×10^2	1.9742×10^2
0.07000	3.4906	-2.4926	1.3767×10^{10}	7.0025×10^4	0.26700050	0.0029	0.9971	0.7149	4.0731×10^2	1.9923×10^2
0.10000	3.4881	-2.6019	1.2283×10^{10}	8.7970×10^4	0.26700050	0.0173	0.9827	0.7149	4.0731×10^2	2.0018×10^2
0.20000	3.4807	-2.8115	9.9841×10^9	1.3315×10^5	0.26700050	0.1754	0.8246	0.7149	3.8581×10^2	1.9166×10^2
0.26568	3.4745	-2.8974	9.3039×10^9	1.5333×10^5	0.26700050	0.3512	0.6488	0.7149	3.7199×10^2	1.8355×10^2
$0.110M_{\odot}$										
0.00002	3.4401	-0.1130	2.6898×10^{11}	2.0179×10^2	0.26700050	0.0000	1.0000	0.7149	4.7283×10^2	2.1668×10^2
0.00010	3.4616	-0.5327	1.5030×10^{11}	6.4632×10^2	0.26700050	0.0000	1.0000	0.7149	4.4856×10^2	2.1138×10^2
0.00020	3.4722	-0.7153	1.1595×10^{11}	1.0859×10^3	0.26700050	0.0000	1.0000	0.7149	4.3647×10^2	2.0753×10^2
0.00030	3.4774	-0.8268	9.9587×10^{10}	1.4721×10^3	0.26700050	0.0000	1.0000	0.7149	4.3098×10^2	2.0573×10^2
0.00050	3.4830	-0.9697	8.2309×10^{10}	2.1550×10^3	0.26700050	0.0000	1.0000	0.7149	4.2500×10^2	2.0369×10^2
0.00070	3.4865	-1.0644	7.2642×10^{10}	2.7667×10^3	0.26700050	0.0000	1.0000	0.7149	4.2135×10^2	2.0231×10^2
0.00100	3.4896	-1.1663	6.3688×10^{10}	3.5994×10^3	0.26700050	0.0000	1.0000	0.7149	4.1812×10^2	2.0112×10^2
0.00200	3.4945	-1.3661	4.9477×10^{10}	5.9638×10^3	0.26700050	0.0000	1.0000	0.7149	4.1329×10^2	1.9946×10^2
0.00300	3.4965	-1.4847	4.2763×10^{10}	7.9838×10^3	0.26700050	0.0000	1.0000	0.7149	4.1118×10^2	1.9865×10^2
0.00500	3.4986	-1.6336	3.5671×10^{10}	1.1474×10^4	0.26700050	0.0000	1.0000	0.7149	4.0873×10^2	1.9777×10^2
0.00700	3.4995	-1.7328	3.1695×10^{10}	1.4533×10^4	0.26700050	0.0000	1.0000	0.7149	4.0798×10^2	1.9754×10^2
0.01000	3.5001	-1.8387	2.7983×10^{10}	1.8644×10^4	0.26700050	0.0000	1.0000	0.7149	4.0807×10^2	1.9763×10^2
0.02000	3.5001	-2.0459	2.2039×10^{10}	3.0057×10^4	0.26700050	0.0000	1.0000	0.7149	4.0864×10^2	1.9850×10^2
0.03000	3.4994	-2.1687	1.9196×10^{10}	3.9620×10^4	0.26700050	0.0000	1.0000	0.7149	4.0992×10^2	1.9938×10^2
0.05000	3.4975	-2.3251	1.6175×10^{10}	5.5803×10^4	0.26700050	0.0007	0.9993	0.7149	4.1233×10^2	2.0073×10^2
0.07000	3.4955	-2.4289	1.4483×10^{10}	6.9605×10^4	0.26700050	0.0065	0.9935	0.7149	4.1373×10^2	2.0215×10^2
0.10000	3.4931	-2.5380	1.2920×10^{10}	8.7455×10^4	0.26700050	0.0290	0.9710	0.7149	4.1170×10^2	2.0217×10^2
0.20000	3.4877	-2.7347	1.0561×10^{10}	1.3091×10^5	0.26700050	0.2487	0.7513	0.7149	3.8132×10^2	1.8893×10^2
0.30000	3.4835	-2.8258	9.6925×10^9	1.5541×10^5	0.26700050	0.5660	0.4340	0.7148	3.5591×10^2	1.7387×10^2
0.50000	3.4794	-2.8851	9.2258×10^9	1.7153×10^5	0.26700050	0.9035	0.0965	0.7148	3.4013×10^2	1.6302×10^2
0.70000	3.4788	-2.8943	9.1531×10^9	1.7426×10^5	0.26700050	0.9776	0.0224	0.7147	3.3740×10^2	1.6114×10^2
1.26797	3.4788	-2.8965	9.1331×10^9	1.7502×10^5	0.26700050	0.9998	0.0002	0.7145	3.3657×10^2	1.6069×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PPI)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.120 $M_{\odot}$										
0.00002	3.4523	-0.0535	2.7232×10^{11}	2.1477×10^2	0.26700050	0.0000	1.0000	0.7149	4.6875×10^2	2.1540×10^2
0.00010	3.4672	-0.4835	1.5501×10^{11}	6.6286×10^2	0.26700050	0.0000	1.0000	0.7149	4.5341×10^2	2.1390×10^2
0.00020	3.4763	-0.6667	1.2033×10^{11}	1.0999×10^3	0.26700050	0.0000	1.0000	0.7149	4.4326×10^2	2.1084×10^2
0.00030	3.4811	-0.7771	1.0367×10^{11}	1.4819×10^3	0.26700050	0.0000	1.0000	0.7149	4.3817×10^2	2.0919×10^2
0.00050	3.4868	-0.9177	8.5906×10^{10}	2.1581×10^3	0.26700050	0.0000	1.0000	0.7149	4.3205×10^2	2.0708×10^2
0.00070	3.4899	-1.0126	7.5907×10^{10}	2.7642×10^3	0.26700050	0.0000	1.0000	0.7149	4.2871×10^2	2.0587×10^2
0.00100	3.4928	-1.1145	6.6618×10^{10}	3.5887×10^3	0.26700050	0.0000	1.0000	0.7149	4.2581×10^2	2.0480×10^2
0.00200	3.4978	-1.3130	5.1807×10^{10}	5.9339×10^3	0.26700050	0.0000	1.0000	0.7149	4.2071×10^2	2.0293×10^2
0.00300	3.4999	-1.4308	4.4799×10^{10}	7.9358×10^3	0.26700050	0.0000	1.0000	0.7149	4.1852×10^2	2.0214×10^2
0.00500	3.5018	-1.5805	3.7373×10^{10}	1.1403×10^4	0.26700050	0.0000	1.0000	0.7149	4.1657×10^2	2.0147×10^2
0.00700	3.5029	-1.6786	3.3214×10^{10}	1.4438×10^4	0.26700050	0.0000	1.0000	0.7149	4.1539×10^2	2.0101×10^2
0.01000	3.5035	-1.7841	2.9331×10^{10}	1.8513×10^4	0.26700050	0.0000	1.0000	0.7149	4.1536×10^2	2.0107×10^2
0.02000	3.5037	-1.9905	2.3109×10^{10}	2.9825×10^4	0.26700050	0.0000	1.0000	0.7149	4.1611×10^2	2.0182×10^2
0.03000	3.5031	-2.1124	2.0133×10^{10}	3.9294×10^4	0.26700050	0.0000	1.0000	0.7149	4.1762×10^2	2.0275×10^2
0.05000	3.5016	-2.2679	1.6953×10^{10}	5.5414×10^4	0.26700050	0.0020	0.9980	0.7149	4.1954×10^2	2.0413×10^2
0.07000	3.4999	-2.3711	1.5173×10^{10}	6.9179×10^4	0.26700050	0.0103	0.9897	0.7149	4.2036×10^2	2.0504×10^2
0.10000	3.4975	-2.4795	1.3538×10^{10}	8.6905×10^4	0.26700050	0.0412	0.9588	0.7149	4.1654×10^2	2.0422×10^2
0.20000	3.4926	-2.6694	1.1129×10^{10}	1.2860×10^5	0.26700050	0.3220	0.6780	0.7149	3.7930×10^2	1.8746×10^2
0.30000	3.4904	-2.7433	1.0324×10^{10}	1.4943×10^5	0.26700050	0.6652	0.3348	0.7148	3.5301×10^2	1.7161×10^2
0.50000	3.4890	-2.7809	9.9534×10^9	1.6076×10^5	0.26700050	0.9435	0.0565	0.7148	3.3908×10^2	1.6234×10^2
0.70000	3.4888	-2.7853	9.9099×10^9	1.6218×10^5	0.26700050	0.9888	0.0112	0.7147	3.3733×10^2	1.6114×10^2
1.15835	3.4888	-2.7862	9.9004×10^9	1.6249×10^5	0.26700050	0.9996	0.0004	0.7145	3.3692×10^2	1.6096×10^2
0.130 $M_{\odot}$										
0.00002	3.4635	0.0014	2.7548×10^{11}	2.2736×10^2	0.26700050	0.0000	1.0000	0.7149	4.6502×10^2	2.1423×10^2
0.00010	3.4727	-0.4390	1.5906×10^{11}	6.8196×10^2	0.26700050	0.0000	1.0000	0.7149	4.5763×10^2	2.1611×10^2
0.00020	3.4807	-0.6212	1.2429×10^{11}	1.1168×10^3	0.26700050	0.0000	1.0000	0.7149	4.4888×10^2	2.1362×10^2
0.00030	3.4852	-0.7303	1.0735×10^{11}	1.4972×10^3	0.26700050	0.0000	1.0000	0.7149	4.4394×10^2	2.1199×10^2
0.00050	3.4903	-0.8709	8.9189×10^{10}	2.1691×10^3	0.26700050	0.0000	1.0000	0.7149	4.3849×10^2	2.1016×10^2
0.00070	3.4932	-0.9654	7.8929×10^{10}	2.7696×10^3	0.26700050	0.0000	1.0000	0.7149	4.3549×10^2	2.0910×10^2
0.00100	3.4964	-1.0652	6.9354×10^{10}	3.5872×10^3	0.26700050	0.0000	1.0000	0.7149	4.3207×10^2	2.0782×10^2
0.00200	3.5009	-1.2645	5.3994×10^{10}	5.9183×10^3	0.26700050	0.0000	1.0000	0.7149	4.2755×10^2	2.0620×10^2
0.00300	3.5032	-1.3814	4.6707×10^{10}	7.9090×10^3	0.26700050	0.0000	1.0000	0.7149	4.2516×10^2	2.0527×10^2
0.00500	3.5052	-1.5304	3.8984×10^{10}	1.1353×10^4	0.26700050	0.0000	1.0000	0.7149	4.2320×10^2	2.0465×10^2
0.00700	3.5060	-1.6292	3.4650×10^{10}	1.4371×10^4	0.26700050	0.0000	1.0000	0.7149	4.2235×10^2	2.0431×10^2
0.01000	3.5068	-1.7339	3.0611×10^{10}	1.8414×10^4	0.26700050	0.0000	1.0000	0.7149	4.2205×10^2	2.0422×10^2
0.02000	3.5071	-1.9399	2.4117×10^{10}	2.9664×10^4	0.26700050	0.0000	1.0000	0.7149	4.2310×10^2	2.0500×10^2
0.03000	3.5066	-2.0615	2.1014×10^{10}	3.9072×10^4	0.26700050	0.0000	1.0000	0.7149	4.2499×10^2	2.0605×10^2
0.05000	3.5053	-2.2159	1.7699×10^{10}	5.5083×10^4	0.26700050	0.0032	0.9968	0.7149	4.2701×10^2	2.0752×10^2
0.07000	3.5038	-2.3183	1.5838×10^{10}	6.8786×10^4	0.26700050	0.0145	0.9855	0.7149	4.2704×10^2	2.0807×10^2
0.10000	3.5017	-2.4257	1.4133×10^{10}	8.6384×10^4	0.26700050	0.0543	0.9457	0.7149	4.2140×10^2	2.0652×10^2
0.20000	3.4971	-2.6085	1.1692×10^{10}	1.2621×10^5	0.26700050	0.3864	0.6136	0.7149	3.7850×10^2	1.8657×10^2
0.30000	3.4954	-2.6721	1.0952×10^{10}	1.4386×10^5	0.26700050	0.7447	0.2553	0.7148	3.5327×10^2	1.7108×10^2
0.50000	3.4946	-2.6989	1.0662×10^{10}	1.5179×10^5	0.26700050	0.9665	0.0335	0.7147	3.4227×10^2	1.6374×10^2
0.70000	3.4945	-2.7016	1.0633×10^{10}	1.5261×10^5	0.26700050	0.9935	0.0065	0.7146	3.4113×10^2	1.6291×10^2
0.95343	3.4945	-2.7017	1.0631×10^{10}	1.5267×10^5	0.26700050	0.9999	0.0001	0.7145	3.4099×10^2	1.6291×10^2
0.140 $M_{\odot}$										
0.00002	3.4740	0.0530	2.7853×10^{11}	2.3951×10^2	0.26700050	0.0000	1.0000	0.7149	4.6150×10^2	2.1312×10^2
0.00010	3.4787	-0.3958	1.6264×10^{11}	7.0248×10^2	0.26700050	0.0000	1.0000	0.7149	4.6028×10^2	2.1756×10^2
0.00020	3.4854	-0.5783	1.2777×10^{11}	1.1381×10^3	0.26700050	0.0000	1.0000	0.7149	4.5318×10^2	2.1578×10^2
0.00030	3.4893	-0.6876	1.1066×10^{11}	1.5173×10^3	0.26700050	0.0000	1.0000	0.7149	4.4903×10^2	2.1449×10^2
0.00050	3.4940	-0.8272	9.2209×10^{10}	2.1854×10^3	0.26700050	0.0000	1.0000	0.7149	4.4404×10^2	2.1285×10^2
0.00070	3.4970	-0.9202	8.1717×10^{10}	2.7826×10^3	0.26700050	0.0000	1.0000	0.7149	4.4087×10^2	2.1169×10^2
0.00100	3.4997	-1.0209	7.1878×10^{10}	3.5965×10^3	0.26700050	0.0000	1.0000	0.7149	4.3807×10^2	2.1066×10^2
0.00200	3.5043	-1.2185	5.6054×10^{10}	5.9138×10^3	0.26700050	0.0000	1.0000	0.7149	4.3336×10^2	2.0899×10^2
0.00300	3.5062	-1.3362	4.8525×10^{10}	7.8913×10^3	0.26700050	0.0000	1.0000	0.7149	4.3152×10^2	2.0831×10^2
0.00500	3.5083	-1.4845	4.0519×10^{10}	1.1318×10^4	0.26700050	0.0000	1.0000	0.7149	4.2954×10^2	2.0754×10^2
0.00700	3.5092	-1.5829	3.6022×10^{10}	1.4320×10^4	0.26700050	0.0000	1.0000	0.7149	4.2878×10^2	2.0732×10^2
0.01000	3.5098	-1.6880	3.1819×10^{10}	1.8352×10^4	0.26700050	0.0000	1.0000	0.7149	4.2836×10^2	2.0730×10^2
0.02000	3.5102	-1.8935	2.5076×10^{10}	2.9551×10^4	0.26700050	0.0000	1.0000	0.7149	4.2986×10^2	2.0813×10^2
0.03000	3.5098	-2.0150	2.1846×10^{10}	3.8934×10^4	0.26700050	0.0002	0.9998	0.7149	4.3164×10^2	2.0929×10^2
0.05000	3.5086	-2.1687	1.8405×10^{10}	5.4856×10^4	0.26700050	0.0047	0.9953	0.7149	4.3433×10^2	2.1095×10^2
0.07000	3.5073	-2.2699	1.6474×10^{10}	6.8470×10^4	0.26700050	0.0191	0.9809	0.7149	4.3383×10^2	2.1118×10^2
0.10000	3.5055	-2.3758	1.4707×10^{10}	8.5912×10^4	0.26700050	0.0683	0.9317	0.7149	4.2614×10^2	2.0903×10^2
0.20000	3.5013	-2.5517	1.2245×10^{10}	1.2392×10^5	0.26700050	0.4515	0.5485	0.7149	3.7859×10^2	1.8617×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.30000	3.4999	-2.6069	1.1567×10^{10}	1.3888×10^5	0.26700050	0.8007	0.1993	0.7148	3.5500×10^2	1.7150×10^2
0.50000	3.4993	-2.6263	1.1341×10^{10}	1.4448×10^5	0.26700050	0.9802	0.0198	0.7147	3.4633×10^2	1.6567×10^2
0.87756	3.4992	-2.6284	1.1317×10^{10}	1.4509×10^5	0.26700050	0.9995	0.0005	0.7145	3.4539×10^2	1.6514×10^2
0.150 $M_{\odot}$										
0.00002	3.4835	0.1002	2.8145×10^{11}	2.5132×10^2	0.26700050	0.0000	1.0000	0.7149	4.5864×10^2	2.1228×10^2
0.00010	3.4851	-0.3530	1.6582×10^{11}	7.2403×10^2	0.26700050	0.0000	1.0000	0.7149	4.6148×10^2	2.1836×10^2
0.00020	3.4903	-0.5378	1.3089×10^{11}	1.1620×10^3	0.26700050	0.0000	1.0000	0.7149	4.5656×10^2	2.1750×10^2
0.00030	3.4935	-0.6475	1.1366×10^{11}	1.5410×10^3	0.26700050	0.0000	1.0000	0.7149	4.5332×10^2	2.1662×10^2
0.00050	3.4981	-0.7857	9.4945×10^{10}	2.2085×10^3	0.26700050	0.0000	1.0000	0.7149	4.4845×10^2	2.1500×10^2
0.00070	3.5006	-0.8792	8.4258×10^{10}	2.8042×10^3	0.26700050	0.0000	1.0000	0.7149	4.4586×10^2	2.1412×10^2
0.00100	3.5031	-0.9791	7.4224×10^{10}	3.6136×10^3	0.26700050	0.0000	1.0000	0.7149	4.4321×10^2	2.1315×10^2
0.00200	3.5073	-1.1768	5.7993×10^{10}	5.9195×10^3	0.26700050	0.0000	1.0000	0.7149	4.3907×10^2	2.1165×10^2
0.00300	3.5095	-1.2928	5.0228×10^{10}	7.8912×10^3	0.26700050	0.0000	1.0000	0.7149	4.3670×10^2	2.1084×10^2
0.00500	3.5114	-1.4416	4.1964×10^{10}	1.1306×10^4	0.26700050	0.0000	1.0000	0.7149	4.3509×10^2	2.1025×10^2
0.00700	3.5123	-1.5398	3.7311×10^{10}	1.4301×10^4	0.26700050	0.0000	1.0000	0.7149	4.3447×10^2	2.1005×10^2
