Appendix E: Additional Figures

This appendix contains plots of calculated results that fill out the picture given by the selected examples in the body of the text. This means that sets of related plots will be partly in this appendix and partly in the main text. The natural groupings are:

IPCC 1992 scenarios This set of figures shows the atmospheric CO_2 concentrations from forward calculations using the 6 IPCC 1992 scenarios: Figures 7.1 (IS92a), E.8 (IS92b), E.9 (IS92c), E.10 (IS92d), E.11 (IS92e) and E.12 (IS92f).

Science profiles This set of forward calculations uses specified percentage changes from 1995 emissions. The calculated CO_2 concentrations are shown in Figures 7.2 (DEC0%, i.e. emissions stabilised at 1995 levels), E.6 (DEC1%) and E.7 (DEC2%).

Emissions for stabilisation This set of figures shows the results of the inverse calculations which deduce the industrial (fossil) emissions required to achieve the concentration profiles specified in Figure 8.1. The results are in Figures 8.2 (S450), 8.3 (S650), E.1 (S350), E.2 (S550), E.3 (S750), E.4 (DS450) and E.5 (DS550). As discussed earlier, for the purposes of the Framework Convention on Climate Change, an analysis in terms of total anthropogenic emission might have been preferable. The curves can be converted to the anthropogenic total by adding the prescribed 'land-use' flux shown in Figure B.4.

Integrated emissions for stabilisation This group shows the cumulative industrial emissions from 1990 onwards for the stabilisation cases. These are Figures 8.6a (S650), E.13a (S350), E.14a (S450), E.15a (S550) and E.16a (S750). To convert to the integrals of total anthropogenic emissions, the integral (from 1990) of the land-use flux shown in Figure B.4 must be added. This is relatively small and after 2100 it is a constant 82 GtC.

Integrated oceanic uptake for stabilisation These show the cumulative ocean uptake from 1990 for the stabilisation calculations. The prescribed atmospheric concentration for each case is shown as the dashed curve. These are Figures 8.6b (S650), E.13b (S350), E.14b (S450), E.15b (S550) and E.16b (S750). The vertical scale on each of these plots is half that of the corresponding plots for cumulative industrial emissions.

Impulse responses The various cases of impulse response functions are shown in Figures 9.1 (pre-industrial), 9.2 (relative to S650) and 9.3 (calculated using Model J, including the reference case used to define GWPs).

In the majority of figures in this appendix, dashed curves are used to denote cases calculated with climatic feedbacks included (Models R* and T).
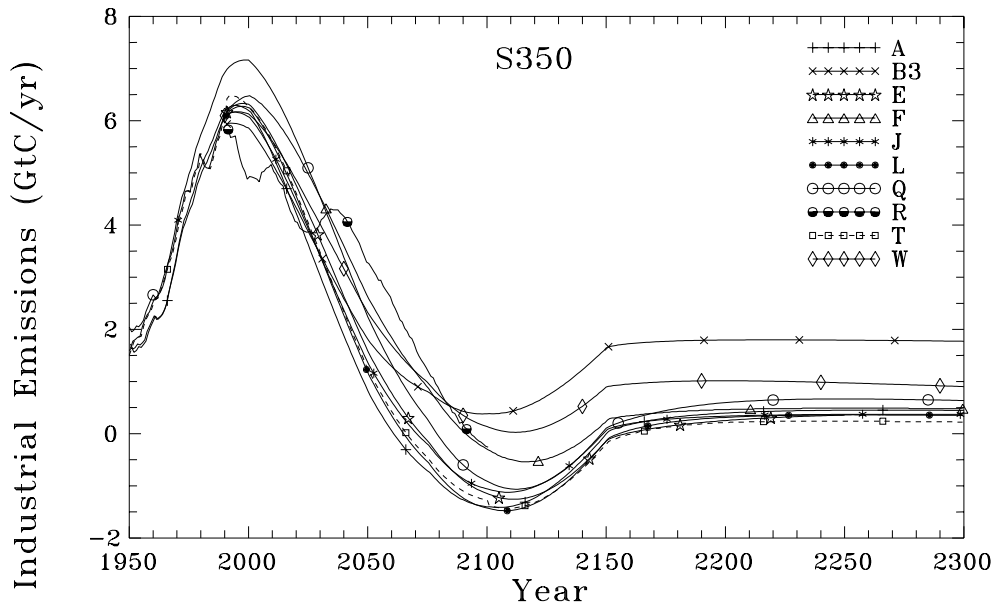
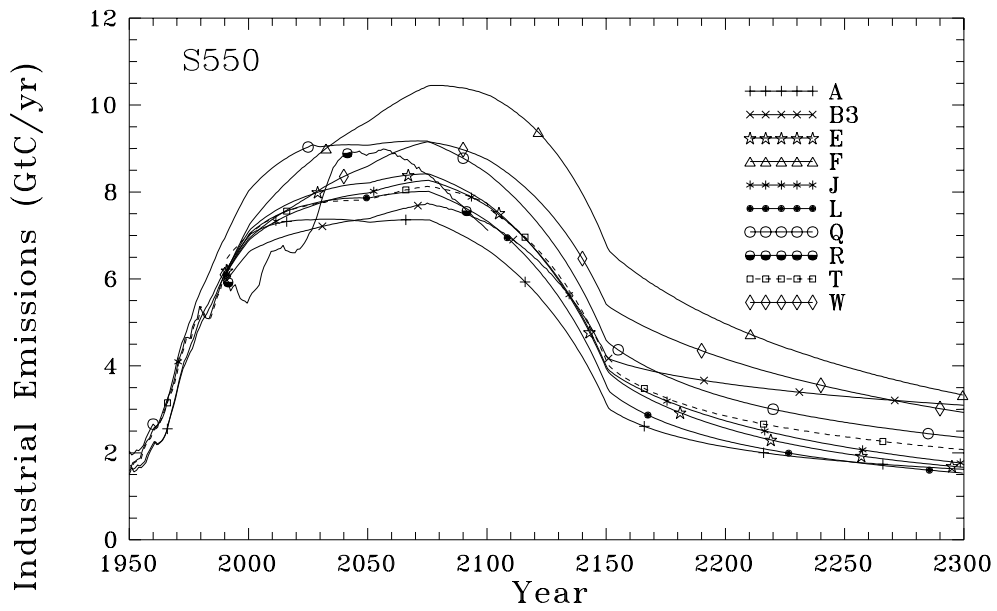Figure E.1. Calculated industrial emissions for S350 case.

