Spreadsheet Information (First Edition)

Download Advice

The file should download with a long hexadecimal number file name with a .XLS extension. Apologies for the awkward name. If asked, you should enable Editing. Please save the spreadsheet with a new name to suit you.

Background

The spreadsheet described here was used to produce the graphs in the **First Edition of the book**. This book has since been reissued as a second edition with an amended spreadsheet. Each book contains descriptions of modelling and the spreadsheet containing the modelling. You should refer to the appropriate edition of the book to understand how the models work.

Limitations of this Model

- It has not been updated following the reissue of the 2021 IPCC Report (AR6)
- It does not deal with Ozone
- It does not deal with the Global Energy Imbalance and the effects of the Oceans
- Albedo feedback does not extend to future years
- The Control Panel Tab is not as intuitive as it could be
- control of Aerosol effects is not explicit
- Please bear in mind it is a working example not a commercial product
- Whilst respecting the physics, it is intended to be illustrative not definitive

Strengths of this model

- It is less complex that the revised 2022 model
- It produces a similar outcome to the revised 2022 model

Following the Descriptions in the book

If you want to run through the book whilst using the spreadsheet, try the following sequence.

1. On the **Auto Chart Tab**, turn off all of the optional climate effects:
   a. Aerosol Effects
   b. Atmospheric Temperature Feedback
   c. Surface Albedo Feedback
   This is done by clicking on blue boxes with red 'on' text to reveal a list box. Select 'off' from the list box in each case.

2. On the **Control Panel Tab** go to the box labelled **'Current Selection'** and click on the box with a blue background to reveal a list box. Using the list box select '**Try 3.62% 1890 Reference**'. You may have to move upward in the list to find this.

3. This is the first example given in the book. On the Auto Chart Tab you can view the resulting graphs for this example

4. Repeat this for:
   a. 'Try 2.705% 1890 Reference'

b. 'IPCC CO2 Only1890 Reference'
c. 'All WMGHG 1890 Ref.'

5. At this point you can introduce the options for:
   a. Aerosol Effects
   b. Atmospheric Temperature Feedback
   c. Surface Albedo Feedback

Experimenting

If you adjust the details of the spreadsheet you will need to remember that the '**Control Panel Tab'** contains a list box to 'Reset' and 'Run' the spreadsheet. This enables you to recover if your changes cause the model to crash.

Note:
The spreadsheet depends on enabling 'Iterative Mode' as a calculation option. Sometimes Excel may revert to its default and you may need to select File > Options > Formulas > Calculation Options. To re-enable this option.