0.01000	3.5130	-1.6444	3.2981×10^{10}	1.8303×10^4	0.26700050	0.0000	1.0000	0.7149	4.3423×10^2	2.0996×10^2
0.02000	3.5134	-1.8493	2.6000×10^{10}	2.9449×10^4	0.26700050	0.0000	1.0000	0.7149	4.3601×10^2	2.1099×10^2
0.03000	3.5129	-1.9706	2.2659×10^{10}	3.8774×10^4	0.26700050	0.0004	0.9996	0.7149	4.3823×10^2	2.1222×10^2
0.05000	3.5118	-2.1237	1.9093×10^{10}	5.4612×10^4	0.26700050	0.0062	0.9938	0.7149	4.4146×10^2	2.1413×10^2
0.07000	3.5106	-2.2248	1.7092×10^{10}	6.8149×10^4	0.26700050	0.0234	0.9766	0.7149	4.4098×10^2	2.1440×10^2
0.10000	3.5089	-2.3299	1.5263×10^{10}	8.5454×10^4	0.26700050	0.0827	0.9173	0.7149	4.3129×10^2	2.1165×10^2
0.20000	3.5052	-2.4982	1.2790×10^{10}	1.2170×10^5	0.26700050	0.5085	0.4915	0.7148	3.7947×10^2	1.8625×10^2
0.30000	3.5039	-2.5466	1.2171×10^{10}	1.3441×10^5	0.26700050	0.8447	0.1553	0.7148	3.5777×10^2	1.7267×10^2
0.60467	3.5034	-2.5625	1.1977×10^{10}	1.3880×10^5	0.26700050	0.9944	0.0056	0.7147	3.5045×10^2	1.6782×10^2
0.160 $M_{\odot}$										
0.00002	3.4921	0.1429	2.8422×10^{11}	2.6287×10^2	0.26700050	0.0000	1.0000	0.7149	4.5652×10^2	2.1172×10^2
0.00010	3.4917	-0.3117	1.6868×10^{11}	7.4633×10^2	0.26700050	0.0000	1.0000	0.7149	4.6196×10^2	2.1878×10^2
0.00020	3.4955	-0.4988	1.3369×10^{11}	1.1882×10^3	0.26700050	0.0000	1.0000	0.7149	4.5891×10^2	2.1875×10^2
0.00030	3.4984	-0.6077	1.1635×10^{11}	1.5687×10^3	0.26700050	0.0000	1.0000	0.7149	4.5602×10^2	2.1800×10^2
0.00050	3.5020	-0.7477	9.7413×10^{10}	2.2378×10^3	0.26700050	0.0000	1.0000	0.7149	4.5250×10^2	2.1697×10^2
0.00070	3.5044	-0.8403	8.6603×10^{10}	2.8314×10^3	0.26700050	0.0000	1.0000	0.7149	4.5000×10^2	2.1614×10^2
0.00100	3.5068	-0.9396	7.6379×10^{10}	3.6402×10^3	0.26700050	0.0000	1.0000	0.7149	4.4750×10^2	2.1521×10^2
0.00200	3.5108	-1.1364	5.9782×10^{10}	5.9420×10^3	0.26700050	0.0000	1.0000	0.7149	4.4352×10^2	2.1382×10^2
0.00300	3.5126	-1.2536	5.1818×10^{10}	7.9087×10^3	0.26700050	0.0000	1.0000	0.7149	4.4190×10^2	2.1326×10^2
0.00500	3.5146	-1.4010	4.3328×10^{10}	1.1312×10^4	0.26700050	0.0000	1.0000	0.7149	4.4010×10^2	2.1252×10^2
0.00700	3.5153	-1.4998	3.8531×10^{10}	1.4304×10^4	0.26700050	0.0000	1.0000	0.7149	4.3979×10^2	2.1258×10^2
0.01000	3.5160	-1.6045	3.4053×10^{10}	1.8313×10^4	0.26700050	0.0000	1.0000	0.7149	4.3971×10^2	2.1264×10^2
0.02000	3.5163	-1.8090	2.6871×10^{10}	2.9411×10^4	0.26700050	0.0000	1.0000	0.7149	4.4209×10^2	2.1380×10^2
0.03000	3.5159	-1.9300	2.3417×10^{10}	3.8727×10^4	0.26700050	0.0006	0.9994	0.7149	4.4460×10^2	2.1521×10^2
0.05000	3.5148	-2.0829	1.9737×10^{10}	5.4512×10^4	0.26700050	0.0078	0.9922	0.7149	4.4867×10^2	2.1742×10^2
0.07000	3.5138	-2.1827	1.7677×10^{10}	6.7958×10^4	0.26700050	0.0287	0.9713	0.7149	4.4787×10^2	2.1772×10^2
0.10000	3.5122	-2.2866	1.5802×10^{10}	8.5041×10^4	0.26700050	0.0972	0.9028	0.7149	4.3654×10^2	2.1435×10^2
0.20000	3.5088	-2.4481	1.3326×10^{10}	1.1957×10^5	0.26700050	0.5619	0.4381	0.7148	3.8120×10^2	1.8689×10^2
0.30000	3.5077	-2.4899	1.2763×10^{10}	1.3036×10^5	0.26700050	0.8768	0.1232	0.7148	3.6121×10^2	1.7434×10^2
0.50000	3.5075	-2.5008	1.2618×10^{10}	1.3337×10^5	0.26700050	0.9929	0.0071	0.7147	3.5565×10^2	1.7069×10^2
0.63888	3.5075	-2.5010	1.2614×10^{10}	1.3346×10^5	0.26700051	0.9991	0.0009	0.7146	3.5544×10^2	1.7055×10^2
0.170 $M_{\odot}$										
0.00002	3.5000	0.1823	2.8682×10^{11}	2.7427×10^2	0.26700050	0.0000	1.0000	0.7149	4.5477×10^2	2.1131×10^2
0.00010	3.4986	-0.2706	1.7134×10^{11}	7.6858×10^2	0.26700050	0.0000	1.0000	0.7149	4.6140×10^2	2.1872×10^2
0.00020	3.5008	-0.4612	1.3621×10^{11}	1.2162×10^3	0.26700050	0.0000	1.0000	0.7149	4.6054×10^2	2.1962×10^2
0.00030	3.5031	-0.5710	1.1876×10^{11}	1.5998×10^3	0.26700050	0.0000	1.0000	0.7149	4.5845×10^2	2.1923×10^2
0.00050	3.5061	-0.7110	9.9687×10^{10}	2.2705×10^3	0.26700050	0.0000	1.0000	0.7149	4.5568×10^2	2.1853×10^2
0.00070	3.5084	-0.8033	8.8718×10^{10}	2.8666×10^3	0.26700050	0.0000	1.0000	0.7149	4.5340×10^2	2.1778×10^2
0.00100	3.5104	-0.9030	7.8359×10^{10}	3.6746×10^3	0.26700050	0.0000	1.0000	0.7149	4.5139×10^2	2.1711×10^2
0.00200	3.5141	-1.0992	6.1463×10^{10}	5.9726×10^3	0.26700050	0.0000	1.0000	0.7149	4.4787×10^2	2.1584×10^2
0.00300	3.5160	-1.2154	5.3310×10^{10}	7.9392×10^3	0.26700050	0.0000	1.0000	0.7149	4.4602×10^2	2.1526×10^2
0.00500	3.5176	-1.3637	4.4605×10^{10}	1.1340×10^4	0.26700050	0.0000	1.0000	0.7149	4.4492×10^2	2.1480×10^2
0.00700	3.5186	-1.4612	3.9690×10^{10}	1.4323×10^4	0.26700050	0.0000	1.0000	0.7149	4.4431×10^2	2.1472×10^2
0.01000	3.5190	-1.5660	3.5104×10^{10}	1.8310×10^4	0.26700050	0.0000	1.0000	0.7149	4.4477×10^2	2.1495×10^2
0.02000	3.5195	-1.7700	2.7700×10^{10}	2.9407×10^4	0.26700050	0.0000	1.0000	0.7149	4.4740×10^2	2.1633×10^2
0.03000	3.5189	-1.8911	2.4152×10^{10}	3.8681×10^4	0.26700050	0.0010	0.9990	0.7149	4.5092×10^2	2.1802×10^2
0.05000	3.5179	-2.0436	2.0364×10^{10}	5.4410×10^4	0.26700050	0.0096	0.9904	0.7149	4.5591×10^2	2.2048×10^2
0.07000	3.5167	-2.1437	1.8243×10^{10}	6.7795×10^4	0.26700050	0.0339	0.9661	0.7149	4.5550×10^2	2.2121×10^2
0.10000	3.5153	-2.2464	1.6319×10^{10}	8.4729×10^4	0.26700050	0.1135	0.8865	0.7149	4.4202×10^2	2.1726×10^2
0.20000	3.5122	-2.4008	1.3854×10^{10}	1.1755×10^5	0.26700050	0.6113	0.3887	0.7148	3.8357×10^2	1.8796×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{1c}(\text{day})$
0.30000	3.5114	-2.4368	1.3343×10^{10}	1.2673×10^5	0.26700050	0.9009	0.0991	0.7148	3.6522×10^2	1.7641×10^2
0.56614	3.5111	-2.4467	1.3209×10^{10}	1.2931×10^5	0.26700051	0.9967	0.0033	0.7146	3.6020×10^2	1.7309×10^2
$0.180M_{\odot}$										
0.00002	3.5072	0.2056	2.8495×10^{11}	2.9423×10^2	0.26700050	0.0000	1.0000	0.7149	4.5347×10^2	2.1125×10^2
0.00010	3.5052	-0.2348	1.7326×10^{11}	7.9581×10^2	0.26700050	0.0000	1.0000	0.7149	4.6093×10^2	2.1868×10^2
0.00020	3.5065	-0.4254	1.3829×10^{11}	1.2493×10^3	0.26700050	0.0000	1.0000	0.7149	4.6119×10^2	2.2006×10^2
0.00030	3.5079	-0.5368	1.2084×10^{11}	1.6361×10^3	0.26700050	0.0000	1.0000	0.7149	4.6033×10^2	2.2021×10^2
0.00050	3.5106	-0.6758	1.0168×10^{11}	2.3106×10^3	0.26700050	0.0000	1.0000	0.7149	4.5788×10^2	2.1965×10^2
0.00070	3.5122	-0.7694	9.0624×10^{10}	2.9089×10^3	0.26700050	0.0000	1.0000	0.7149	4.5648×10^2	2.1928×10^2
0.00100	3.5143	-0.8678	8.0158×10^{10}	3.7182×10^3	0.26700050	0.0000	1.0000	0.7149	4.5444×10^2	2.1858×10^2
0.00200	3.5176	-1.0634	6.3016×10^{10}	6.0161×10^3	0.26700050	0.0000	1.0000	0.7149	4.5139×10^2	2.1751×10^2
0.00300	3.5192	-1.1800	5.4704×10^{10}	7.9833×10^3	0.26700050	0.0000	1.0000	0.7149	4.5000×10^2	2.1715×10^2
0.00500	3.5209	-1.3274	4.5805×10^{10}	1.1386×10^4	0.26700050	0.0000	1.0000	0.7149	4.4882×10^2	2.1662×10^2
0.00700	3.5215	-1.4258	4.0779×10^{10}	1.4367×10^4	0.26700050	0.0000	1.0000	0.7149	4.4892×10^2	2.1678×10^2
0.01000	3.5221	-1.5299	3.6071×10^{10}	1.8362×10^4	0.26700050	0.0000	1.0000	0.7149	4.4934×10^2	2.1704×10^2
0.02000	3.5223	-1.7342	2.8486×10^{10}	2.9441×10^4	0.26700050	0.0001	0.9999	0.7149	4.5300×10^2	2.1879×10^2
0.03000	3.5220	-1.8545	2.4843×10^{10}	3.8710×10^4	0.26700050	0.0013	0.9987	0.7149	4.5712×10^2	2.2073×10^2
0.05000	3.5208	-2.0073	2.0952×10^{10}	5.4421×10^4	0.26700050	0.0115	0.9885	0.7149	4.6341×10^2	2.2379×10^2
0.07000	3.5198	-2.1061	1.8781×10^{10}	6.7728×10^4	0.26700050	0.0397	0.9603	0.7149	4.6292×10^2	2.2455×10^2
0.10000	3.5183	-2.2079	1.6824×10^{10}	8.4404×10^4	0.26700050	0.1293	0.8707	0.7149	4.4793×10^2	2.2024×10^2
0.20000	3.5155	-2.3554	1.4376×10^{10}	1.1559×10^5	0.26700050	0.6599	0.3401	0.7148	3.8656×10^2	1.8951×10^2
0.30000	3.5147	-2.3874	1.3907×10^{10}	1.2352×10^5	0.26700050	0.9200	0.0800	0.7148	3.6964×10^2	1.7877×10^2
0.53224	3.5145	-2.3950	1.3799×10^{10}	1.2546×10^5	0.26700051	0.9966	0.0034	0.7146	3.6562×10^2	1.7612×10^2
$0.190M_{\odot}$										
0.00002	3.5138	0.2429	2.8853×10^{11}	3.0292×10^2	0.26700050	0.0000	1.0000	0.7149	4.5251×10^2	2.1109×10^2
0.00010	3.5116	-0.1961	1.7586×10^{11}	8.1541×10^2	0.26700050	0.0000	1.0000	0.7149	4.6006×10^2	2.1843×10^2
0.00020	3.5122	-0.3886	1.4052×10^{11}	1.2770×10^3	0.26700050	0.0000	1.0000	0.7149	4.6133×10^2	2.2021×10^2
0.00030	3.5131	-0.5010	1.2293×10^{11}	1.6687×10^3	0.26700050	0.0000	1.0000	0.7149	4.6113×10^2	2.2067×10^2
0.00050	3.5151	-0.6419	1.0360×10^{11}	2.3497×10^3	0.26700050	0.0000	1.0000	0.7149	4.5977×10^2	2.2058×10^2
0.00070	3.5166	-0.7349	9.2434×10^{10}	2.9515×10^3	0.26700050	0.0000	1.0000	0.7149	4.5851×10^2	2.2028×10^2
0.00100	3.5182	-0.8342	8.1839×10^{10}	3.7651×10^3	0.26700050	0.0000	1.0000	0.7149	4.5706×10^2	2.1986×10^2
0.00200	3.5212	-1.0296	6.4461×10^{10}	6.0689×10^3	0.26700050	0.0000	1.0000	0.7149	4.5449×10^2	2.1900×10^2
0.00300	3.5226	-1.1456	5.6016×10^{10}	8.0367×10^3	0.26700050	0.0000	1.0000	0.7149	4.5324×10^2	2.1868×10^2
0.00500	3.5240	-1.2938	4.6941×10^{10}	1.1445×10^4	0.26700050	0.0000	1.0000	0.7149	4.5268×10^2	2.1850×10^2
0.00700	3.5249	-1.3908	4.1810×10^{10}	1.4426×10^4	0.26700050	0.0000	1.0000	0.7149	4.5244×10^2	2.1845×10^2
0.01000	3.5252	-1.4957	3.6996×10^{10}	1.8424×10^4	0.26700050	0.0000	1.0000	0.7149	4.5360×10^2	2.1901×10^2
0.02000	3.5255	-1.6994	2.9224×10^{10}	2.9526×10^4	0.26700050	0.0002	0.9998	0.7149	4.5779×10^2	2.2106×10^2
0.03000	3.5249	-1.8202	2.5494×10^{10}	3.8800×10^4	0.26700050	0.0017	0.9983	0.7149	4.6329×10^2	2.2343×10^2
0.05000	3.5237	-1.9725	2.1516×10^{10}	5.4473×10^4	0.26700050	0.0136	0.9864	0.7149	4.7129×10^2	2.2706×10^2
0.07000	3.5226	-2.0717	1.9293×10^{10}	6.7750×10^4	0.26700050	0.0461	0.9539	0.7149	4.7144×10^2	2.2832×10^2
0.10000	3.5212	-2.1719	1.7303×10^{10}	8.4228×10^4	0.26700050	0.1477	0.8523	0.7149	4.5412×10^2	2.2342×10^2
0.20000	3.5186	-2.3128	1.4886×10^{10}	1.1380×10^5	0.26700050	0.6992	0.3008	0.7148	3.9008×10^2	1.9141×10^2
0.30000	3.5180	-2.3403	1.4462×10^{10}	1.2057×10^5	0.26700050	0.9335	0.0665	0.7148	3.7458×10^2	1.8154×10^2
0.45870	3.5179	-2.3454	1.4384×10^{10}	1.2188×10^5	0.26700051	0.9968	0.0032	0.7147	3.7159×10^2	1.7959×10^2
$0.200M_{\odot}$										
0.00002	3.5200	0.2782	2.9213×10^{11}	3.1105×10^2	0.26700050	0.0000	1.0000	0.7149	4.5171×10^2	2.1102×10^2
0.00010	3.5178	-0.1591	1.7837×10^{11}	8.3436×10^2	0.26700050	0.0000	1.0000	0.7149	4.5916×10^2	2.1815×10^2
0.00020	3.5176	-0.3540	1.4266×10^{11}	1.3043×10^3	0.26700050	0.0000	1.0000	0.7149	4.6149×10^2	2.2041×10^2
0.00030	3.5183	-0.4663	1.2491×10^{11}	1.7013×10^3	0.26700050	0.0000	1.0000	0.7149	4.6150×10^2	2.2092×10^2
0.00050	3.5197	-0.6084	1.0540×10^{11}	2.3893×10^3	0.26700050	0.0000	1.0000	0.7149	4.6095×10^2	2.2119×10^2
0.00070	3.5209	-0.7020	9.4120×10^{10}	2.9965×10^3	0.26700050	0.0000	1.0000	0.7149	4.6015×10^2	2.2109×10^2
0.00100	3.5221	-0.8020	8.3416×10^{10}	3.8149×10^3	0.26700050	0.0000	1.0000	0.7149	4.5927×10^2	2.2093×10^2
0.00200	3.5247	-0.9971	6.5830×10^{10}	6.1253×10^3	0.26700050	0.0000	1.0000	0.7149	4.5716×10^2	2.2028×10^2
0.00300	3.5260	-1.1131	5.7252×10^{10}	8.0983×10^3	0.26700050	0.0000	1.0000	0.7149	4.5632×10^2	2.2003×10^2
0.00500	3.5274	-1.2605	4.8021×10^{10}	1.1511×10^4	0.26700050	0.0000	1.0000	0.7149	4.5570×10^2	2.1997×10^2
0.00700	3.5279	-1.3588	4.2783×10^{10}	1.4502×10^4	0.26700050	0.0000	1.0000	0.7149	4.5625×10^2	2.2025×10^2
0.01000	3.5284	-1.4624	3.7873×10^{10}	1.8506×10^4	0.26700050	0.0000	1.0000	0.7149	4.5714×10^2	2.2074×10^2