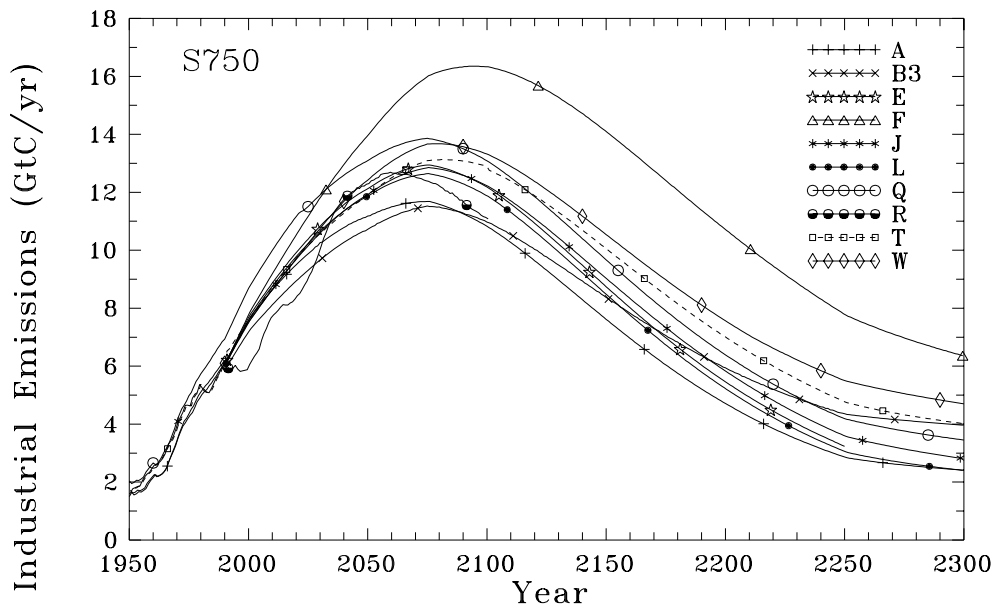Figure E.2. Calculated industrial emissions for S550 case.

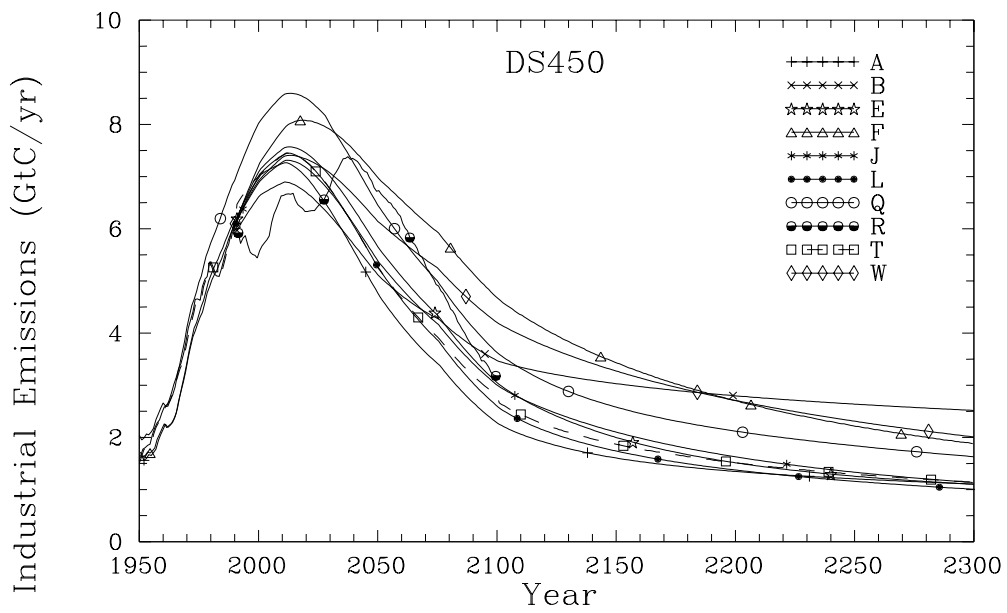Figure E.3. Calculated industrial emissions for S750 case.

