1. Selected Figures Regarding the Atmosphere of the Sun

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The figures illustrate the solar temperature profile with depth, the solar spectrum over a broad frequency range, and variability with time of the solar spectrum. There is also a figure illustrating the limb darkening in the Sun, which can be observed as we ressolve the disk of the Sun, not just see its integrated light. Limb darkening can be used to infer the $T - \tau$ distribution of the solar atmosphere.
Fig. 1.— The VALIII empirically determined Solar atmosphere. (Fig. 6.2 from Rutten)
Fig. 2.— Comparison of an empirical atmosphere $T - \tau$ profile derived from observations with that of a classical LTE model atmosphere with the Solar $T_{\text{eff}}$ and surface gravity. (Fig. 5.2 from Rutten)
Fig. 3.— The Solar spectrum from the $\gamma$-ray regime to the radio. Some indication of the time variability is shown. (Fig. 6.1 from Rutten)
Fig. 4.— The $T$–height distribution for the Sun is shown, together with selected lines and continuum wavelengths that originate in various regions. (Fig. 6.7 from Rutten)
Fig. 5.— Upper panel: The $T$–height relation for the outermost layers of the Sun, the corona and chromosphere. Middle panel: The corona as seen during a solar eclipse. Bottom panel: The change in the orientation of the magnetic field of the Sun during the 11 year

Figure 11.19 The temperature (solid line) and number density structure (dotted line) of the upper atmosphere of the Sun. (Figure from Mariska, *The Solar Transition Region*, Cambridge University Press, Cambridge, 1992.)

Figure 11.21 (a) The quiet solar corona seen during a total solar eclipse in 1954. The shape of the corona is elongated along the Sun's equator. (Courtesy of J. D. R. Bahng and K. L. Hallam.) (b) The active corona tends to have a very complex structure. This image of the July 11, 1991 eclipse is a composite of five photographs that was processed electronically. (Courtesy of S. Albers.)

Figure 11.32 The global magnetic field orientation of the Sun, along with the magnetic polarity of sunspots during successive 11-year periods.
Fig. 6.— Details of the solar cycle, including the variation in the number of sunspots and the latitude of the sunspots. (Fig. 11.28 from Rutten)
Fig. 7.— Variation with time of the total luminosity from the Sun, the solar irradiance, as measured by a satellite. (Fig. 1 from Frohlich & Lean 1998)
Fig. 8.— The limb darkening for the Sun. (Fig. 9.2 from Gray, 3rd edition)