0.02000	3.5283	-1.6670	2.9939×10^{10}	2.9613×10^4	0.26700050	0.0002	0.9998	0.7149	4.6310×10^2	2.2335×10^2
0.03000	3.5280	-1.7865	2.6130×10^{10}	3.8876×10^4	0.26700050	0.0021	0.9979	0.7149	4.6920×10^2	2.2595×10^2
0.05000	3.5267	-1.9391	2.2057×10^{10}	5.4562×10^4	0.26700050	0.0156	0.9844	0.7149	4.7973×10^2	2.3045×10^2
0.07000	3.5256	-2.0373	1.9792×10^{10}	6.7762×10^4	0.26700050	0.0525	0.9475	0.7149	4.8019×10^2	2.3195×10^2
0.10000	3.5241	-2.1368	1.7775×10^{10}	8.4018×10^4	0.26700050	0.1650	0.8350	0.7149	4.6092×10^2	2.2687×10^2
0.20000	3.5217	-2.2714	1.5391×10^{10}	1.1206×10^5	0.26700050	0.7273	0.2727	0.7148	3.9421×10^2	1.9364×10^2
0.30000	3.5212	-2.2957	1.5004×10^{10}	1.1792×10^5	0.26700050	0.9445	0.0555	0.7148	3.7984×10^2	1.8461×10^2
0.49957	3.5210	-2.3007	1.4927×10^{10}	1.1913×10^5	0.26700053	0.9972	0.0028	0.7146	3.7693×10^2	1.8271×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.210 $M_{\odot}$										
0.00002	3.5258	0.3111	2.9537×10^{11}	3.1948×10^2	0.26700050	0.0000	1.0000	0.7149	4.5104×10^2	2.1097×10^2
0.00010	3.5235	-0.1246	1.8080×10^{11}	8.5266×10^2	0.26700050	0.0000	1.0000	0.7149	4.5860×10^2	2.1802×10^2
0.00020	3.5229	-0.3203	1.4471×10^{11}	1.3309×10^3	0.26700050	0.0000	1.0000	0.7149	4.6142×10^2	2.2045×10^2
0.00030	3.5233	-0.4336	1.2678×10^{11}	1.7341×10^3	0.26700050	0.0000	1.0000	0.7149	4.6192×10^2	2.2120×10^2
0.00050	3.5243	-0.5763	1.0708×10^{11}	2.4306×10^3	0.26700050	0.0000	1.0000	0.7149	4.6189×10^2	2.2168×10^2
0.00070	3.5252	-0.6702	9.5708×10^{10}	3.0428×10^3	0.26700050	0.0000	1.0000	0.7149	4.6139×10^2	2.2173×10^2
0.00100	3.5263	-0.7701	8.4880×10^{10}	3.8686×10^3	0.26700050	0.0000	1.0000	0.7149	4.6071×10^2	2.2165×10^2
0.00200	3.5284	-0.9659	6.7088×10^{10}	6.1926×10^3	0.26700050	0.0000	1.0000	0.7149	4.5935×10^2	2.2133×10^2
0.00300	3.5295	-1.0818	5.8417×10^{10}	8.1675×10^3	0.26700050	0.0000	1.0000	0.7149	4.5879×10^2	2.2125×10^2
0.00500	3.5306	-1.2296	4.9026×10^{10}	1.1596×10^4	0.26700050	0.0000	1.0000	0.7149	4.5872×10^2	2.2134×10^2
0.00700	3.5312	-1.3270	4.3699×10^{10}	1.4596×10^4	0.26700050	0.0000	1.0000	0.7149	4.5923×10^2	2.2158×10^2
0.01000	3.5315	-1.4315	3.8701×10^{10}	1.8609×10^4	0.26700050	0.0000	1.0000	0.7149	4.6095×10^2	2.2238×10^2
0.02000	3.5315	-1.6350	3.0615×10^{10}	2.9738×10^4	0.26700050	0.0004	0.9996	0.7149	4.6772×10^2	2.2535×10^2
0.03000	3.5309	-1.7552	2.6726×10^{10}	3.9022×10^4	0.26700050	0.0024	0.9976	0.7149	4.7570×10^2	2.2858×10^2
0.05000	3.5296	-1.9073	2.2569×10^{10}	5.4720×10^4	0.26700050	0.0182	0.9818	0.7149	4.8875×10^2	2.3407×10^2
0.07000	3.5284	-2.0061	2.0258×10^{10}	6.7916×10^4	0.26700050	0.0599	0.9401	0.7149	4.9063×10^2	2.3622×10^2
0.10000	3.5270	-2.1037	1.8217×10^{10}	8.3987×10^4	0.26700050	0.1846	0.8154	0.7149	4.6822×10^2	2.3060×10^2
0.20000	3.5247	-2.2322	1.5882×10^{10}	1.1050×10^5	0.26700050	0.7631	0.2369	0.7148	3.9876×10^2	1.9641×10^2
0.30000	3.5242	-2.2532	1.5540×10^{10}	1.1541×10^5	0.26700050	0.9590	0.0410	0.7148	3.8586×10^2	1.8822×10^2
0.58319	3.5241	-2.2573	1.5473×10^{10}	1.1641×10^5	0.26700058	0.9998	0.0002	0.7145	3.8320×10^2	1.8653×10^2
0.220 $M_{\odot}$										
0.00002	3.5309	0.3428	2.9921×10^{11}	3.2616×10^2	0.26700050	0.0000	1.0000	0.7149	4.5099×10^2	2.1118×10^2
0.00010	3.5290	-0.0906	1.8330×10^{11}	8.6909×10^2	0.26700050	0.0000	1.0000	0.7149	4.5792×10^2	2.1781×10^2
0.00020	3.5283	-0.2863	1.4675×10^{11}	1.3558×10^3	0.26700050	0.0000	1.0000	0.7149	4.6079×10^2	2.2022×10^2
0.00030	3.5281	-0.4017	1.2860×10^{11}	1.7655×10^3	0.26700050	0.0000	1.0000	0.7149	4.6213×10^2	2.2137×10^2
0.00050	3.5287	-0.5454	1.0870×10^{11}	2.4711×10^3	0.26700050	0.0000	1.0000	0.7149	4.6263×10^2	2.2207×10^2
0.00070	3.5295	-0.6394	9.7206×10^{10}	3.0902×10^3	0.26700050	0.0000	1.0000	0.7149	4.6238×10^2	2.2222×10^2
0.00100	3.5304	-0.7396	8.6275×10^{10}	3.9228×10^3	0.26700050	0.0000	1.0000	0.7149	4.6198×10^2	2.2229×10^2
0.00200	3.5319	-0.9365	6.8284×10^{10}	6.2623×10^3	0.26700050	0.0000	1.0000	0.7149	4.6145×10^2	2.2236×10^2
0.00300	3.5330	-1.0519	5.9490×10^{10}	8.2505×10^3	0.26700050	0.0000	1.0000	0.7149	4.6098×10^2	2.2227×10^2
0.00500	3.5340	-1.1992	4.9986×10^{10}	1.1686×10^4	0.26700050	0.0000	1.0000	0.7149	4.6131×10^2	2.2250×10^2
0.00700	3.5343	-1.2975	4.4566×10^{10}	1.4702×10^4	0.26700050	0.0000	1.0000	0.7149	4.6226×10^2	2.2305×10^2
0.01000	3.5347	-1.4011	3.9489×10^{10}	1.8725×10^4	0.26700050	0.0000	1.0000	0.7149	4.6408×10^2	2.2380×10^2
0.02000	3.5344	-1.6057	3.1242×10^{10}	2.9915×10^4	0.26700050	0.0005	0.9995	0.7149	4.7275×10^2	2.2760×10^2
0.03000	3.5339	-1.7250	2.7290×10^{10}	3.9207×10^4	0.26700050	0.0029	0.9971	0.7149	4.8216×10^2	2.3116×10^2
0.05000	3.5326	-1.8766	2.3061×10^{10}	5.4906×10^4	0.26700050	0.0208	0.9792	0.7149	4.9910×10^2	2.3776×10^2
0.07000	3.5314	-1.9747	2.0714×10^{10}	6.8050×10^4	0.26700050	0.0675	0.9325	0.7149	5.0216×10^2	2.4061×10^2
0.10000	3.5299	-2.0716	1.8652×10^{10}	8.3929×10^4	0.26700050	0.2048	0.7952	0.7149	4.7661×10^2	2.3471×10^2
0.20000	3.5277	-2.1938	1.6371×10^{10}	1.0895×10^5	0.26700050	0.7914	0.2086	0.7148	4.0408×10^2	1.9964×10^2
0.30000	3.5273	-2.2125	1.6052×10^{10}	1.1333×10^5	0.26700051	0.9599	0.0401	0.7147	3.9167×10^2	1.9182×10^2
0.44256	3.5272	-2.2157	1.5997×10^{10}	1.1409×10^5	0.26700054	0.9959	0.0040	0.7146	3.8949×10^2	1.9044×10^2
0.230 $M_{\odot}$										
0.00002	3.5359	0.3788	3.0477×10^{11}	3.2865×10^2	0.26700050	0.0000	1.0000	0.7149	4.5074×10^2	2.1125×10^2
0.00010	3.5343	-0.0528	1.8685×10^{11}	8.7439×10^2	0.26700050	0.0000	1.0000	0.7149	4.5719×10^2	2.1754×10^2
0.00020	3.5333	-0.2501	1.4956×10^{11}	1.3647×10^3	0.26700050	0.0000	1.0000	0.7149	4.6057×10^2	2.2017×10^2
0.00030	3.5332	-0.3649	1.3111×10^{11}	1.7758×10^3	0.26700050	0.0000	1.0000	0.7149	4.6177×10^2	2.2120×10^2
0.00050	3.5334	-0.5097	1.1088×10^{11}	2.4830×10^3	0.26700050	0.0000	1.0000	0.7149	4.6281×10^2	2.2216×10^2
0.00070	3.5337	-0.6052	9.9184×10^{10}	3.1031×10^3	0.26700050	0.0000	1.0000	0.7149	4.6318×10^2	2.2260×10^2
0.00100	3.5344	-0.7056	8.8081×10^{10}	3.9347×10^3	0.26700050	0.0000	1.0000	0.7149	4.6305×10^2	2.2278×10^2
0.00200	3.5357	-0.9024	6.9797×10^{10}	6.2661×10^3	0.26700050	0.0000	1.0000	0.7149	4.6290×10^2	2.2302×10^2
0.00300	3.5364	-1.0185	6.0880×10^{10}	8.2360×10^3	0.26700050	0.0000	1.0000	0.7149	4.6306×10^2	2.2326×10^2
0.00500	3.5372	-1.1652	5.1226×10^{10}	1.1633×10^4	0.26700050	0.0000	1.0000	0.7149	4.6366×10^2	2.2363×10^2
0.00700	3.5376	-1.2627	4.5688×10^{10}	1.4624×10^4	0.26700050	0.0000	1.0000	0.7149	4.6473×10^2	2.2414×10^2
0.01000	3.5378	-1.3675	4.0469×10^{10}	1.8639×10^4	0.26700050	0.0000	1.0000	0.7149	4.6713×10^2	2.2528×10^2
0.02000	3.5375	-1.5724	3.2002×10^{10}	2.9807×10^4	0.26700050	0.0006	0.9994	0.7149	4.7723×10^2	2.2945×10^2
0.03000	3.5370	-1.6926	2.7938×10^{10}	3.9109×10^4	0.26700050	0.0032	0.9968	0.7149	4.8876×10^2	2.3381×10^2
0.05000	3.5356	-1.8442	2.3608×10^{10}	5.4771×10^4	0.26700050	0.0227	0.9773	0.7149	5.1085×10^2	2.4178×10^2
0.07000	3.5343	-1.9428	2.1206×10^{10}	6.7880×10^4	0.26700050	0.0737	0.9263	0.7149	5.1688×10^2	2.4562×10^2
0.10000	3.5329	-2.0378	1.9130×10^{10}	8.3415×10^4	0.26700050	0.2184	0.7816	0.7149	4.8797×10^2	2.3983×10^2
0.20000	3.5307	-2.1570	1.6849×10^{10}	1.0753×10^5	0.26700050	0.7962	0.2038	0.7148	4.1028×10^2	2.0352×10^2
0.30000	3.5302	-2.1751	1.6537×10^{10}	1.1163×10^5	0.26700051	0.9582	0.0418	0.7147	3.9788×10^2	1.9574×10^2
0.47450	3.5301	-2.1780	1.6488×10^{10}	1.1230×10^5	0.26700059	0.9988	0.0012	0.7146	3.9574×10^2	1.9440×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.240 $M_{\odot}$										
0.00002	3.5406	0.4024	3.0646×10^{11}	3.3917×10^2	0.26700050	0.0000	1.0000	0.7149	4.5074×10^2	2.1152×10^2
0.00010	3.5391	-0.0235	1.8902×10^{11}	8.9155×10^2	0.26700050	0.0000	1.0000	0.7149	4.5694×10^2	2.1756×10^2
0.00020	3.5379	-0.2207	1.5142×10^{11}	1.3893×10^3	0.26700050	0.0000	1.0000	0.7149	4.6048×10^2	2.2019×10^2
0.00030	3.5377	-0.3355	1.3279×10^{11}	1.8063×10^3	0.26700050	0.0000	1.0000	0.7149	4.6180×10^2	2.2128×10^2
0.00050	3.5378	-0.4805	1.1237×10^{11}	2.5226×10^3	0.26700050	0.0000	1.0000	0.7149	4.6302×10^2	2.2230×10^2
0.00070	3.5379	-0.5762	1.0057×10^{11}	3.1496×10^3	0.26700050	0.0000	1.0000	0.7149	4.6368×10^2	2.2287×10^2
0.00100	3.5383	-0.6775	8.9345×10^{10}	3.9904×10^3	0.26700050	0.0000	1.0000	0.7149	4.6400×10^2	2.2325×10^2
0.00200	3.5392	-0.8748	7.0877×10^{10}	6.3408×10^3	0.26700050	0.0000	1.0000	0.7149	4.6440×10^2	2.2374×10^2
0.00300	3.5399	-0.9905	6.1866×10^{10}	8.3226×10^3	0.26700050	0.0000	1.0000	0.7149	4.6468×10^2	2.2402×10^2
0.00500	3.5405	-1.1373	5.2093×10^{10}	1.1738×10^4	0.26700050	0.0000	1.0000	0.7149	4.6575×10^2	2.2460×10^2
0.00700	3.5407	-1.2352	4.6491×10^{10}	1.4738×10^4	0.26700050	0.0000	1.0000	0.7149	4.6733×10^2	2.2534×10^2
0.01000	3.5409	-1.3393	4.1209×10^{10}	1.8758×10^4	0.26700050	0.0000	1.0000	0.7149	4.7009×10^2	2.2654×10^2
0.02000	3.5405	-1.5449	3.2582×10^{10}	3.0006×10^4	0.26700050	0.0007	0.9993	0.7149	4.8225×10^2	2.3148×10^2
0.03000	3.5399	-1.6652	2.8450×10^{10}	3.9355×10^4	0.26700050	0.0038	0.9962	0.7149	4.9644×10^2	2.3661×10^2
0.05000	3.5386	-1.8165	2.4048×10^{10}	5.5080×10^4	0.26700050	0.0257	0.9743	0.7149	5.2547×10^2	2.4620×10^2
0.07000	3.5373	-1.9137	2.1627×10^{10}	6.8102×10^4	0.26700050	0.0822	0.9178	0.7149	5.3498×10^2	2.5112×10^2
0.10000	3.5358	-2.0082	1.9527×10^{10}	8.3540×10^4	0.26700050	0.2364	0.7636	0.7149	5.0038×10^2	2.4538×10^2
0.20000	3.5337	-2.1208	1.7323×10^{10}	1.0615×10^5	0.26700050	0.8182	0.1818	0.7148	4.1713×10^2	2.0789×10^2
0.30000	3.5334	-2.1356	1.7054×10^{10}	1.0952×10^5	0.26700052	0.9630	0.0370	0.7147	4.0573×10^2	2.0084×10^2
0.43111	3.5333	-2.1386	1.6999×10^{10}	1.1024×10^5	0.26700059	0.9947	0.0053	0.7146	4.0334×10^2	1.9936×10^2
0.250 $M_{\odot}$										
0.00002	3.5448	0.4693	3.2475×10^{11}	3.1462×10^2	0.26700050	0.0000	1.0000	0.7149	4.5080×10^2	2.1135×10^2
0.00010	3.5437	-0.0146	1.9337×10^{11}	8.8734×10^2	0.26700050	0.0000	1.0000	0.7149	4.5664×10^2	2.1748×10^2
0.00020	3.5426	-0.1863	1.5417×10^{11}	1.3961×10^3	0.26700050	0.0000	1.0000	0.7149	4.6004×10^2	2.2003×10^2
0.00030	3.5421	-0.3040	1.3499×10^{11}	1.8208×10^3	0.26700050	0.0000	1.0000	0.7149	4.6192×10^2	2.2138×10^2
0.00050	3.5418	-0.4509	1.1410×10^{11}	2.5485×10^3	0.26700050	0.0000	1.0000	0.7149	4.6349×10^2	2.2256×10^2
0.00070	3.5421	-0.5465	1.0209×10^{11}	3.1838×10^3	0.26700050	0.0000	1.0000	0.7149	4.6396×10^2	2.2303×10^2
0.00100	3.5422	-0.6490	9.0699×10^{10}	4.0335×10^3	0.26700050	0.0000	1.0000	0.7149	4.6476×10^2	2.2363×10^2
0.00200	3.5429	-0.8468	7.1981×10^{10}	6.4041×10^3	0.26700050	0.0000	1.0000	0.7149	4.6549×10^2	2.2426×10^2
0.00300	3.5432	-0.9637	6.2836×10^{10}	8.4036×10^3	0.26700050	0.0000	1.0000	0.7149	4.6638×10^2	2.2482×10^2
0.00500	3.5436	-1.1108	5.2937×10^{10}	1.1840×10^4	0.26700050	0.0000	1.0000	0.7149	4.6789×10^2	2.2559×10^2
0.00700	3.5439	-1.2083	4.7266×10^{10}	1.4852×10^4	0.26700050	0.0000	1.0000	0.7149	4.6973×10^2	2.2641×10^2
0.01000	3.5439	-1.3125	4.1908×10^{10}	1.8892×10^4	0.26700050	0.0000	1.0000	0.7149	4.7301×10^2	2.2787×10^2
0.02000	3.5435	-1.5173	3.3174×10^{10}	3.0151×10^4	0.26700050	0.0008	0.9992	0.7149	4.8737×10^2	2.3348×10^2
0.03000	3.5428	-1.6375	2.8973×10^{10}	3.9528×10^4	0.26700050	0.0044	0.9956	0.7149	5.0478×10^2	2.3949×10^2
0.05000	3.5416	-1.7881	2.4506×10^{10}	5.5252×10^4	0.26700050	0.0289	0.9711	0.7149	5.4368×10^2	2.5091×10^2