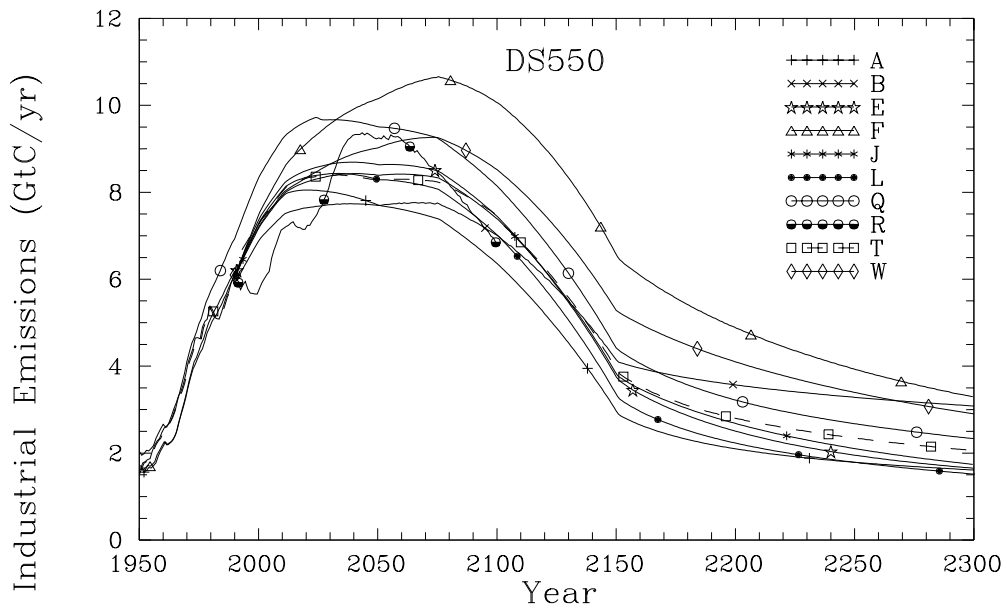Figure E.4. Calculated industrial emissions for DS450 case.

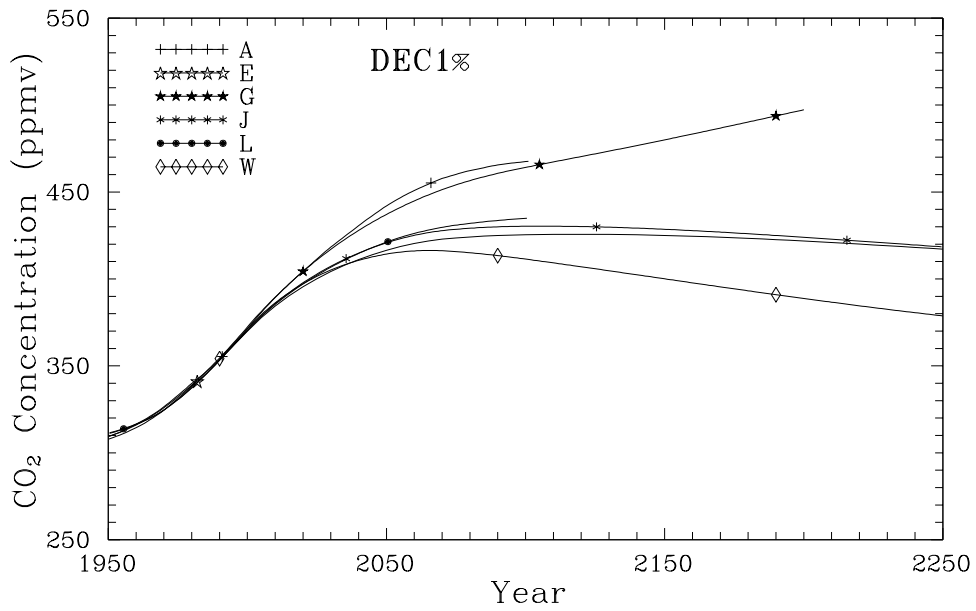Figure E.5. Calculated industrial emissions for DS550 case.

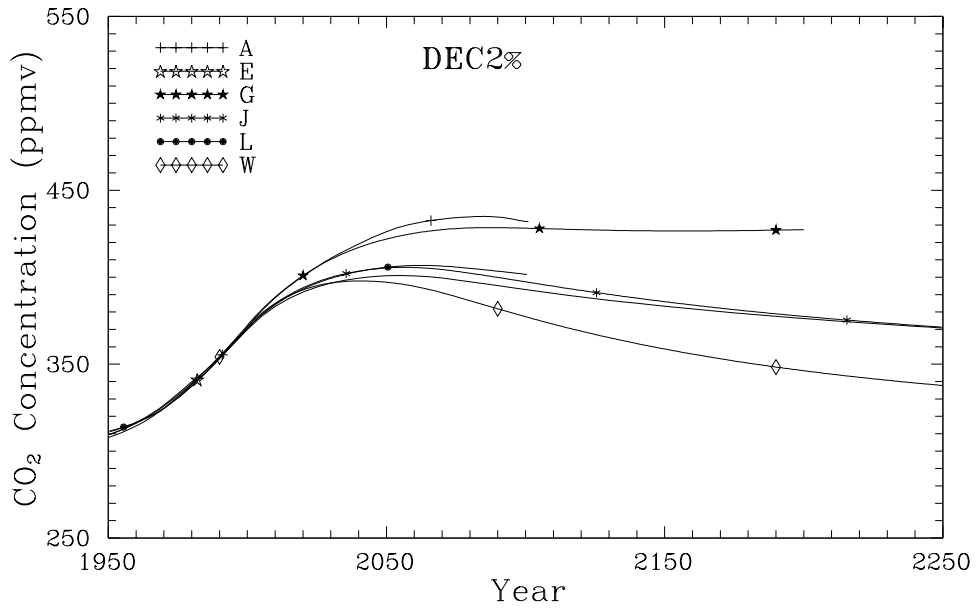Figure E.6. Concentrations for 1% compound emission reduction.