0.07000	3.5402	-1.8855	2.2043×10^{10}	6.8286×10^4	0.26700050	0.0909	0.9091	0.7149	5.6022×10^2	2.5746×10^2
0.10000	3.5387	-1.9793	1.9921×10^{10}	8.3607×10^4	0.26700050	0.2593	0.7407	0.7149	5.1503×10^2	2.5155×10^2
0.20000	3.5367	-2.0861	1.7781×10^{10}	1.0495×10^5	0.26700050	0.8402	0.1597	0.7148	4.2461×10^2	2.1275×10^2
0.30000	3.5364	-2.1003	1.7516×10^{10}	1.0814×10^5	0.26700053	0.9664	0.0336	0.7147	4.1309×10^2	2.0573×10^2
0.44279	3.5364	-2.1025	1.7476×10^{10}	1.0864×10^5	0.26700066	0.9982	0.0018	0.7146	4.1106×10^2	2.0452×10^2
0.260 $M_{\odot}$										
0.00002	3.5488	0.4921	3.2731×10^{11}	3.2212×10^2	0.26700050	0.0000	1.0000	0.7149	4.5122×10^2	2.1175×10^2
0.00010	3.5481	0.0431	1.9573×10^{11}	9.0073×10^2	0.26700050	0.0000	1.0000	0.7149	4.5633×10^2	2.1740×10^2
0.00020	3.5470	-0.1580	1.5610×10^{11}	1.4161×10^3	0.26700050	0.0000	1.0000	0.7149	4.5982×10^2	2.1999×10^2
0.00030	3.5464	-0.2759	1.3667×10^{11}	1.8473×10^3	0.26700050	0.0000	1.0000	0.7149	4.6175×10^2	2.2134×10^2
0.00050	3.5460	-0.4234	1.1554×10^{11}	2.5850×10^3	0.26700050	0.0000	1.0000	0.7149	4.6365×10^2	2.2267×10^2
0.00070	3.5459	-0.5200	1.0342×10^{11}	3.2262×10^3	0.26700050	0.0000	1.0000	0.7149	4.6458×10^2	2.2335×10^2
0.00100	3.5460	-0.6223	9.1903×10^{10}	4.0857×10^3	0.26700050	0.0000	1.0000	0.7149	4.6537×10^2	2.2393×10^2
0.00200	3.5463	-0.8210	7.3002×10^{10}	6.4751×10^3	0.26700050	0.0000	1.0000	0.7149	4.6670×10^2	2.2483×10^2
0.00300	3.5465	-0.9376	6.3766×10^{10}	8.4868×10^3	0.26700050	0.0000	1.0000	0.7149	4.6777×10^2	2.2547×10^2
0.00500	3.5468	-1.0849	5.3756×10^{10}	1.1942×10^4	0.26700050	0.0000	1.0000	0.7149	4.6980×10^2	2.2646×10^2
0.00700	3.5468	-1.1826	4.8026×10^{10}	1.4961×10^4	0.26700050	0.0000	1.0000	0.7149	4.7225×10^2	2.2750×10^2
0.01000	3.5469	-1.2866	4.2597×10^{10}	1.9018×10^4	0.26700050	0.0000	1.0000	0.7149	4.7603×10^2	2.2912×10^2
0.02000	3.5463	-1.4912	3.3740×10^{10}	3.0313×10^4	0.26700050	0.0010	0.9990	0.7149	4.9293×10^2	2.3557×10^2
0.03000	3.5457	-1.6120	2.9451×10^{10}	3.9786×10^4	0.26700050	0.0049	0.9951	0.7149	5.1480×10^2	2.4272×10^2
0.05000	3.5444	-1.7625	2.4915×10^{10}	5.5591×10^4	0.26700050	0.0323	0.9677	0.7149	5.7089×10^2	2.5658×10^2
0.07000	3.5432	-1.8586	2.2429×10^{10}	6.8598×10^4	0.26700050	0.0989	0.9011	0.7149	6.0290×10^2	2.6507×10^2
0.10000	3.5417	-1.9501	2.0319×10^{10}	8.3580×10^4	0.26700050	0.2837	0.7163	0.7149	5.3493×10^2	2.5894×10^2
0.20000	3.5397	-2.0523	1.8228×10^{10}	1.0385×10^5	0.26700050	0.8515	0.1485	0.7148	4.3340×10^2	2.1855×10^2
0.30000	3.5395	-2.0649	1.7986×10^{10}	1.0667×10^5	0.26700055	0.9710	0.0290	0.7147	4.2185×10^2	2.1164×10^2
0.43200	3.5395	-2.0665	1.7954×10^{10}	1.0705×10^5	0.26700072	0.9988	0.0012	0.7146	4.1997×10^2	2.1058×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
$0.270M_{\odot}$										
0.00002	3.5525	0.5136	3.2978×10^{11}	3.2950×10^2	0.26700050	0.0000	1.0000	0.7149	4.5181×10^2	2.1224×10^2
0.00010	3.5522	0.0691	1.9796×10^{11}	9.1441×10^2	0.26700050	0.0000	1.0000	0.7149	4.5641×10^2	2.1753×10^2
0.00020	3.5509	-0.1321	1.5795×10^{11}	1.4365×10^3	0.26700050	0.0000	1.0000	0.7149	4.6006×10^2	2.2017×10^2
0.00030	3.5505	-0.2489	1.3836×10^{11}	1.8720×10^3	0.26700050	0.0000	1.0000	0.7149	4.6176×10^2	2.2139×10^2
0.00050	3.5499	-0.3969	1.1701×10^{11}	2.6173×10^3	0.26700050	0.0000	1.0000	0.7149	4.6392×10^2	2.2283×10^2
0.00070	3.5496	-0.4943	1.0472×10^{11}	3.2675×10^3	0.26700050	0.0000	1.0000	0.7149	4.6512×10^2	2.2364×10^2
0.00100	3.5496	-0.5963	9.3121×10^{10}	4.1325×10^3	0.26700050	0.0000	1.0000	0.7149	4.6595×10^2	2.2422×10^2
0.00200	3.5495	-0.7961	7.4011×10^{10}	6.5422×10^3	0.26700050	0.0000	1.0000	0.7149	4.6802×10^2	2.2547×10^2
0.00300	3.5497	-0.9127	6.4663×10^{10}	8.5705×10^3	0.26700050	0.0000	1.0000	0.7149	4.6923×10^2	2.2615×10^2
0.00500	3.5498	-1.0602	5.4546×10^{10}	1.2045×10^4	0.26700050	0.0000	1.0000	0.7149	4.7178×10^2	2.2736×10^2
0.00700	3.5497	-1.1578	4.8763×10^{10}	1.5071×10^4	0.26700050	0.0000	1.0000	0.7149	4.7461×10^2	2.2859×10^2
0.01000	3.5497	-1.2619	4.3258×10^{10}	1.9150×10^4	0.26700050	0.0000	1.0000	0.7149	4.7912×10^2	2.3048×10^2
0.02000	3.5491	-1.4663	3.4279×10^{10}	3.0496×10^4	0.26700050	0.0011	0.9989	0.7149	4.9913×10^2	2.3782×10^2
0.03000	3.5484	-1.5861	2.9957×10^{10}	3.9932×10^4	0.26700050	0.0055	0.9945	0.7149	5.2623×10^2	2.4607×10^2
0.05000	3.5472	-1.7364	2.5342×10^{10}	5.5799×10^4	0.26700050	0.0354	0.9646	0.7149	6.1646×10^2	2.6286×10^2
0.07000	3.5460	-1.8317	2.2833×10^{10}	6.8733×10^4	0.26700976	0.1082	0.8918	0.7149	7.4429×10^2	2.7280×10^2
0.10000	3.5445	-1.9232	2.0686×10^{10}	8.3742×10^4	0.26700050	0.3012	0.6988	0.7149	5.6470×10^2	2.6843×10^2
0.20000	3.5427	-2.0201	1.8658×10^{10}	1.0294×10^5	0.26700051	0.8698	0.1302	0.7148	4.4309×10^2	2.2503×10^2
0.30000	3.5426	-2.0298	1.8467×10^{10}	1.0507×10^5	0.26700057	0.9759	0.0240	0.7147	4.3287×10^2	2.1906×10^2
0.39674	3.5425	-2.0314	1.8435×10^{10}	1.0544×10^5	0.26700072	0.9956	0.0044	0.7146	4.3093×10^2	2.1800×10^2
$0.280M_{\odot}$										
0.00002	3.5561	0.5353	3.3255×10^{11}	3.3604×10^2	0.26700050	0.0000	1.0000	0.7149	4.5232×10^2	2.1268×10^2
0.00010	3.5559	0.0942	2.0031×10^{11}	9.2623×10^2	0.26700050	0.0000	1.0000	0.7149	4.5672×10^2	2.1779×10^2
0.00020	3.5548	-0.1062	1.5987×10^{11}	1.4541×10^3	0.26700050	0.0000	1.0000	0.7149	4.6019×10^2	2.2029×10^2
0.00030	3.5542	-0.2235	1.4004×10^{11}	1.8950×10^3	0.26700050	0.0000	1.0000	0.7149	4.6204×10^2	2.2157×10^2
0.00050	3.5536	-0.3711	1.1847×10^{11}	2.6480×10^3	0.26700050	0.0000	1.0000	0.7149	4.6408×10^2	2.2295×10^2
0.00070	3.5531	-0.4693	1.0605×10^{11}	3.3041×10^3	0.26700050	0.0000	1.0000	0.7149	4.6572×10^2	2.2395×10^2
0.00100	3.5530	-0.5718	9.4308×10^{10}	4.1784×10^3	0.26700050	0.0000	1.0000	0.7149	4.6681×10^2	2.2466×10^2
0.00200	3.5526	-0.7721	7.5004×10^{10}	6.6059×10^3	0.26700050	0.0000	1.0000	0.7149	4.6931×10^2	2.2609×10^2
0.00300	3.5527	-0.8888	6.5567×10^{10}	8.6445×10^3	0.26700050	0.0000	1.0000	0.7149	4.7079×10^2	2.2688×10^2
0.00500	3.5526	-1.0363	5.5330×10^{10}	1.2139×10^4	0.26700050	0.0000	1.0000	0.7149	4.7373×10^2	2.2824×10^2
0.00700	3.5525	-1.1339	4.9479×10^{10}	1.5180×10^4	0.26700050	0.0000	1.0000	0.7149	4.7708×10^2	2.2967×10^2
0.01000	3.5524	-1.2382	4.3909×10^{10}	1.9275×10^4	0.26700050	0.0000	1.0000	0.7149	4.8246×10^2	2.3181×10^2
0.02000	3.5518	-1.4420	3.4823×10^{10}	3.0646×10^4	0.26700050	0.0013	0.9987	0.7149	5.0590×10^2	2.4018×10^2
0.03000	3.5511	-1.5617	3.0436×10^{10}	4.0116×10^4	0.26700050	0.0062	0.9938	0.7149	5.4056×10^2	2.4981×10^2
0.05000	3.5499	-1.7119	2.5744×10^{10}	5.6073×10^4	0.26700420	0.0395	0.9605	0.7149	6.8139×10^2	2.6083×10^2
0.07000	3.5487	-1.8072	2.3193×10^{10}	6.9088×10^4	0.26703303	0.1188	0.8812	0.7149	5.4447×10^2	2.3746×10^2
0.10000	3.5474	-1.8960	2.1067×10^{10}	8.3730×10^4	0.26700050	0.3256	0.6744	0.7149	6.1164×10^2	2.7972×10^2
0.20000	3.5457	-1.9877	1.9105×10^{10}	1.0182×10^5	0.26700051	0.8793	0.1207	0.7148	4.5630×10^2	2.3368×10^2
0.33655	3.5455	-1.9986	1.8884×10^{10}	1.0422×10^5	0.26700066	0.9903	0.0097	0.7146	4.4311×10^2	2.2630×10^2
$0.290M_{\odot}$										
0.00002	3.5595	0.5548	3.3479×10^{11}	3.4339×10^2	0.26700050	0.0000	1.0000	0.7149	4.5295×10^2	2.1319×10^2
0.00010	3.5596	0.1186	2.0260×10^{11}	9.3772×10^2	0.26700050	0.0000	1.0000	0.7149	4.5699×10^2	2.1797×10^2
0.00020	3.5584	-0.0815	1.6176×10^{11}	1.4710×10^3	0.26700050	0.0000	1.0000	0.7149	4.6046×10^2	2.2047×10^2
0.00030	3.5577	-0.1994	1.4168×10^{11}	1.9176×10^3	0.26700050	0.0000	1.0000	0.7149	4.6244×10^2	2.2181×10^2
0.00050	3.5570	-0.3473	1.1987×10^{11}	2.6785×10^3	0.26700050	0.0000	1.0000	0.7149	4.6471×10^2	2.2328×10^2
0.00070	3.5566	-0.4447	1.0737×10^{11}	3.3389×10^3	0.26700050	0.0000	1.0000	0.7149	4.6617×10^2	2.2419×10^2
0.00100	3.5562	-0.5484	9.5478×10^{10}	4.2222×10^3	0.26700050	0.0000	1.0000	0.7149	4.6774×10^2	2.2511×10^2
0.00200	3.5557	-0.7487	7.5982×10^{10}	6.6668×10^3	0.26700050	0.0000	1.0000	0.7149	4.7051×10^2	2.2666×10^2
0.00300	3.5555	-0.8658	6.6457×10^{10}	8.7150×10^3	0.26700050	0.0000	1.0000	0.7149	4.7243×10^2	2.2765×10^2
0.00500	3.5553	-1.0134	5.6110×10^{10}	1.2225×10^4	0.26700050	0.0000	1.0000	0.7149	4.7591×10^2	2.2922×10^2
0.00700	3.5552	-1.1110	5.0181×10^{10}	1.5285×10^4	0.26700050	0.0000	1.0000	0.7149	4.7962×10^2	2.3077×10^2
0.01000	3.5550	-1.2152	4.4557×10^{10}	1.9388×10^4	0.26700050	0.0000	1.0000	0.7149	4.8585×10^2	2.3328×10^2
0.02000	3.5543	-1.4188	3.5348×10^{10}	3.0804×10^4	0.26700050	0.0014	0.9986	0.7149	5.1366×10^2	2.4275×10^2
0.03000	3.5536	-1.5385	3.0900×10^{10}	4.0311×10^4	0.26700050	0.0068	0.9932	0.7149	5.5969×10^2	2.5408×10^2
0.05000	3.5524	-1.6876	2.6167×10^{10}	5.6211×10^4	0.26701365	0.0429	0.9571	0.7149	5.5190×10^2	2.3801×10^2
0.07000	3.5514	-1.7813	2.3602×10^{10}	6.9095×10^4	0.26704250	0.1288	0.8712	0.7149	4.6650×10^2	2.1515×10^2
0.10000	3.5501	-1.8696	2.1445×10^{10}	8.3692×10^4	0.26709240	0.3469	0.6531	0.7149	5.1795×10^2	2.3511×10^2
0.20000	3.5486	-1.9569	1.9536×10^{10}	1.0085×10^5	0.26700049	0.8943	0.1057	0.7148	4.7218×10^2	2.4400×10^2
0.33982	3.5484	-1.9666	1.9334×10^{10}	1.0296×10^5	0.26700071	0.9919	0.0081	0.7146	4.5804×10^2	2.3654×10^2
$0.300M_{\odot}$										
0.00002	3.5628	0.5681	3.3488×10^{11}	3.5505×10^2	0.26700050	0.0000	1.0000	0.7149	4.5354×10^2	2.1370×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00010	3.5630	0.1369	2.0362×10^{11}	9.6031×10^2	0.26700050	0.0000	1.0000	0.7149	4.5731×10^2	2.1825×10^2
0.00020	3.5619	-0.0624	1.6269×10^{11}	1.5043×10^3	0.26700050	0.0000	1.0000	0.7149	4.6068×10^2	2.2065×10^2
0.00030	3.5611	-0.1805	1.4256×10^{11}	1.9592×10^3	0.26700050	0.0000	1.0000	0.7149	4.6292×10^2	2.2210×10^2
0.00050	3.5602	-0.3289	1.2066×10^{11}	2.7351×10^3	0.26700050	0.0000	1.0000	0.7149	4.6543×10^2	2.2367×10^2
0.00070	3.5599	-0.4257	1.0807×10^{11}	3.4093×10^3	0.26700050	0.0000	1.0000	0.7149	4.6669×10^2	2.2450×10^2
0.00100	3.5592	-0.5301	9.6141×10^{10}	4.3078×10^3	0.26700050	0.0000	1.0000	0.7149	4.6864×10^2	2.2558×10^2
0.00200	3.5585	-0.7307	7.6552×10^{10}	6.7945×10^3	0.26700050	0.0000	1.0000	0.7149	4.7179×10^2	2.2731×10^2
0.00300	3.5582	-0.8482	6.6978×10^{10}	8.8757×10^3	0.26700050	0.0000	1.0000	0.7149	4.7415×10^2	2.2847×10^2
0.00500	3.5579	-0.9963	5.6559×10^{10}	1.2447×10^4	0.26700050	0.0000	1.0000	0.7149	4.7827×10^2	2.3030×10^2
0.00700	3.5577	-1.0938	5.0584×10^{10}	1.5561×10^4	0.26700050	0.0000	1.0000	0.7149	4.8257×10^2	2.3200×10^2
0.01000	3.5574	-1.1981	4.4929×10^{10}	1.9725×10^4	0.26700050	0.0001	0.9999	0.7149	4.8991×10^2	2.3486×10^2
0.02000	3.5567	-1.4008	3.5695×10^{10}	3.1250×10^4	0.26700050	0.0017	0.9983	0.7149	5.2396×10^2	2.4583×10^2
0.03000	3.5560	-1.5198	3.1224×10^{10}	4.0841×10^4	0.26700050	0.0079	0.9921	0.7149	5.9063×10^2	2.5926×10^2
0.05000	3.5548	-1.6681	2.6466×10^{10}	5.6845×10^4	0.26701933	0.0486	0.9514	0.7149	4.9236×10^2	2.2195×10^2
0.07000	3.5539	-1.7606	2.3890×10^{10}	6.9765×10^4	0.26704824	0.1433	0.8567	0.7149	4.1715×10^2	1.9847×10^2
0.10000	3.5527	-1.8460	2.1773×10^{10}	8.3992×10^4	0.26709809	0.3759	0.6241	0.7149	4.1320×10^2	1.9842×10^2
0.20000	3.5513	-1.9271	1.9960×10^{10}	9.9939×10^4	0.26700044	0.9177	0.0822	0.7148	4.9276×10^2	2.5698×10^2
0.32246	3.5512	-1.9342	1.9810×10^{10}	1.0146×10^5	0.26700065	0.9937	0.0063	0.7146	4.7908×10^2	2.5039×10^2

0.400 $M_{\odot}$

0.00002	3.5868	0.7457	3.6782×10^{11}	3.9240×10^2	0.26700050	0.0000	1.0000	0.7149	4.6422×10^2	2.1992×10^2
0.00010	3.5891	0.3353	2.2690×10^{11}	1.0312×10^3	0.26700050	0.0000	1.0000	0.7149	4.6474×10^2	2.2233×10^2
0.00020	3.5883	0.1377	1.8143×10^{11}	1.6129×10^3	0.26700050	0.0000	1.0000	0.7149	4.6765×10^2	2.2435×10^2
0.00030	3.5872	0.0191	1.5902×10^{11}	2.0995×10^3	0.26700050	0.0000	1.0000	0.7149	4.7023×10^2	2.2588×10^2
0.00050	3.5859	-0.1307	1.3466×10^{11}	2.9279×10^3	0.26700050	0.0000	1.0000	0.7149	4.7356×10^2	2.2777×10^2
0.00070	3.5850	-0.2295	1.2069×10^{11}	3.6446×10^3	0.26700050	0.0000	1.0000	0.7149	4.7590×10^2	2.2903×10^2
0.00100	3.5837	-0.3353	1.0748×10^{11}	4.5956×10^3	0.26700050	0.0000	1.0000	0.7149	4.7901×10^2	2.3064×10^2
0.00200	3.5814	-0.5398	8.5856×10^{10}	7.2022×10^3	0.26700050	0.0000	1.0000	0.7149	4.8633×10^2	2.3407×10^2
0.00300	3.5801	-0.6588	7.5290×10^{10}	9.3655×10^3	0.26700050	0.0000	1.0000	0.7149	4.9226×10^2	2.3664×10^2
0.00500	3.5786	-0.8086	6.3807×10^{10}	1.3040×10^4	0.26700050	0.0000	1.0000	0.7149	5.0441×10^2	2.4140×10^2
0.00700	3.5777	-0.9070	5.7207×10^{10}	1.6222×10^4	0.26700050	0.0000	1.0000	0.7149	5.1871×10^2	2.4632×10^2
0.01000	3.5770	-1.0108	5.0939×10^{10}	2.0460×10^4	0.26700050	0.0003	0.9997	0.7149	5.4765×10^2	2.5453×10^2
0.02000	3.5755	-1.2131	4.0624×10^{10}	3.2170×10^4	0.26700504	0.0039	0.9961	0.7149	5.0126×10^2	2.2555×10^2
0.03000	3.5749	-1.3294	3.5640×10^{10}	4.1796×10^4	0.26701553	0.0163	0.9837	0.7149	3.7869×10^2	1.8276×10^2
0.05000	3.5747	-1.4648	3.0521×10^{10}	5.6991×10^4	0.26704064	0.0866	0.9134	0.7149	2.8692×10^2	1.4271×10^2
0.07000	3.5753	-1.5405	2.7901×10^{10}	6.8200×10^4	0.26707057	0.2310	0.7690	0.7149	2.4582×10^2	1.2270×10^2
0.10000	3.5758	-1.6031	2.5892×10^{10}	7.9189×10^4	0.26712414	0.5240	0.4760	0.7149	2.1429×10^2	1.0787×10^2
0.17132	3.5751	-1.6547	2.4485×10^{10}	8.8552×10^4	0.26729845	0.9900	0.0095	0.7150	2.0528×10^2	1.0370×10^2

0.500 $M_{\odot}$

0.00002	3.6010	0.9248	4.2352×10^{11}	3.6997×10^2	0.26700050	0.0000	1.0000	0.7149	4.7876×10^2	2.2729×10^2
0.00010	3.6062	0.4973	2.5271×10^{11}	1.0391×10^3	0.26700050	0.0000	1.0000	0.7149	4.7516×10^2	2.2763×10^2
0.00020	3.6058	0.2954	2.0071×10^{11}	1.6474×10^3	0.26700050	0.0000	1.0000	0.7149	4.7773×10^2	2.2940×10^2
0.00030	3.6050	0.1756	1.7550×10^{11}	2.1547×10^3	0.26700050	0.0000	1.0000	0.7149	4.8009×10^2	2.3078×10^2
0.00050	3.6037	0.0243	1.4833×10^{11}	3.0160×10^3	0.26700050	0.0000	1.0000	0.7149	4.8365×10^2	2.3272×10^2
0.00070	3.6024	-0.0764	1.3284×10^{11}	3.7607×10^3	0.26700050	0.0000	1.0000	0.7149	4.8688×10^2	2.3436×10^2
0.00100	3.6012	-0.1825	1.1825×10^{11}	4.7459×10^3	0.26700050	0.0000	1.0000	0.7149	4.9072×10^2	2.3618×10^2
0.00200	3.5982	-0.3896	9.4452×10^{10}	7.4386×10^3	0.26700050	0.0000	1.0000	0.7149	5.0249×10^2	2.4124×10^2
0.00300	3.5963	-0.5107	8.2882×10^{10}	9.6605×10^3	0.26700050	0.0000	1.0000	0.7149	5.1455×10^2	2.4593×10^2
0.00500	3.5940	-0.6625	7.0332×10^{10}	1.3416×10^4	0.26700050	0.0000	1.0000	0.7149	5.4510×10^2	2.5578×10^2
0.00700	3.5926	-0.7618	6.3138×10^{10}	1.6647×10^4	0.26700050	0.0001	0.9999	0.7149	5.9911×10^2	2.6749×10^2
0.01000	3.5912	-0.8669	5.6312×10^{10}	2.0927×10^4	0.26700170	0.0005	0.9995	0.7149	5.6711×10^2	2.4456×10^2
0.02000	3.5893	-1.0651	4.5206×10^{10}	3.2473×10^4	0.26701050	0.0064	0.9936	0.7149	3.4656×10^2	1.6906×10^2
0.03000	3.5894	-1.1704	4.0027×10^{10}	4.1420×10^4	0.26702119	0.0247	0.9753	0.7149	2.7517×10^2	1.3699×10^2
0.05000	3.5919	-1.2785	3.4937×10^{10}	5.4367×10^4	0.26704761	0.1246	0.8754	0.7149	2.0538×10^2	1.0339×10^2
0.07000	3.5954	-1.3244	3.2607×10^{10}	6.2414×10^4	0.26708058	0.3214	0.6786	0.7149	1.6790×10^2	8.5190×10^1
0.10000	3.5995	-1.3512	3.1028×10^{10}	6.8930×10^4	0.26717083	0.6994	0.3002	0.7150	1.3903×10^2	7.1783×10^1
0.12793	3.5993	-1.3721	3.0319×10^{10}	7.2190×10^4	0.26725855	0.9904	0.0083	0.7150	1.3415×10^2	6.9417×10^1

0.600 $M_{\odot}$

0.00002	3.6106	1.0567	4.7170×10^{11}	3.5790×10^2	0.26700050	0.0000	1.0000	0.7149	4.9423×10^2	2.3506×10^2
0.00010	3.6187	0.6259	2.7663×10^{11}	1.0406×10^3	0.26700050	0.0000	1.0000	0.7149	4.8625×10^2	2.3318×10^2
0.00020	3.6192	0.4237	2.1869×10^{11}	1.6652×10^3	0.26700050	0.0000	1.0000	0.7149	4.8753×10^2	2.3429×10^2
0.00030	3.6185	0.3023	1.9081×10^{11}	2.1872×10^3	0.26700050	0.0000	1.0000	0.7149	4.9012×10^2	2.3573×10^2
0.00050	3.6170	0.1488	1.6099×10^{11}	3.0726×10^3	0.26700050	0.0000	1.0000	0.7149	4.9458×10^2	2.3799×10^2
0.00070	3.6159	0.0481	1.4410×10^{11}	3.8351×10^3	0.26700050	0.0000	1.0000	0.7149	4.9829×10^2	2.3975×10^2
0.00100	3.6144	-0.0592	1.2822×10^{11}	4.8442×10^3	0.26700050	0.0000	1.0000	0.7149	5.0379×10^2	2.4217×10^2
0.00200	3.6113	-0.2671	1.0238×10^{11}	7.5974×10^3	0.26700050	0.0000	1.0000	0.7149	5.2237×10^2	2.4941×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PPI)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00300	3.6093	-0.3887	8.9841×10^{10}	9.8661×10^3	0.26700050	0.0000	1.0000	0.7149	5.4616×10^2	2.5721×10^2
0.00500	3.6066	-0.5418	7.6275×10^{10}	1.3688×10^4	0.26700050	0.0001	0.9999	0.7149	6.5855×10^2	2.7689×10^2
0.00700	3.6048	-0.6421	6.8512×10^{10}	1.6965×10^4	0.26700159	0.0002	0.9998	0.7149	5.2008×10^2	2.3317×10^2
0.01000	3.6031	-0.7466	6.1218×10^{10}	2.1249×10^4	0.26700379	0.0008	0.9992	0.7149	4.0151×10^2	1.9271×10^2
0.02000	3.6020	-0.9319	4.9704×10^{10}	3.2234×10^4	0.26701277	0.0092	0.9908	0.7149	2.7126×10^2	1.3425×10^2
0.03000	3.6041	-1.0176	4.4604×10^{10}	4.0027×10^4	0.26702402	0.0347	0.9653	0.7149	2.1067×10^2	1.0614×10^2
0.05000	3.6131	-1.0707	4.0257×10^{10}	4.9138×10^4	0.26705317	0.1792	0.8208	0.7149	1.4605×10^2	7.4386×10^1
0.07000	3.6243	-1.0581	3.8799×10^{10}	5.2899×10^4	0.26710486	0.4749	0.5247	0.7149	1.1039×10^2	5.7095×10^1
0.09431	3.6278	-1.0764	3.7373×10^{10}	5.7014×10^4	0.26723634	0.9828	0.0139	0.7150	9.5916×10^1	5.0670×10^1

0.700 $M_{\odot}$

0.00002	3.6181	1.1540	5.0967×10^{11}	3.5766×10^2	0.26700050	0.0000	1.0000	0.7149	5.0888×10^2	2.4244×10^2
0.00010	3.6282	0.7299	2.9845×10^{11}	1.0431×10^3	0.26700050	0.0000	1.0000	0.7149	4.9769×10^2	2.3884×10^2
0.00020	3.6298	0.5296	2.3532×10^{11}	1.6777×10^3	0.26700050	0.0000	1.0000	0.7149	4.9774×10^2	2.3929×10^2
0.00030	3.6296	0.4093	2.0501×10^{11}	2.2104×10^3	0.26700050	0.0000	1.0000	0.7149	4.9962×10^2	2.4036×10^2
0.00050	3.6285	0.2555	1.7267×10^{11}	3.1161×10^3	0.26700050	0.0000	1.0000	0.7149	5.0453×10^2	2.4271×10^2
0.00070	3.6272	0.1534	1.5444×10^{11}	3.8952×10^3	0.26700050	0.0000	1.0000	0.7149	5.0971×10^2	2.4500×10^2
0.00100	3.6255	0.0451	1.3736×10^{11}	4.9242×10^3	0.26700050	0.0000	1.0000	0.7149	5.1764×10^2	2.4823×10^2
0.00200	3.6221	-0.1642	1.0968×10^{11}	7.7236×10^3	0.26700050	0.0000	1.0000	0.7149	5.4958×10^2	2.5926×10^2
0.00300	3.6200	-0.2861	9.6257×10^{10}	1.0027×10^4	0.26700050	0.0000	1.0000	0.7149	6.0766×10^2	2.7270×10^2
0.00500	3.6171	-0.4394	8.1758×10^{10}	1.3899×10^4	0.26700132	0.0001	0.9999	0.7149	5.0512×10^2	2.3005×10^2
0.00700	3.6154	-0.5382	7.3539×10^{10}	1.7179×10^4	0.26700263	0.0003	0.9997	0.7149	4.0073×10^2	1.9240×10^2
0.01000	3.6140	-0.6386	6.5944×10^{10}	2.1365×10^4	0.26700486	0.0012	0.9988	0.7149	3.2558×10^2	1.6004×10^2
0.02000	3.6156	-0.7992	5.4405×10^{10}	3.1388×10^4	0.26701422	0.0124	0.9876	0.7149	2.1634×10^2	1.0840×10^2
0.03000	3.6226	-0.8467	4.9880×10^{10}	3.7342×10^4	0.26702643	0.0489	0.9511	0.7149	1.6140×10^2	8.1443×10^1
0.05000	3.6485	-0.7881	4.7347×10^{10}	4.1445×10^4	0.26706425	0.2834	0.7164	0.7149	9.4789×10^1	4.9620×10^1
0.07052	3.6619	-0.7881	4.4524×10^{10}	4.6866×10^4	0.26724304	0.9770	0.0154	0.7150	7.2282×10^1	3.8930×10^1

0.800 $M_{\odot}$

0.00002	3.6246	1.2224	5.3495×10^{11}	3.7104×10^2	0.26700050	0.0000	1.0000	0.7149	5.2202×10^2	2.4913×10^2
0.00010	3.6360	0.8153	3.1780×10^{11}	1.0513×10^3	0.26700050	0.0000	1.0000	0.7149	5.0891×10^2	2.4437×10^2
0.00020	3.6385	0.6195	2.5066×10^{11}	1.6900×10^3	0.26700050	0.0000	1.0000	0.7149	5.0757×10^2	2.4412×10^2
0.00030	3.6390	0.5011	2.1820×10^{11}	2.2301×10^3	0.26700050	0.0000	1.0000	0.7149	5.0903×10^2	2.4489×10^2
0.00050	3.6384	0.3484	1.8353×10^{11}	3.1523×10^3	0.26700050	0.0000	1.0000	0.7149	5.1432×10^2	2.4724×10^2
0.00070	3.6373	0.2462	1.6399×10^{11}	3.9480×10^3	0.26700050	0.0000	1.0000	0.7149	5.2092×10^2	2.4993×10^2
0.00100	3.6356	0.1369	1.4574×10^{11}	4.9993×10^3	0.26700050	0.0000	1.0000	0.7149	5.3262×10^2	2.5434×10^2
0.00200	3.6317	-0.0747	1.1633×10^{11}	7.8456×10^3	0.26700050	0.0000	1.0000	0.7149	5.9440×10^2	2.7166×10^2
0.00300	3.6292	-0.1976	1.0213×10^{11}	1.0179×10^4	0.26700070	0.0000	1.0000	0.7149	6.1431×10^2	2.5921×10^2
0.00500	3.6264	-0.3493	8.6890×10^{10}	1.4064×10^4	0.26700186	0.0001	0.9999	0.7149	4.0694×10^2	1.9511×10^2
0.00700	3.6250	-0.4444	7.8390×10^{10}	1.7279×10^4	0.26700320	0.0005	0.9995	0.7149	3.3391×10^2	1.6398×10^2
0.01000	3.6246	-0.5362	7.0660×10^{10}	2.1266×10^4	0.26700549	0.0016	0.9984	0.7149	2.7391×10^2	1.3547×10^2
0.02000	3.6318	-0.6538	5.9682×10^{10}	2.9809×10^4	0.26701543	0.0169	0.9831	0.7149	1.7252×10^2	8.6824×10^1
0.03000	3.6508	-0.6241	5.6579×10^{10}	3.3169×10^4	0.26702917	0.0732	0.9268	0.7149	1.1564×10^2	5.9332×10^1
0.05000	3.7049	-0.4783	5.2179×10^{10}	3.8999×10^4	0.26717137	0.7737	0.2147	0.7150	5.7733×10^1	3.1555×10^1
0.05722	3.6967	-0.5594	4.9346×10^{10}	4.3604×10^4	0.26737379	0.9780	0.0045	0.7150	5.8011×10^1	3.1660×10^1