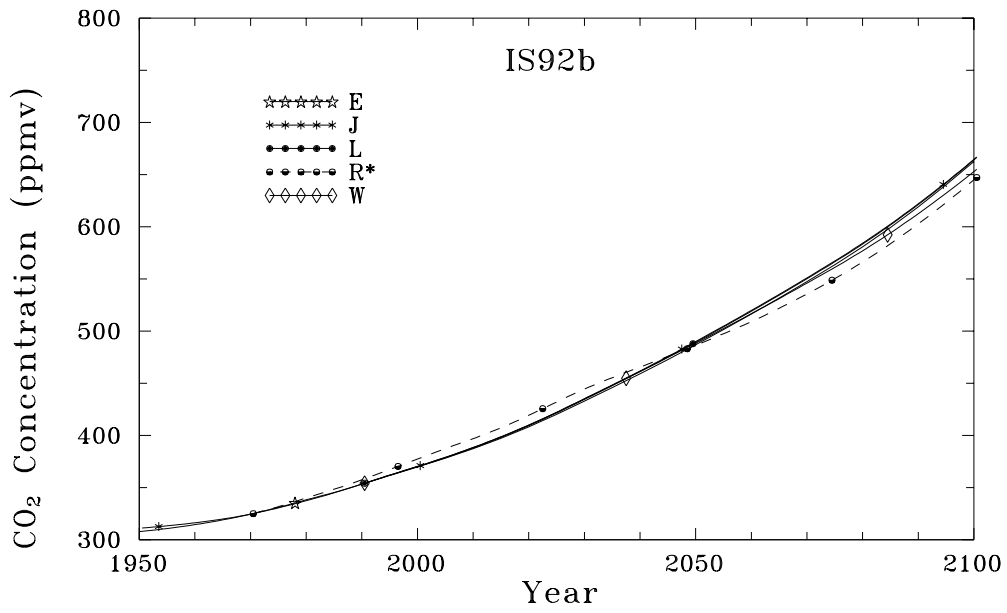Figure E.7. Concentrations for 2% compound emission reduction.
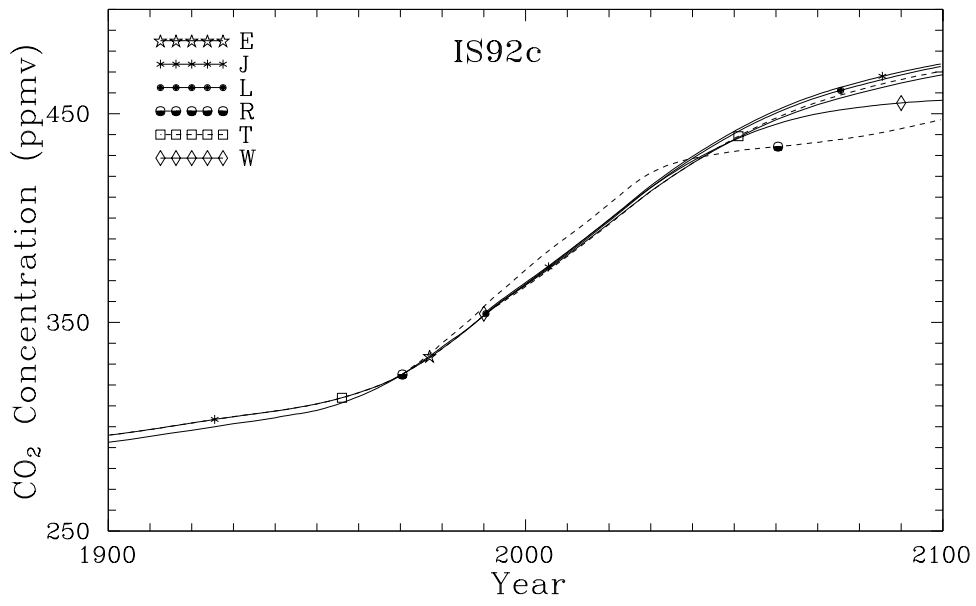
Figure E.8. Concentrations predicted using IS92b.