0.900 $M_{\odot}$

0.00002	3.6294	1.2958	5.6945×10^{11}	3.6836×10^2	0.26700050	0.0000	1.0000	0.7149	5.3555×10^2	2.5584×10^2
0.00010	3.6424	0.8941	3.3779×10^{11}	1.0469×10^3	0.26700050	0.0000	1.0000	0.7149	5.1970×10^2	2.4968×10^2
0.00020	3.6458	0.6997	2.6584×10^{11}	1.6902×10^3	0.26700050	0.0000	1.0000	0.7149	5.1767×10^2	2.4901×10^2
0.00030	3.6469	0.5825	2.3112×10^{11}	2.2362×10^3	0.26700050	0.0000	1.0000	0.7149	5.1882×10^2	2.4954×10^2
0.00050	3.6471	0.4312	1.9402×10^{11}	3.1731×10^3	0.26700050	0.0000	1.0000	0.7149	5.2472×10^2	2.5190×10^2
0.00070	3.6463	0.3293	1.7313×10^{11}	3.9851×10^3	0.26700050	0.0000	1.0000	0.7149	5.3341×10^2	2.5513×10^2
0.00100	3.6450	0.2205	1.5368×10^{11}	5.0578×10^3	0.26700050	0.0000	1.0000	0.7149	5.5026×10^2	2.6083×10^2
0.00200	3.6407	0.0062	1.2247×10^{11}	7.9640×10^3	0.26700051	0.0000	1.0000	0.7149	7.5105×10^2	2.8618×10^2
0.00300	3.6379	-0.1179	1.0755×10^{11}	1.0327×10^4	0.26700101	0.0000	1.0000	0.7149	4.7661×10^2	2.2104×10^2
0.00500	3.6352	-0.2666	9.1791×10^{10}	1.4177×10^4	0.26700220	0.0002	0.9998	0.7149	3.4656×10^2	1.6937×10^2
0.00700	3.6345	-0.3551	8.3165×10^{10}	1.7271×10^4	0.26700356	0.0006	0.9994	0.7149	2.8626×10^2	1.4165×10^2
0.01000	3.6357	-0.4338	7.5511×10^{10}	2.0949×10^4	0.26700595	0.0020	0.9980	0.7149	2.3070×10^2	1.1531×10^2
0.02000	3.6558	-0.4709	6.5955×10^{10}	2.7460×10^4	0.26701675	0.0238	0.9762	0.7149	1.3179×10^2	6.7130×10^1
0.03000	3.7049	-0.3067	6.3574×10^{10}	2.9555×10^4	0.26703479	0.1318	0.8680	0.7149	7.3294×10^1	3.8845×10^1
0.04670	3.7298	-0.3380	5.4671×10^{10}	3.9965×10^4	0.26751727	0.9556	0.0020	0.7150	4.5129×10^1	2.5391×10^1

1.000 $M_{\odot}$

0.00002	3.6343	1.3422	5.8725×10^{11}	3.8486×10^2	0.26700050	0.0000	1.0000	0.7149	5.4719×10^2	2.6169×10^2
0.00010	3.6479	0.9587	3.5470×10^{11}	1.0549×10^3	0.26700050	0.0000	1.0000	0.7149	5.3042×10^2	2.5490×10^2
0.00020	3.6521	0.7685	2.7955×10^{11}	1.6983×10^3	0.26700050	0.0000	1.0000	0.7149	5.2782×10^2	2.5386×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PPI)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00030	3.6537	0.6532	2.4299×10^{11}	2.2478×10^3	0.26700050	0.0000	1.0000	0.7149	5.2910×10^2	2.5432×10^2
0.00050	3.6545	0.5037	2.0381×10^{11}	3.1951×10^3	0.26700050	0.0000	1.0000	0.7149	5.3658×10^2	2.5702×10^2
0.00070	3.6543	0.4032	1.8173×10^{11}	4.0189×10^3	0.26700050	0.0000	1.0000	0.7149	5.4837×10^2	2.6098×10^2
0.00100	3.6534	0.2950	1.6113×10^{11}	5.1118×10^3	0.26700050	0.0000	1.0000	0.7149	5.7489×10^2	2.6866×10^2
0.00200	3.6495	0.0807	1.2816×10^{11}	8.0800×10^3	0.26700071	0.0000	1.0000	0.7149	5.4009×10^2	2.4194×10^2
0.00300	3.6466	-0.0434	1.1261×10^{11}	1.0467×10^4	0.26700123	0.0000	1.0000	0.7149	4.0270×10^2	1.9420×10^2
0.00500	3.6443	-0.1864	9.6514×10^{10}	1.4248×10^4	0.26700243	0.0003	0.9997	0.7149	3.0090×10^2	1.4852×10^2
0.00700	3.6449	-0.2650	8.7904×10^{10}	1.7176×10^4	0.26700385	0.0008	0.9992	0.7149	2.4691×10^2	1.2283×10^2
0.01000	3.6495	-0.3226	8.0575×10^{10}	2.0443×10^4	0.26700636	0.0026	0.9974	0.7149	1.9425×10^2	9.7528×10^1
0.02000	3.6974	-0.2192	7.2775×10^{10}	2.5060×10^4	0.26701858	0.0384	0.9616	0.7149	9.2436×10^1	4.8160×10^1
0.03000	3.7597	0.0011	7.0382×10^{10}	2.6793×10^4	0.26714656	0.5267	0.4496	0.7149	3.6291×10^1	2.1060×10^1
0.03628	3.7586	-0.1162	6.1806×10^{10}	3.4745×10^4	0.26753638	0.8959	0.0017	0.7150	3.2984×10^1	1.9503×10^1
1.100 $M_{\odot}$										
0.00002	3.6389	1.3853	6.0446×10^{11}	3.9958×10^2	0.26700050	0.0000	1.0000	0.7149	5.5796×10^2	2.6708×10^2
0.00010	3.6528	1.0170	3.7085×10^{11}	1.0615×10^3	0.26700050	0.0000	1.0000	0.7149	5.4081×10^2	2.5996×10^2
0.00020	3.6576	0.8306	2.9271×10^{11}	1.7040×10^3	0.26700050	0.0000	1.0000	0.7149	5.3810×10^2	2.5872×10^2
0.00030	3.6596	0.7166	2.5440×10^{11}	2.2558×10^3	0.26700050	0.0000	1.0000	0.7149	5.4004×10^2	2.5934×10^2
0.00050	3.6611	0.5691	2.1323×10^{11}	3.2110×10^3	0.26700050	0.0000	1.0000	0.7149	5.5022×10^2	2.6265×10^2
0.00070	3.6613	0.4696	1.8998×10^{11}	4.0451×10^3	0.26700050	0.0000	1.0000	0.7149	5.6764×10^2	2.6786×10^2
0.00100	3.6608	0.3624	1.6829×10^{11}	5.1548×10^3	0.26700050	0.0000	1.0000	0.7149	6.1534×10^2	2.7852×10^2
0.00200	3.6578	0.1502	1.3363×10^{11}	8.1759×10^3	0.26700085	0.0000	1.0000	0.7149	4.5435×10^2	2.1422×10^2
0.00300	3.6555	0.0293	1.1750×10^{11}	1.0574×10^4	0.26700137	0.0001	0.9999	0.7149	3.5436×10^2	1.7283×10^2
0.00500	3.6547	-0.1040	1.0115×10^{11}	1.4270×10^4	0.26700261	0.0003	0.9997	0.7149	2.6244×10^2	1.3074×10^2
0.00700	3.6579	-0.1674	9.2681×10^{10}	1.6997×10^4	0.26700409	0.0010	0.9990	0.7149	2.1229×10^2	1.0617×10^2
0.01000	3.6689	-0.1896	8.5879×10^{10}	1.9795×10^4	0.26700678	0.0035	0.9965	0.7149	1.5978×10^2	8.0916×10^1
0.02000	3.7453	0.0798	8.2345×10^{10}	2.1531×10^4	0.26702316	0.0830	0.9167	0.7149	5.4151×10^1	2.9686×10^1
0.02839	3.7807	0.0903	7.0824×10^{10}	2.9105×10^4	0.26746793	0.7854	0.0131	0.7150	2.0896×10^1	1.3579×10^1
1.200 $M_{\odot}$										
0.00002	3.6422	1.4368	6.3143×10^{11}	3.9946×10^2	0.26700050	0.0000	1.0000	0.7149	5.6934×10^2	2.7265×10^2
0.00010	3.6570	1.0732	3.8809×10^{11}	1.0575×10^3	0.26700050	0.0000	1.0000	0.7149	5.5134×10^2	2.6504×10^2
0.00020	3.6624	0.8886	3.0608×10^{11}	1.7001×10^3	0.26700050	0.0000	1.0000	0.7149	5.4883×10^2	2.6375×10^2
0.00030	3.6648	0.7755	2.6582×10^{11}	2.2539×10^3	0.26700050	0.0000	1.0000	0.7149	5.5184×10^2	2.6463×10^2
0.00050	3.6668	0.6293	2.2253×10^{11}	3.2162×10^3	0.26700050	0.0000	1.0000	0.7149	5.6648×10^2	2.6900×10^2
0.00070	3.6674	0.5304	1.9808×10^{11}	4.0591×10^3	0.26700050	0.0000	1.0000	0.7149	5.9427×10^2	2.7608×10^2
0.00100	3.6674	0.4242	1.7528×10^{11}	5.1839×10^3	0.26700050	0.0000	1.0000	0.7149	7.2785×10^2	2.9128×10^2
0.00200	3.6655	0.2152	1.3902×10^{11}	8.2405×10^3	0.26700094	0.0000	1.0000	0.7149	4.0061×10^2	1.9293×10^2
0.00300	3.6643	0.0999	1.2239×10^{11}	1.0633×10^4	0.26700146	0.0001	0.9999	0.7149	3.1461×10^2	1.5517×10^2
0.00500	3.6663	-0.0180	1.0586×10^{11}	1.4211×10^4	0.26700275	0.0004	0.9996	0.7149	2.3068×10^2	1.1524×10^2
0.00700	3.6736	-0.0590	9.7678×10^{10}	1.6693×10^4	0.26700431	0.0012	0.9988	0.7149	1.8118×10^2	9.1033×10^1
0.01000	3.6928	-0.0354	9.1857×10^{10}	1.8876×10^4	0.26700726	0.0049	0.9951	0.7149	1.2845×10^2	6.5403×10^1
0.02000	3.7926	0.3928	9.4968×10^{10}	1.7659×10^4	0.26717428	0.3801	0.5657	0.7149	1.0868×10^1	8.7656×10^0
0.02281	3.7976	0.2748	8.1035×10^{10}	2.4254×10^4	0.26738981	0.6633	0.0098	0.7150	8.7224×10^0	7.7002×10^0
1.300 $M_{\odot}$										
0.00002	3.6456	1.4780	6.5189×10^{11}	4.0601×10^2	0.26700050	0.0000	1.0000	0.7149	5.7970×10^2	2.7774×10^2
0.00010	3.6607	1.1258	4.0547×10^{11}	1.0495×10^3	0.26700050	0.0000	1.0000	0.7149	5.6201×10^2	2.7010×10^2
0.00020	3.6666	0.9443	3.2018×10^{11}	1.6831×10^3	0.26700050	0.0000	1.0000	0.7149	5.6014×10^2	2.6897×10^2
0.00030	3.6693	0.8330	2.7811×10^{11}	2.2307×10^3	0.26700050	0.0000	1.0000	0.7149	5.6457×10^2	2.7021×10^2
0.00050	3.6719	0.6883	2.3272×10^{11}	3.1857×10^3	0.26700050	0.0000	1.0000	0.7149	5.8596×10^2	2.7605×10^2
0.00070	3.6728	0.5906	2.0703×10^{11}	4.0254×10^3	0.26700050	0.0000	1.0000	0.7149	6.3285×10^2	2.8545×10^2
0.00100	3.6732	0.4853	1.8307×10^{11}	5.1480×10^3	0.26700056	0.0000	1.0000	0.7149	6.0654×10^2	2.6178×10^2
0.00200	3.6726	0.2815	1.4517×10^{11}	8.1867×10^3	0.26700100	0.0000	1.0000	0.7149	3.6069×10^2	1.7610×10^2
0.00300	3.6729	0.1730	1.2797×10^{11}	1.0535×10^4	0.26700154	0.0001	0.9999	0.7149	2.8340×10^2	1.4076×10^2
0.00500	3.6784	0.0734	1.1125×10^{11}	1.3941×10^4	0.26700286	0.0005	0.9995	0.7149	2.0299×10^2	1.0210×10^2
0.00700	3.6903	0.0583	1.0352×10^{11}	1.6099×10^4	0.26700453	0.0016	0.9984	0.7149	1.5348×10^2	7.7830×10^1
0.01000	3.7182	0.1382	9.9778×10^{10}	1.7331×10^4	0.26700783	0.0072	0.9928	0.7149	9.8456×10^1	5.1204×10^1
0.01870	3.8121	0.4501	9.2723×10^{10}	2.0068×10^4	0.26732463	0.5409	0.0253	0.7149		
1.400 $M_{\odot}$										
0.00002	3.6483	1.5220	6.7752×10^{11}	4.0480×10^2	0.26700050	0.0000	1.0000	0.7149	5.9055×10^2	2.8303×10^2
0.00010	3.6640	1.1737	4.2187×10^{11}	1.0440×10^3	0.26700050	0.0000	1.0000	0.7149	5.7268×10^2	2.7516×10^2
0.00020	3.6703	0.9932	3.3292×10^{11}	1.6765×10^3	0.26700050	0.0000	1.0000	0.7149	5.7224×10^2	2.7448×10^2
0.00030	3.6734	0.8826	2.8896×10^{11}	2.2254×10^3	0.26700050	0.0000	1.0000	0.7149	5.7916×10^2	2.7636×10^2
0.00050	3.6764	0.7388	2.4157×10^{11}	3.1842×10^3	0.26700050	0.0000	1.0000	0.7149	6.1286×10^2	2.8449×10^2
0.00070	3.6777	0.6419	2.1474×10^{11}	4.0294×10^3	0.26700050	0.0000	1.0000	0.7149	7.3501×10^2	2.9776×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00100	3.6785	0.5376	1.8976×10^{11}	5.1601×10^3	0.26700061	0.0000	1.0000	0.7149	5.1678×10^2	2.3724×10^2
0.00200	3.6792	0.3395	1.5056×10^{11}	8.1970×10^3	0.26700105	0.0000	1.0000	0.7149	3.2822×10^2	1.6116×10^2
0.00300	3.6812	0.2400	1.3306×10^{11}	1.0495×10^4	0.26700160	0.0001	0.9999	0.7149	2.5452×10^2	1.2749×10^2
0.00500	3.6909	0.1650	1.1669×10^{11}	1.3646×10^4	0.26700299	0.0006	0.9994	0.7149	1.7751×10^2	8.9526×10^1
0.00700	3.7084	0.1863	1.1033×10^{11}	1.5264×10^4	0.26700480	0.0021	0.9979	0.7149	1.2612×10^2	6.4785×10^1
0.01000	3.7465	0.3549	1.1241×10^{11}	1.4705×10^4	0.26700858	0.0120	0.9880	0.7149	6.5809×10^1	3.5659×10^1
0.01552	3.8260	0.6112	1.0472×10^{11}	1.6944×10^4	0.26727591	0.4478	0.0238	0.7149		
1.500 $M_{\odot}$										
0.00002	3.6515	1.5468	6.8679×10^{11}	4.2208×10^2	0.26700050	0.0000	1.0000	0.7149	5.9997×10^2	2.8768×10^2
0.00010	3.6673	1.2132	4.3494×10^{11}	1.0524×10^3	0.26700050	0.0000	1.0000	0.7149	5.8356×10^2	2.8028×10^2
0.00020	3.6738	1.0359	3.4410×10^{11}	1.6814×10^3	0.26700050	0.0000	1.0000	0.7149	5.8545×10^2	2.8037×10^2
0.00030	3.6771	0.9263	2.9880×10^{11}	2.2298×10^3	0.26700050	0.0000	1.0000	0.7149	5.9666×10^2	2.8335×10^2
0.00050	3.6805	0.7844	2.4983×10^{11}	3.1898×10^3	0.26700050	0.0000	1.0000	0.7149	6.5465×10^2	2.9464×10^2
0.00070	3.6820	0.6882	2.2204×10^{11}	4.0382×10^3	0.26700054	0.0000	1.0000	0.7149	6.3449×10^2	2.7153×10^2
0.00100	3.6833	0.5857	1.9619×10^{11}	5.1724×10^3	0.26700065	0.0000	1.0000	0.7149	4.5922×10^2	2.1809×10^2
0.00200	3.6856	0.3956	1.5599×10^{11}	8.1821×10^3	0.26700109	0.0000	1.0000	0.7149	2.9762×10^2	1.4806×10^2
0.00300	3.6892	0.3062	1.3836×10^{11}	1.0399×10^4	0.26700166	0.0001	0.9999	0.7149	2.3009×10^2	1.1561×10^2
0.00500	3.7039	0.2623	1.2295×10^{11}	1.3169×10^4	0.26700312	0.0007	0.9993	0.7149	1.5354×10^2	7.7787×10^1
0.00700	3.7278	0.3340	1.1960×10^{11}	1.3919×10^4	0.26700510	0.0030	0.9970	0.7149	9.9550×10^1	5.1881×10^1
0.01000	3.7791	0.6513	1.3607×10^{11}	1.0752×10^4	0.26700999	0.0233	0.9765	0.7149	2.0771×10^1	1.3851×10^1
0.01314	3.8411	0.7519	1.1488×10^{11}	1.5085×10^4	0.26725628	0.3647	0.0199	0.7149		
1.600 $M_{\odot}$										
0.00002	3.6561	1.5394	6.6655×10^{11}	4.7797×10^2	0.26700050	0.0000	1.0000	0.7149	6.0724×10^2	2.9132×10^2
0.00010	3.6707	1.2397	4.4144×10^{11}	1.0898×10^3	0.26700050	0.0000	1.0000	0.7149	5.9483×10^2	2.8553×10^2
0.00020	3.6773	1.0700	3.5230×10^{11}	1.7110×10^3	0.26700050	0.0000	1.0000	0.7149	6.0069×10^2	2.8681×10^2
0.00030	3.6806	0.9636	3.0690×10^{11}	2.2546×10^3	0.26700050	0.0000	1.0000	0.7149	6.1872×10^2	2.9131×10^2
0.00050	3.6843	0.8244	2.5710×10^{11}	3.2126×10^3	0.26700050	0.0000	1.0000	0.7149	7.7149×10^2	3.0753×10^2
0.00070	3.6861	0.7299	2.2865×10^{11}	4.0618×10^3	0.26700056	0.0000	1.0000	0.7149	5.3972×10^2	2.4720×10^2
0.00100	3.6877	0.6297	2.0224×10^{11}	5.1918×10^3	0.26700067	0.0000	1.0000	0.7149	4.1826×10^2	2.0172×10^2
0.00200	3.6915	0.4491	1.6143×10^{11}	8.1493×10^3	0.26700112	0.0000	1.0000	0.7149	2.7398×10^2	1.3625×10^2
0.00300	3.6972	0.3727	1.4398×10^{11}	1.0244×10^4	0.26700171	0.0001	0.9999	0.7149	2.0824×10^2	1.0467×10^2
0.00500	3.7174	0.3688	1.3060×10^{11}	1.2451×10^4	0.26700325	0.0009	0.9991	0.7149	1.2912×10^2	6.6411×10^1
0.00700	3.7490	0.5192	1.3425×10^{11}	1.1782×10^4	0.26700548	0.0045	0.9955	0.7149	6.8499×10^1	3.7163×10^1
0.01000	3.8276	0.9487	1.5331×10^{11}	9.0349×10^3	0.26707017	0.1087	0.8709	0.7149		
0.01128	3.8598	0.8755	1.2149×10^{11}	1.4388×10^4	0.26724475	0.3110	0.0029	0.7149		
1.700 $M_{\odot}$										
0.00002	3.6591	1.5650	6.7723×10^{11}	4.9195×10^2	0.26700050	0.0000	1.0000	0.7149	6.1643×10^2	2.9572×10^2
0.00010	3.6733	1.2738	4.5358×10^{11}	1.0967×10^3	0.26700050	0.0000	1.0000	0.7149	6.0736×10^2	2.9125×10^2
0.00020	3.6801	1.1070	3.6277×10^{11}	1.7144×10^3	0.26700050	0.0000	1.0000	0.7149	6.1801×10^2	2.9392×10^2
0.00030	3.6838	1.0022	3.1619×10^{11}	2.2568×10^3	0.26700050	0.0000	1.0000	0.7149	6.4651×10^2	3.0023×10^2
0.00050	3.6876	0.8638	2.6495×10^{11}	3.2141×10^3	0.26700052	0.0000	1.0000	0.7149	6.6411×10^2	2.8260×10^2
0.00070	3.6898	0.7709	2.3568×10^{11}	4.0621×10^3	0.26700059	0.0000	1.0000	0.7149	4.8627×10^2	2.2944×10^2
0.00100	3.6918	0.6728	2.0858×10^{11}	5.1863×10^3	0.26700070	0.0000	1.0000	0.7149	3.8506×10^2	1.8805×10^2
0.00200	3.6973	0.5027	1.6720×10^{11}	8.0714×10^3	0.26700116	0.0000	1.0000	0.7149	2.5041×10^2	1.2571×10^2
0.00300	3.7052	0.4413	1.5018×10^{11}	1.0004×10^4	0.26700176	0.0001	0.9999	0.7149	1.8681×10^2	9.4579×10^1
0.00500	3.7317	0.4912	1.4077×10^{11}	1.1386×10^4	0.26700342	0.0012	0.9988	0.7149	1.0522×10^2	5.4843×10^1
0.00700	3.7744	0.7771	1.6074×10^{11}	8.7332×10^3	0.26700599	0.0073	0.9926	0.7149	2.4926×10^1	1.6104×10^1
0.00973	3.8815	1.0048	1.2760×10^{11}	1.3857×10^4	0.26722327	0.2589	0.0187	0.7149		
1.800 $M_{\odot}$										
0.00002	3.6615	1.5876	6.8731×10^{11}	5.0573×10^2	0.26700050	0.0000	1.0000	0.7149	6.2655×10^2	3.0050×10^2
0.00010	3.6759	1.3064	4.6533×10^{11}	1.1033×10^3	0.26700050	0.0000	1.0000	0.7149	6.2054×10^2	2.9714×10^2
0.00020	3.6828	1.1419	3.7296×10^{11}	1.7175×10^3	0.26700050	0.0000	1.0000	0.7149	6.3842×10^2	3.0175×10^2
0.00030	3.6865	1.0379	3.2529×10^{11}	2.2578×10^3	0.26700050	0.0000	1.0000	0.7149	6.8751×10^2	3.1086×10^2
0.00050	3.6908	0.9015	2.7265×10^{11}	3.2136×10^3	0.26700054	0.0000	1.0000	0.7149	5.7217×10^2	2.6032×10^2
0.00070	3.6931	0.8095	2.4264×10^{11}	4.0579×10^3	0.26700061	0.0000	1.0000	0.7149	4.4553×10^2	2.1454×10^2
0.00100	3.6955	0.7140	2.1494×10^{11}	5.1712×10^3	0.26700072	0.0000	1.0000	0.7149	3.5717×10^2	1.7604×10^2
0.00200	3.7029	0.5560	1.7323×10^{11}	7.9607×10^3	0.26700119	0.0000	1.0000	0.7149	2.3157×10^2	1.1600×10^2
0.00300	3.7133	0.5131	1.5714×10^{11}	9.6751×10^3	0.26700181	0.0002	0.9998	0.7149	1.6653×10^2	8.4924×10^1
0.00500	3.7476	0.6438	1.5602×10^{11}	9.8142×10^3	0.26700361	0.0016	0.9984	0.7149	7.6114×10^1	4.1083×10^1
0.00700	3.8106	1.0541	1.8719×10^{11}	6.8183×10^3	0.26700720	0.0179	0.9816	0.7149		
0.00851	3.9011	1.1137	1.3217×10^{11}	1.3676×10^4	0.26721787	0.2170	0.0168	0.7149		

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
1.900 $M_{\odot}$										
0.00002	3.6652	1.5876	6.7586×10^{11}	5.5207×10^2	0.26700050	0.0000	1.0000	0.7149	6.3573×10^2	3.0479×10^2
0.00010	3.6787	1.3257	4.6964×10^{11}	1.1433×10^3	0.26700050	0.0000	1.0000	0.7149	6.3624×10^2	3.0386×10^2
0.00020	3.6856	1.1664	3.7876×10^{11}	1.7578×10^3	0.26700050	0.0000	1.0000	0.7149	6.6739×10^2	3.1145×10^2
0.00030	3.6895	1.0648	3.3103×10^{11}	2.3013×10^3	0.26700050	0.0000	1.0000	0.7149	7.8870×10^2	3.2467×10^2
0.00050	3.6938	0.9305	2.7803×10^{11}	3.2623×10^3	0.26700055	0.0000	1.0000	0.7149	5.1042×10^2	2.4102×10^2
0.00070	3.6964	0.8411	2.4778×10^{11}	4.1075×10^3	0.26700062	0.0000	1.0000	0.7149	4.0844×10^2	2.0011×10^2
0.00100	3.6994	0.7494	2.1996×10^{11}	5.2123×10^3	0.26700073	0.0000	1.0000	0.7149	3.3048×10^2	1.6410×10^2
0.00200	3.7087	0.6077	1.7897×10^{11}	7.8734×10^3	0.26700121	0.0000	1.0000	0.7149	2.1028×10^2	1.0605×10^2
0.00300	3.7222	0.5909	1.6501×10^{11}	9.2612×10^3	0.26700186	0.0002	0.9998	0.7149	1.4607×10^2	7.4677×10^1
0.00500	3.7679	0.8677	1.8381×10^{11}	7.4638×10^3	0.26700384	0.0024	0.9976	0.7149	3.3769×10^1	2.0393×10^1
0.00700	3.9040	1.2987	1.6136×10^{11}	9.6851×10^3	0.26710331	0.1165	0.7511	0.7149		
0.00747	3.9195	1.2143	1.3633×10^{11}	1.3567×10^4	0.26721075	0.1875	0.0012	0.7149		
2.000 $M_{\odot}$										
0.00002	3.6677	1.6073	6.8347×10^{11}	5.6825×10^2	0.26700050	0.0000	1.0000	0.7149	6.4646×10^2	3.0969×10^2
0.00010	3.6810	1.3533	4.7983×10^{11}	1.1529×10^3	0.26700050	0.0000	1.0000	0.7149	6.5368×10^2	3.1113×10^2
0.00020	3.6879	1.1965	3.8801×10^{11}	1.7632×10^3	0.26700050	0.0000	1.0000	0.7149	7.0508×10^2	3.2221×10^2
0.00030	3.6918	1.0961	3.3942×10^{11}	2.3041×10^3	0.26700051	0.0000	1.0000	0.7149	7.3404×10^2	3.0544×10^2
0.00050	3.6965	0.9641	2.8536×10^{11}	3.2597×10^3	0.26700057	0.0000	1.0000	0.7149	4.7250×10^2	2.2643×10^2
0.00070	3.6994	0.8763	2.5458×10^{11}	4.0958×10^3	0.26700063	0.0000	1.0000	0.7149	3.8244×10^2	1.8847×10^2
0.00100	3.7027	0.7880	2.2644×10^{11}	5.1771×10^3	0.26700075	0.0000	1.0000	0.7149	3.0962×10^2	1.5414×10^2
0.00200	3.7144	0.6638	1.8603×10^{11}	7.6700×10^3	0.26700124	0.0000	1.0000	0.7149	1.9211×10^2	9.7295×10^1
0.00300	3.7310	0.6784	1.7522×10^{11}	8.6461×10^3	0.26700192	0.0002	0.9998	0.7149	1.2498×10^2	6.4760×10^1
0.00500	3.7940	1.1113	2.1580×10^{11}	5.6998×10^3	0.26700414	0.0043	0.9957	0.7149		
0.00663	3.9366	1.3107	1.4077×10^{11}	1.3395×10^4	0.26720409	0.1643	0.0040	0.7149		
2.100 $M_{\odot}$										
0.00002	3.6699	1.6252	6.9064×10^{11}	5.8434×10^2	0.26700050	0.0000	1.0000	0.7149	6.5837×10^2	3.1508×10^2
0.00010	3.6831	1.3797	4.8980×10^{11}	1.1618×10^3	0.26700050	0.0000	1.0000	0.7149	6.7406×10^2	3.1919×10^2
0.00020	3.6902	1.2256	3.9704×10^{11}	1.7681×10^3	0.26700050	0.0000	1.0000	0.7149	7.6725×10^2	3.3470×10^2
0.00030	3.6942	1.1262	3.4766×10^{11}	2.3060×10^3	0.26700052	0.0000	1.0000	0.7149	6.2889×10^2	2.8272×10^2
0.00050	3.6990	0.9959	2.9265×10^{11}	3.2545×10^3	0.26700057	0.0000	1.0000	0.7149	4.3801×10^2	2.1353×10^2
0.00070	3.7022	0.9109	2.6144×10^{11}	4.0777×10^3	0.26700064	0.0000	1.0000	0.7149	3.5780×10^2	1.7783×10^2
0.00100	3.7061	0.8268	2.3308×10^{11}	5.1306×10^3	0.26700075	0.0000	1.0000	0.7149	2.9051×10^2	1.4491×10^2
0.00200	3.7200	0.7224	1.9388×10^{11}	7.4148×10^3	0.26700126	0.0000	1.0000	0.7149	1.7410×10^2	8.8710×10^1
0.00300	3.7406	0.7820	1.8885×10^{11}	7.8149×10^3	0.26700198	0.0003	0.9997	0.7149	1.0034×10^2	5.3150×10^1
0.00500	3.8512	1.3513	2.1855×10^{11}	5.8352×10^3	0.26700483	0.0121	0.9872	0.7149		
0.00591	3.9526	1.3994	1.4485×10^{11}	1.3284×10^4	0.26720477	0.1405	0.0036	0.7149		
2.200 $M_{\odot}$										
0.00002	3.6727	1.6312	6.8632×10^{11}	6.1990×10^2	0.26700055	0.0000	1.0000	0.7149	6.7149×10^2	3.2080×10^2
0.00010	3.6853	1.3992	4.9600×10^{11}	1.1869×10^3	0.26700055	0.0000	1.0000	0.7149	7.0125×10^2	3.2894×10^2
0.00020	3.6923	1.2497	4.0429×10^{11}	1.7864×10^3	0.26700055	0.0000	1.0000	0.7149	8.7036×10^2	3.3583×10^2
0.00030	3.6964	1.1528	3.5479×10^{11}	2.3196×10^3	0.26700057	0.0000	1.0000	0.7149	5.6382×10^2	2.6355×10^2
0.00050	3.7015	1.0255	2.9941×10^{11}	3.2572×10^3	0.26700063	0.0000	1.0000	0.7149	4.0861×10^2	2.0131×10^2
0.00070	3.7049	0.9435	2.6808×10^{11}	4.0630×10^3	0.26700069	0.0000	1.0000	0.7149	3.3653×10^2	1.6770×10^2
0.00100	3.7093	0.8641	2.3977×10^{11}	5.0790×10^3	0.26700081	0.0000	1.0000	0.7149	2.7062×10^2	1.3605×10^2
0.00200	3.7259	0.7854	2.0288×10^{11}	7.0943×10^3	0.26700133	0.0001	0.9999	0.7149	1.5516×10^2	7.9867×10^1
0.00300	3.7521	0.9183	2.0953×10^{11}	6.6507×10^3	0.26700210	0.0004	0.9996	0.7149	6.8366×10^1	3.7423×10^1
0.00500	3.9525	1.5656	1.7550×10^{11}	9.4799×10^3	0.26709444	0.0785	0.7752	0.7149		
0.00530	3.9675	1.4809	1.4855×10^{11}	1.3232×10^4	0.26720411	0.1239	0.0002	0.7149		
2.300 $M_{\odot}$										
0.00002	3.6811	1.5365	5.9228×10^{11}	8.7019×10^2	0.26700070	0.0000	1.0000	0.7149	6.9841×10^2	3.3077×10^2
0.00010	3.6899	1.3674	4.6811×10^{11}	1.3931×10^3	0.26700070	0.0000	1.0000	0.7149	7.8557×10^2	3.4749×10^2
0.00020	3.6957	1.2417	3.9426×10^{11}	1.9639×10^3	0.26700071	0.0000	1.0000	0.7149	6.2126×10^2	2.8389×10^2
0.00030	3.6995	1.1559	3.5106×10^{11}	2.4769×10^3	0.26700074	0.0000	1.0000	0.7149	4.8881×10^2	2.3586×10^2
0.00050	3.7044	1.0409	3.0060×10^{11}	3.3783×10^3	0.26700080	0.0000	1.0000	0.7149	3.7046×10^2	1.8450×10^2
0.00070	3.7081	0.9655	2.7130×10^{11}	4.1474×10^3	0.26700087	0.0000	1.0000	0.7149	3.0912×10^2	1.5455×10^2
0.00100	3.7131	0.8967	2.4468×10^{11}	5.0990×10^3	0.26700099	0.0000	1.0000	0.7149	2.4767×10^2	1.2519×10^2
0.00200	3.7329	0.8578	2.1354×10^{11}	6.6944×10^3	0.26700153	0.0001	0.9999	0.7149	1.3232×10^2	6.8890×10^1
0.00300	3.7689	1.1188	2.4431×10^{11}	5.1142×10^3	0.26700238	0.0005	0.9995	0.7149	2.6877×10^1	1.7314×10^1
0.00475	3.9818	1.5602	1.5241×10^{11}	1.3142×10^4	0.26720060	0.1120	0.0010	0.7149		