Figure E.9. Concentrations predicted using IS92c.
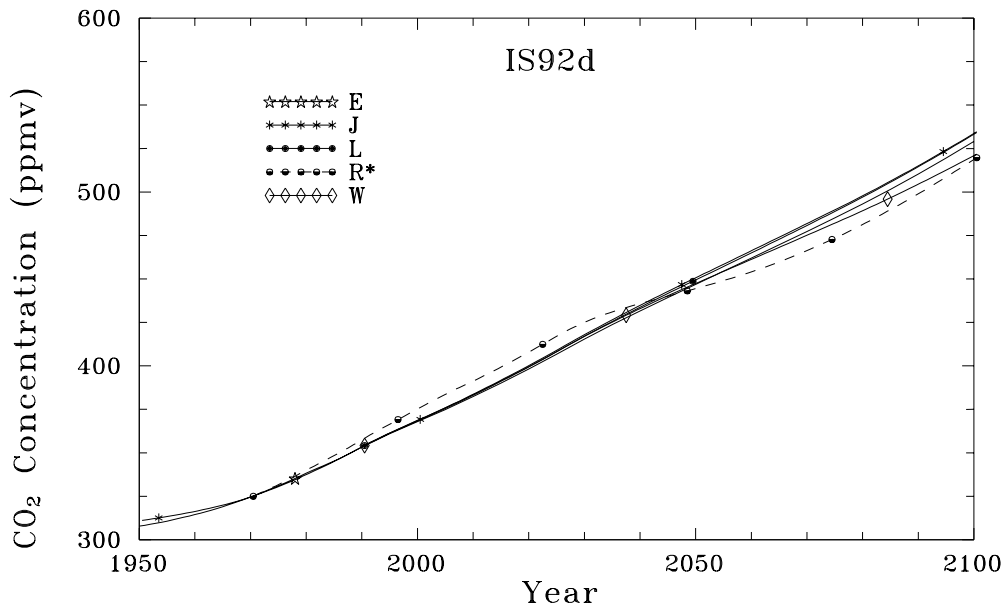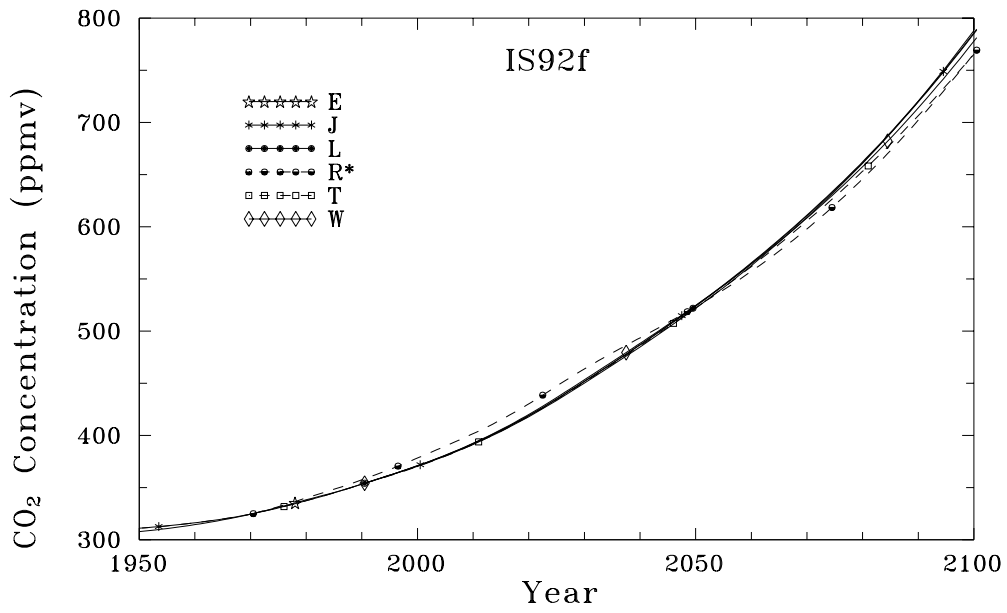
Figure E.10. Concentrations predicted using IS92d.
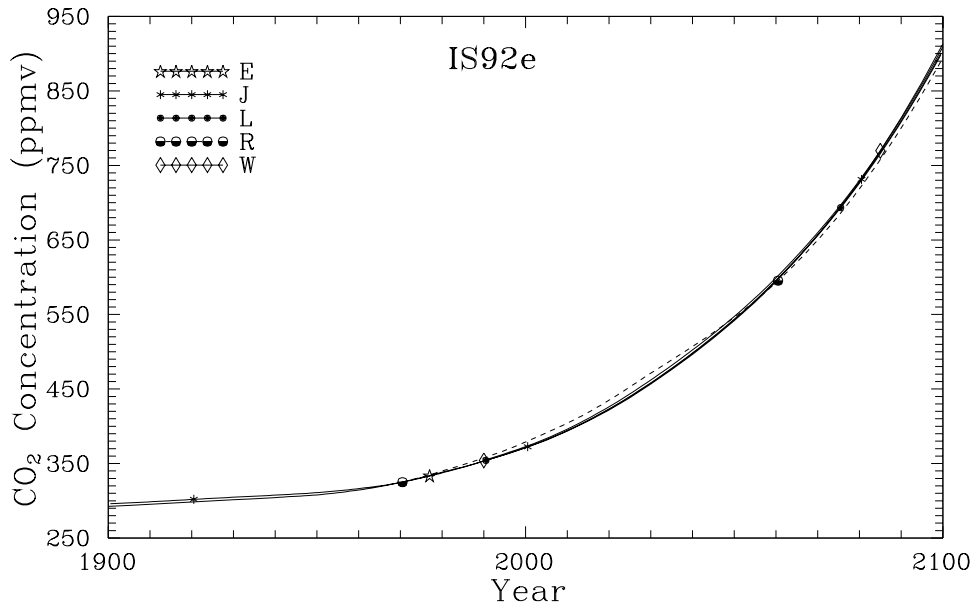
Figure E.11. Concentrations predicted using IS92e.
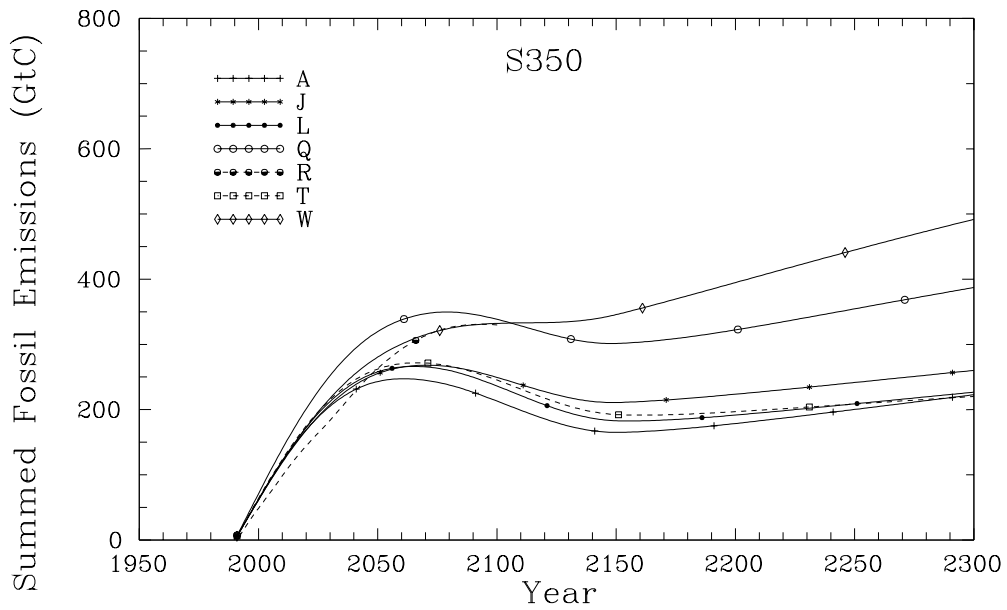
Figure E.12. Concentrations predicted using IS92f.

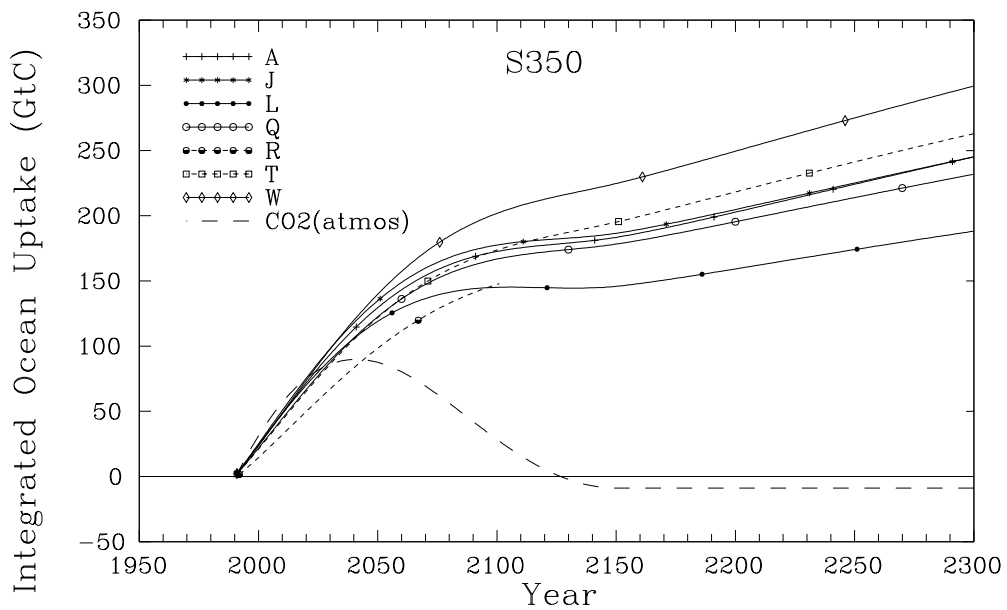Figure E.13a. Integrated industrial emissions for S350.