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PPI)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
2.400 $M_{\odot}$										
0.00002	3.6835	1.5466	5.9252×10^{11}	9.0730×10^2	0.26700050	0.0000	1.0000	0.7149	7.2573×10^2	3.4054×10^2
0.00010	3.6919	1.3871	4.7449×10^{11}	1.4148×10^3	0.26700050	0.0000	1.0000	0.7149	9.2712×10^2	3.5697×10^2
0.00020	3.6977	1.2662	4.0197×10^{11}	1.9714×10^3	0.26700052	0.0000	1.0000	0.7149	5.6076×10^2	2.6488×10^2
0.00030	3.7014	1.1831	3.5902×10^{11}	2.4713×10^3	0.26700055	0.0000	1.0000	0.7149	4.5297×10^2	2.2236×10^2
0.00050	3.7065	1.0722	3.0860×10^{11}	3.3448×10^3	0.26700060	0.0000	1.0000	0.7149	3.4989×10^2	1.7473×10^2
0.00070	3.7106	1.0015	2.7928×10^{11}	4.0839×10^3	0.26700068	0.0000	1.0000	0.7149	2.9081×10^2	1.4614×10^2
0.00100	3.7162	0.9379	2.5291×10^{11}	4.9798×10^3	0.26700080	0.0000	1.0000	0.7149	2.3272×10^2	1.1750×10^2
0.00200	3.7396	0.9401	2.2768×10^{11}	6.1448×10^3	0.26700136	0.0001	0.9999	0.7149	1.0990×10^2	5.7873×10^1
0.00300	3.7886	1.3084	2.7762×10^{11}	4.1329×10^3	0.26700228	0.0009	0.9991	0.7149		
0.00431	3.9945	1.6271	1.5524×10^{11}	1.3217×10^4	0.26721080	0.0981	0.0034	0.7149		
2.500 $M_{\odot}$										
0.00002	3.6857	1.5484	5.8784×10^{11}	9.6022×10^2	0.26700050	0.0000	1.0000	0.7149	7.6959×10^2	3.5381×10^2
0.00010	3.6941	1.3984	4.7582×10^{11}	1.4655×10^3	0.26700051	0.0000	1.0000	0.7149	7.2986×10^2	3.1864×10^2
0.00020	3.6998	1.2818	4.0526×10^{11}	2.0204×10^3	0.26700053	0.0000	1.0000	0.7149	5.1058×10^2	2.4654×10^2
0.00030	3.7036	1.2015	3.6311×10^{11}	2.5165×10^3	0.26700055	0.0000	1.0000	0.7149	4.2203×10^2	2.0846×10^2
0.00050	3.7090	1.0958	3.1355×10^{11}	3.3751×10^3	0.26700061	0.0000	1.0000	0.7149	3.2760×10^2	1.6399×10^2
0.00070	3.7134	1.0302	2.8490×10^{11}	4.0879×10^3	0.26700068	0.0000	1.0000	0.7149	2.6977×10^2	1.3657×10^2
0.00100	3.7197	0.9752	2.5973×10^{11}	4.9186×10^3	0.26700081	0.0000	1.0000	0.7149	2.1251×10^2	1.0843×10^2
0.00200	3.7490	1.0548	2.4880×10^{11}	5.3604×10^3	0.26700140	0.0001	0.9999	0.7149	7.6716×10^1	4.1765×10^1
0.00300	3.8309	1.5156	2.9007×10^{11}	3.9435×10^3	0.26700202	0.0018	0.9982	0.7149		
0.00388	4.0082	1.7075	1.5987×10^{11}	1.2982×10^4	0.26720180	0.0873	0.0049	0.7149		
2.600 $M_{\odot}$										
0.00002	3.6877	1.5707	5.9764×10^{11}	9.6614×10^2	0.26700050	0.0000	1.0000	0.7149	8.2161×10^2	3.6630×10^2
0.00010	3.6956	1.4230	4.8618×10^{11}	1.4599×10^3	0.26700051	0.0000	1.0000	0.7149	6.4756×10^2	2.9709×10^2
0.00020	3.7013	1.3088	4.1517×10^{11}	2.0020×10^3	0.26700053	0.0000	1.0000	0.7149	4.7727×10^2	2.3368×10^2
0.00030	3.7052	1.2304	3.7262×10^{11}	2.4854×10^3	0.26700056	0.0000	1.0000	0.7149	3.9907×10^2	1.9829×10^2
0.00050	3.7110	1.1284	3.2262×10^{11}	3.3155×10^3	0.26700061	0.0000	1.0000	0.7149	3.1030×10^2	1.5587×10^2
0.00070	3.7158	1.0667	2.9393×10^{11}	3.9942×10^3	0.26700069	0.0000	1.0000	0.7149	2.5356×10^2	1.2912×10^2
0.00100	3.7229	1.0193	2.6934×10^{11}	4.7568×10^3	0.26700081	0.0000	1.0000	0.7149	1.9728×10^2	1.0091×10^2
0.00200	3.7594	1.1965	2.7917×10^{11}	4.4279×10^3	0.26700144	0.0001	0.9999	0.7149	4.3318×10^1	2.5631×10^1
0.00300	3.9086	1.7184	2.5611×10^{11}	5.2609×10^3	0.26700252	0.0049	0.9947	0.7149		
0.00354	4.0199	1.7706	1.6287×10^{11}	1.3008×10^4	0.26720860	0.0777	0.0096	0.7149		
2.700 $M_{\odot}$										
0.00002	3.6896	1.5815	5.9974×10^{11}	9.9627×10^2	0.26700050	0.0000	1.0000	0.7149	9.7713×10^2	3.8421×10^2
0.00010	3.6974	1.4381	4.9050×10^{11}	1.4895×10^3	0.26700051	0.0000	1.0000	0.7149	5.8382×10^2	2.7618×10^2
0.00020	3.7032	1.3267	4.2009×10^{11}	2.0306×10^3	0.26700054	0.0000	1.0000	0.7149	4.4484×10^2	2.1986×10^2
0.00030	3.7072	1.2509	3.7791×10^{11}	2.5092×10^3	0.26700056	0.0000	1.0000	0.7149	3.7408×10^2	1.8688×10^2
0.00050	3.7134	1.1539	3.2855×10^{11}	3.3198×10^3	0.26700062	0.0000	1.0000	0.7149	2.9056×10^2	1.4632×10^2
0.00070	3.7186	1.0978	3.0068×10^{11}	3.9636×10^3	0.26700069	0.0000	1.0000	0.7149	2.3657×10^2	1.2014×10^2
0.00100	3.7266	1.0626	2.7825×10^{11}	4.6286×10^3	0.26700082	0.0000	1.0000	0.7149	1.7757×10^2	9.1357×10^1
0.00200	3.7749	1.3740	3.1884×10^{11}	3.5251×10^3	0.26700150	0.0002	0.9998	0.7149	1.1532×10^1	1.0240×10^1
0.00300	4.0053	1.9162	2.0600×10^{11}	8.4442×10^3	0.26707308	0.0353	0.9060	0.7149		
0.00322	4.0321	1.8392	1.6667×10^{11}	1.2900×10^4	0.26720193	0.0719	0.0055	0.7149		
2.800 $M_{\odot}$										
0.00002	3.6920	1.5829	5.9393×10^{11}	1.0535×10^3	0.26700150	0.0000	1.0000	0.7149	7.8383×10^2	3.3818×10^2
0.00010	3.6993	1.4483	4.9190×10^{11}	1.5359×10^3	0.26700152	0.0000	1.0000	0.7149	5.2828×10^2	2.5457×10^2
0.00020	3.7050	1.3428	4.2439×10^{11}	2.0633×10^3	0.26700154	0.0000	1.0000	0.7149	4.1345×10^2	2.0543×10^2
0.00030	3.7091	1.2712	3.8345×10^{11}	2.5275×10^3	0.26700156	0.0000	1.0000	0.7149	3.5028×10^2	1.7521×10^2
0.00050	3.7156	1.1808	3.3545×10^{11}	3.3026×10^3	0.26700163	0.0000	1.0000	0.7149	2.7001×10^2	1.3680×10^2
0.00070	3.7214	1.1322	3.0883×10^{11}	3.8963×10^3	0.26700170	0.0000	1.0000	0.7149	2.1812×10^2	1.1100×10^2
0.00100	3.7305	1.1121	2.8932×10^{11}	4.4397×10^3	0.26700184	0.0000	1.0000	0.7149	1.5660×10^2	8.1122×10^1
0.00200	3.7963	1.5402	3.4978×10^{11}	3.0375×10^3	0.26700245	0.0003	0.9997	0.7149		
0.00294	4.0429	1.8971	1.6946×10^{11}	1.2940×10^4	0.26720465	0.0667	0.0019	0.7149		
2.900 $M_{\odot}$										
0.00002	3.6938	1.5939	5.9663×10^{11}	1.0813×10^3	0.26700150	0.0000	1.0000	0.7149	6.7771×10^2	3.0972×10^2
0.00010	3.7010	1.4645	4.9744×10^{11}	1.5555×10^3	0.26700152	0.0000	1.0000	0.7149	4.8616×10^2	2.3813×10^2
0.00020	3.7067	1.3630	4.3102×10^{11}	2.0718×10^3	0.26700154	0.0000	1.0000	0.7149	3.8660×10^2	1.9333×10^2
0.00030	3.7109	1.2944	3.9059×10^{11}	2.5229×10^3	0.26700157	0.0000	1.0000	0.7149	3.2611×10^2	1.6493×10^2

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PPI)	L_g	X_{cnn}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00050	3.7178	1.2103	3.4350×10^{11}	3.2621×10^3	0.26700163	0.0000	1.0000	0.7149	2.5194×10^2	1.2781×10^2
0.00070	3.7242	1.1694	3.1821×10^{11}	3.8012×10^3	0.26700170	0.0000	1.0000	0.7149	1.9909×10^2	1.0190×10^2
0.00100	3.7348	1.1692	3.0300×10^{11}	4.1924×10^3	0.26700185	0.0000	1.0000	0.7149	1.3347×10^2	6.9859×10^1
0.00200	3.8433	1.7161	3.4500×10^{11}	3.2337×10^3	0.26700232	0.0006	0.9994	0.7149		
0.00269	4.0536	1.9556	1.7261×10^{11}	1.2919×10^4	0.26720771	0.0600	0.0018	0.7149		
3.000 $M_{\odot}$										
0.00002	3.6963	1.5894	5.8678×10^{11}	1.1564×10^3	0.26700050	0.0000	1.0000	0.7149	6.0080×10^2	2.8192×10^2
0.00010	3.7031	1.4715	4.9651×10^{11}	1.6151×10^3	0.26700052	0.0000	1.0000	0.7149	4.4480×10^2	2.1937×10^2
0.00020	3.7088	1.3773	4.3406×10^{11}	2.1133×10^3	0.26700054	0.0000	1.0000	0.7149	3.5980×10^2	1.7944×10^2
0.00030	3.7131	1.3140	3.9555×10^{11}	2.5449×10^3	0.26700057	0.0000	1.0000	0.7149	3.0486×10^2	1.5318×10^2
0.00050	3.7204	1.2389	3.5084×10^{11}	3.2349×10^3	0.26700063	0.0000	1.0000	0.7149	2.3038×10^2	1.1751×10^2
0.00070	3.7274	1.2091	3.2819×10^{11}	3.6968×10^3	0.26700071	0.0000	1.0000	0.7149	1.7678×10^2	9.1216×10^1
0.00100	3.7401	1.2404	3.2092×10^{11}	3.8661×10^3	0.26700086	0.0000	1.0000	0.7149	1.0461×10^2	5.6009×10^1
0.00200	3.9179	1.9100	3.0599×10^{11}	4.2525×10^3	0.26700128	0.0016	0.9984	0.7149		
0.00246	4.0641	2.0152	1.7613×10^{11}	1.2835×10^4	0.26720588	0.0554	0.0063	0.7149		
3.200 $M_{\odot}$										
0.00002	3.7001	1.6000	5.8366×10^{11}	1.2468×10^3	0.26700050	0.0000	1.0000	0.7149	5.1541×10^2	2.4877×10^2
0.00010	3.7066	1.4968	5.0314×10^{11}	1.6777×10^3	0.26700052	0.0000	1.0000	0.7149	3.8636×10^2	1.9150×10^2
0.00020	3.7123	1.4140	4.4547×10^{11}	2.1402×10^3	0.26700054	0.0000	1.0000	0.7149	3.0973×10^2	1.5624×10^2
0.00030	3.7170	1.3600	4.0971×10^{11}	2.5301×10^3	0.26700057	0.0000	1.0000	0.7149	2.6061×10^2	1.3219×10^2
0.00050	3.7255	1.3057	3.7005×10^{11}	3.1015×10^3	0.26700064	0.0000	1.0000	0.7149	1.8938×10^2	9.6995×10^1
0.00070	3.7347	1.3080	3.5572×10^{11}	3.3564×10^3	0.26700072	0.0000	1.0000	0.7149	1.2948×10^2	6.7911×10^1
0.00100	3.7557	1.4584	3.8391×10^{11}	2.8816×10^3	0.26700088	0.0000	1.0000	0.7149	4.1937×10^1	2.4943×10^1
0.00200	4.0839	2.2063	2.0037×10^{11}	1.0579×10^4	0.26711840	0.0474	0.4094	0.7149		
0.00207	4.0832	2.1200	1.8193×10^{11}	1.2831×10^4	0.26720880	0.0480	0.0056	0.7149		
3.400 $M_{\odot}$										
0.00002	3.6958	1.7406	7.0001×10^{11}	9.2091×10^2	0.26700050	0.0000	1.0000	0.7149	5.4359×10^2	2.5991×10^2
0.00010	3.7049	1.5997	5.7079×10^{11}	1.3851×10^3	0.26700052	0.0000	1.0000	0.7149	3.8785×10^2	1.9219×10^2
0.00020	3.7121	1.4989	4.9162×10^{11}	1.8671×10^3	0.26700054	0.0000	1.0000	0.7149	3.0008×10^2	1.5170×10^2
0.00030	3.7178	1.4387	4.4686×10^{11}	2.2599×10^3	0.26700057	0.0000	1.0000	0.7149	2.4515×10^2	1.2485×10^2
0.00050	3.7280	1.3890	4.0260×10^{11}	2.7840×10^3	0.26700063	0.0000	1.0000	0.7149	1.6482×10^2	8.5365×10^1
0.00070	3.7401	1.4249	3.9682×10^{11}	2.8658×10^3	0.26700071	0.0000	1.0000	0.7149	9.4627×10^1	5.1246×10^1
0.00100	3.7717	1.6609	4.5013×10^{11}	2.2271×10^3	0.26700089	0.0000	1.0000	0.7149	7.5434×10^0	3.2537×10^1
0.00182	4.1002	2.2089	1.8636×10^{11}	1.2993×10^4	0.26722195	0.0411	0.0002	0.7149		
3.600 $M_{\odot}$										
0.00002	3.6969	1.7849	7.3280×10^{11}	8.8977×10^2	0.26700050	0.0000	1.0000	0.7149	4.9456×10^2	2.4001×10^2
0.00010	3.7065	1.6468	5.9821×10^{11}	1.3352×10^3	0.26700052	0.0000	1.0000	0.7149	3.4837×10^2	1.7389×10^2
0.00020	3.7143	1.5519	5.1722×10^{11}	1.7861×10^3	0.26700054	0.0000	1.0000	0.7149	2.6690×10^2	1.3458×10^2
0.00030	3.7208	1.5000	4.7289×10^{11}	2.1367×10^3	0.26700057	0.0000	1.0000	0.7149	2.1054×10^2	1.0764×10^2
0.00050	3.7334	1.4822	4.3722×10^{11}	2.4995×10^3	0.26700064	0.0000	1.0000	0.7149	1.2369×10^2	6.5402×10^1
0.00070	3.7519	1.6052	4.6253×10^{11}	2.2334×10^3	0.26700072	0.0000	1.0000	0.7149	4.2959×10^1	2.5738×10^1
0.00100	3.8134	1.8969	4.8759×10^{11}	2.0097×10^3	0.26700082	0.0000	1.0000	0.7149		
0.00159	4.1140	2.2739	1.8848×10^{11}	1.3449×10^4	0.26725586	0.0341	0.0074	0.7149		
3.800 $M_{\odot}$										
0.00002	3.6975	1.8341	7.7338×10^{11}	8.4322×10^2	0.26700050	0.0000	1.0000	0.7149	4.6498×10^2	2.2685×10^2
0.00010	3.7080	1.6942	6.2744×10^{11}	1.2811×10^3	0.26700052	0.0000	1.0000	0.7149	3.1507×10^2	1.5839×10^2
0.00020	3.7167	1.6046	5.4361×10^{11}	1.7067×10^3	0.26700054	0.0000	1.0000	0.7149	2.3197×10^2	1.1834×10^2
0.00030	3.7242	1.5645	5.0148×10^{11}	2.0055×10^3	0.26700057	0.0000	1.0000	0.7149	1.7433×10^2	9.0158×10^1
0.00050	3.7412	1.6106	4.8891×10^{11}	2.1099×10^3	0.26700064	0.0000	1.0000	0.7149	7.6777×10^1	4.2800×10^1
0.00070	3.7709	1.8092	5.3605×10^{11}	1.7551×10^3	0.26700074	0.0000	1.0000	0.7149	4.4412×10^0	2.6528×10^1
0.00100	3.9107	2.1781	4.3065×10^{11}	2.7195×10^3	0.26700075	0.0002	0.9998	0.7149		
0.00137	4.1311	2.3746	1.9563×10^{11}	1.3178×10^4	0.26723873	0.0320	0.0001	0.7149		
4.000 $M_{\odot}$										
0.00002	3.7002	1.8471	7.7526×10^{11}	8.8331×10^2	0.26700050	0.0000	1.0000	0.7149	4.1814×10^2	2.0553×10^2
0.00010	3.7107	1.7267	6.4329×10^{11}	1.2829×10^3	0.26700052	0.0000	1.0000	0.7149	2.7578×10^2	1.3879×10^2
0.00020	3.7202	1.6561	5.6754×10^{11}	1.6482×10^3	0.26700054	0.0000	1.0000	0.7149	1.9237×10^2	9.9052×10^1
0.00030	3.7292	1.6422	5.3591×10^{11}	1.8485×10^3	0.26700057	0.0000	1.0000	0.7149	1.3145×10^2	6.9507×10^1
0.00050	3.7552	1.7972	5.6822×10^{11}	1.6443×10^3	0.26700065	0.0000	1.0000	0.7149	2.6024×10^1	1.7991×10^1
0.00070	3.8144	2.0257	5.6305×10^{11}	1.6746×10^3	0.26700069	0.0000	1.0000	0.7149		

Table 1. Continued

Age(Gyr)	$\log T_{\text{eff}}$	$\log L/L_{\odot}$	R(cm)	$g(\text{cm/s}^2)$	Y_c	L(PP1)	L_g	X_{env}	$\tau_{gc}(\text{day})$	$\tau_{lc}(\text{day})$
0.00100	4.0460	2.4855	3.2901×10^{11}	4.9044×10^3	0.26700140	0.0015	0.9981	0.7149		
0.00118	4.1457	2.4556	2.0084×10^{11}	1.3161×10^4	0.26724459	0.0281	0.0047	0.7149		
$4.500M_{\odot}$										
0.00002	3.6991	1.9901	9.1895×10^{11}	7.0725×10^2	0.26700050	0.0000	1.0000	0.7149	3.7413×10^2	1.8670×10^2
0.00010	3.7131	1.8679	7.4826×10^{11}	1.0667×10^3	0.26700052	0.0000	1.0000	0.7149	2.1660×10^2	1.1093×10^2
0.00020	3.7271	1.8415	6.8063×10^{11}	1.2892×10^3	0.26700054	0.0000	1.0000	0.7149	1.1830×10^2	6.3101×10^1
0.00030	3.7457	1.9378	6.9815×10^{11}	1.2253×10^3	0.26700057	0.0000	1.0000	0.7149	3.8014×10^1	2.4146×10^1
0.00050	3.8339	2.2129	6.3836×10^{11}	1.4656×10^3	0.26700061	0.0000	1.0000	0.7149		
0.00070	4.0423	2.6285	3.9454×10^{11}	3.8368×10^3	0.26700067	0.0004	0.9995	0.7149		
0.00087	4.1791	2.6454	2.1424×10^{11}	1.3012×10^4	0.26724505	0.0231	0.0146	0.7149		
$5.000M_{\odot}$										
0.00002	3.7007	2.0825	1.0146×10^{12}	6.4471×10^2	0.26700050	0.0000	1.0000	0.7149	3.2367×10^2	1.6185×10^2
0.00010	3.7182	2.0128	8.6391×10^{11}	8.8915×10^2	0.26700052	0.0000	1.0000	0.7149	1.4662×10^2	7.6777×10^1
0.00020	3.7452	2.1250	8.6804×10^{11}	8.8071×10^2	0.26700054	0.0000	1.0000	0.7149	2.7883×10^1	1.9601×10^1
0.00030	3.7934	2.2610	8.1296×10^{11}	1.0041×10^3	0.26700056	0.0000	1.0000	0.7149		
0.00050	4.0469	2.7682	4.5365×10^{11}	3.2246×10^3	0.26700057	0.0002	0.9998	0.7149		
0.00065	4.2075	2.8045	2.2580×10^{11}	1.3016×10^4	0.26724996	0.0207	0.0253	0.7149		