Figure E.13b. Integrated oceanic uptake for S350. Here and in 14b, 15b and 16b, the longer dashes denote the change in atmospheric carbon inventory, relative to 1990.
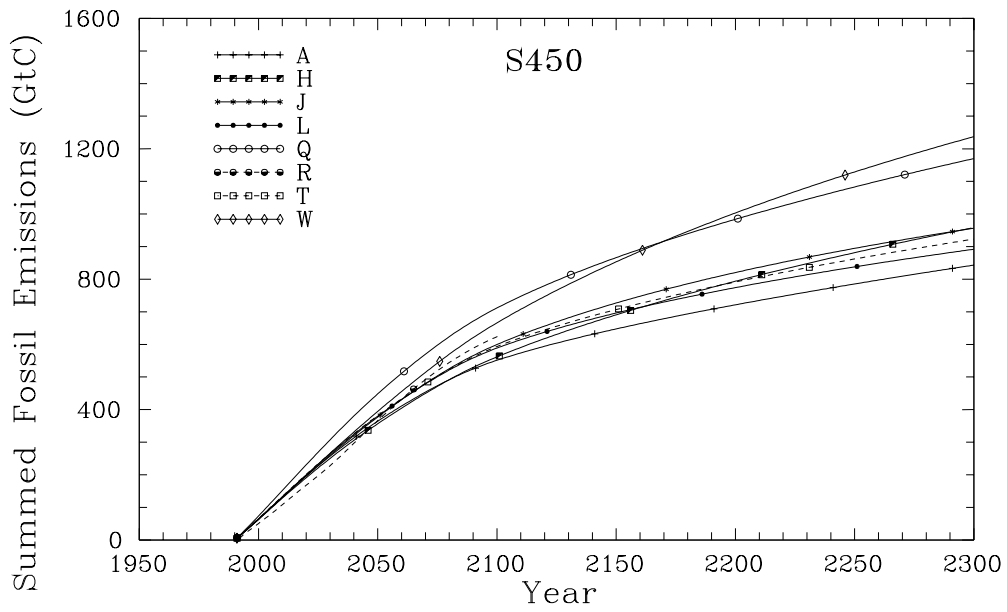
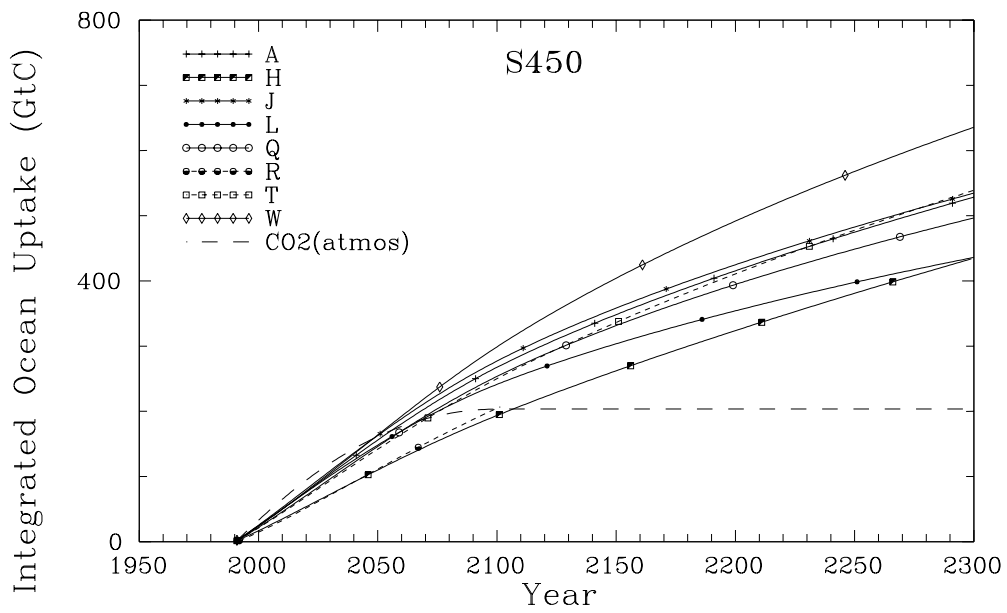Figure E.14a. Integrated industrial emissions for S450.

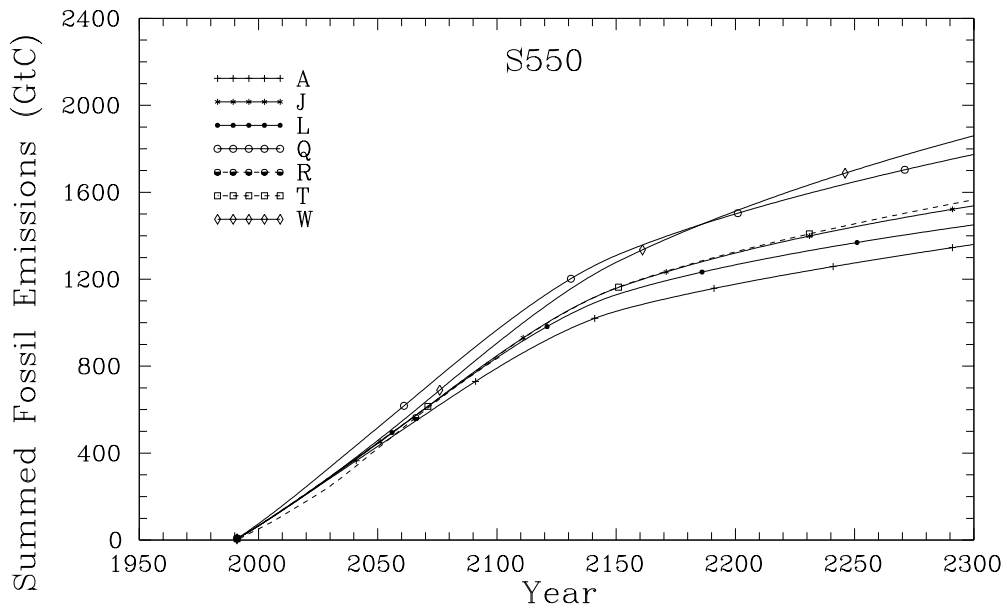Figure E.14b. Integrated oceanic uptake for S450.

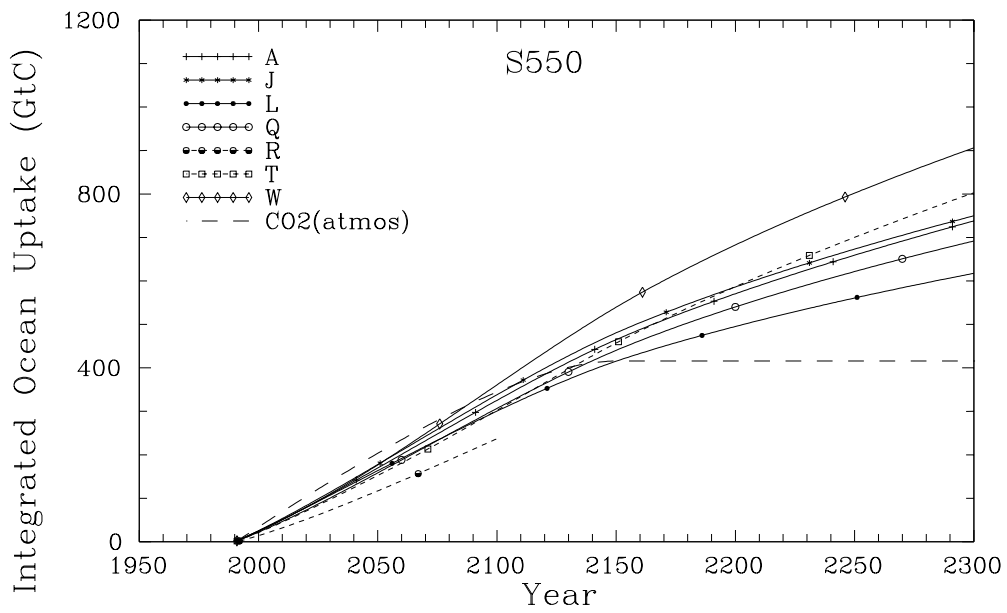Figure E.15a. Integrated industrial emissions for S550.

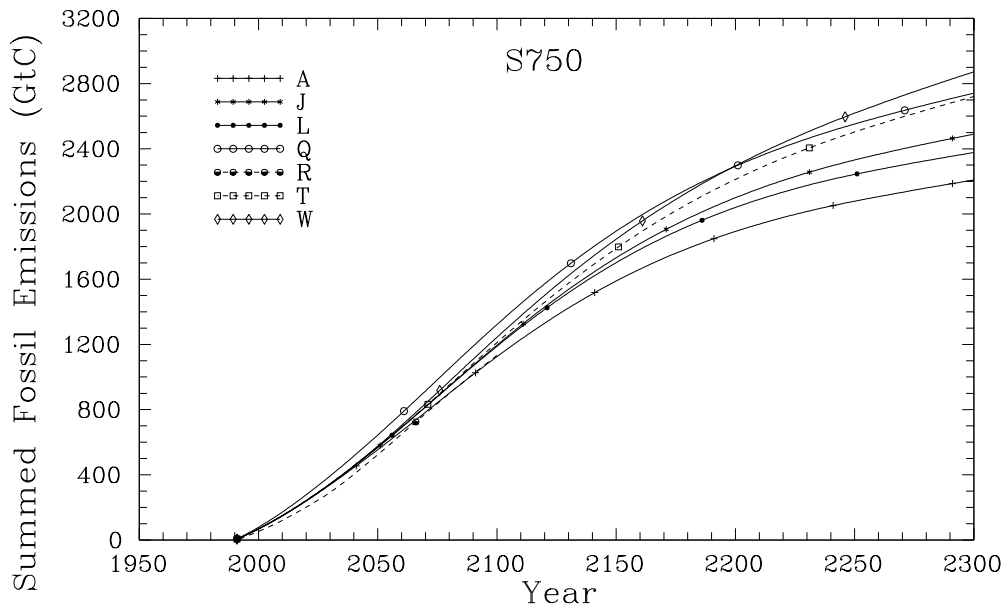Figure E.15b. Integrated oceanic uptake for S550.

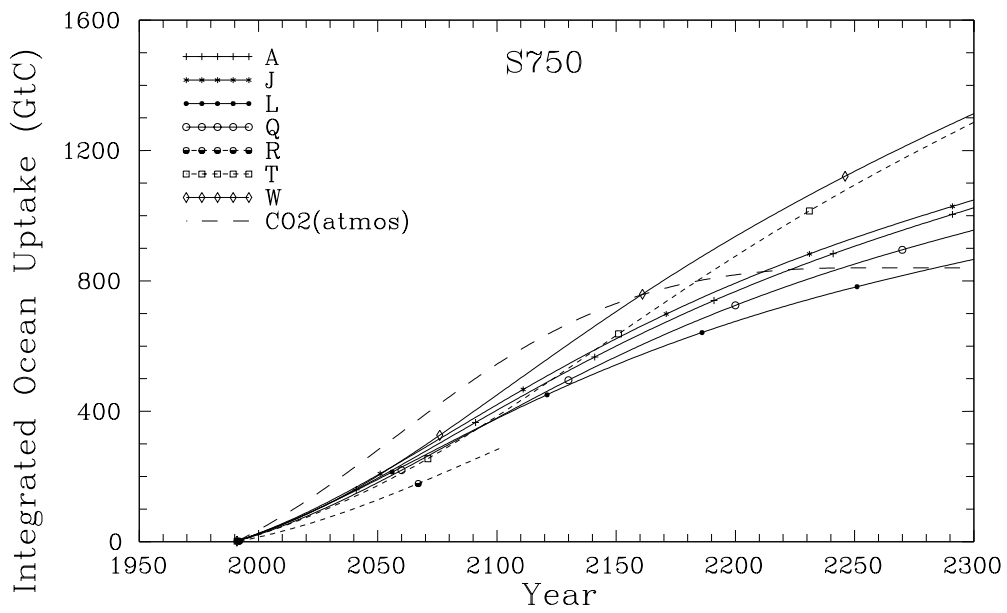Figure E.16a. Integrated industrial emissions for S750.

Figure E.16b. Integrated oceanic uptake for S750.

Click here to go back to contents