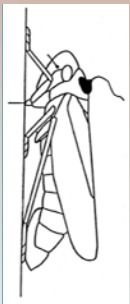


# Trimmer

- This section is optional and controversial.
- The problem
  - All recordings end, and the end is usually caused by human intervention. If the insect is in waveform E2 at the end, it is expected that the insect would have continued in E2 for some undefined period of time had the recording continued. In this case, E2 is an artificially terminated event.

EPG  
Work-  
shop





# Controversy

- The artificially terminated event will bias your data.
- The controversy is over whether to keep or delete these events.
- The correct approach depends on the insect and the limits of equipment and research methodology. A more complete discussion will be presented elsewhere.
- Trimmer deletes these events.



# Conditions

- Trimmer follows these rules:
  - Given a cut-off time that you provide, trimmer will delete all events that end after this time except as follows:
  - If the ending event is NP it will be retained.
  - If there are additional behaviors after the cut-off time, the behavior that starts before the cut-off and ends after the cut-off will be retained.



# Using Trimmer

- Find the shortest duration in the file.
- Start by opening AphidData1.csv in Excel.
- Type this into cell D2, and fill down.

`=IF(A2=A1,C2+D1,C2)`

- Type this into cell E2, and fill down.

`=IF(A2=A3,"",D2)`

- Type this into cell E1, and record the answer (10211.21) or 2.8 hours.

`=min(E2:E2500)`



## Caution

- You can run Trimmer with this value, or you can delete the insect from the data file.
- In cell F2 I can type this and fill down.  
`=IF(E2=$E$I, "Any Text You Want Here", "")`
- I scroll down to find that insect AI has the shortest value.
- I can delete the value in cell E134 and see that my new minimum is 21532.12 (5.98 hours)



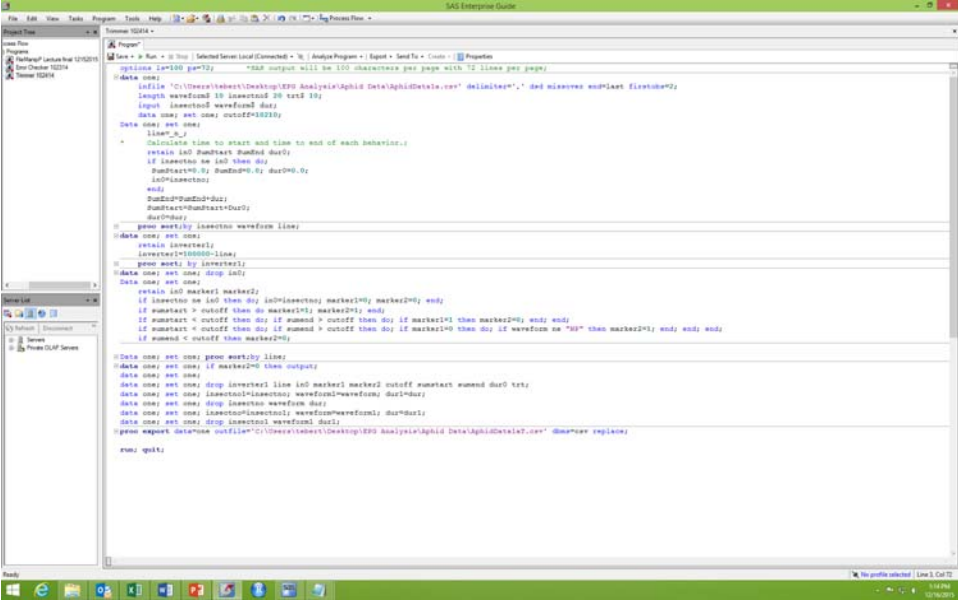
## Decision

- Given that I have only three insects in treatment A, I will live with the loss of about 3 hours of recording.
- The best option would be to gather more data, but this is an example.
- I would save the corrected file under a different name: `AphidData1a.csv`



# Run Trimmer

- The program should look like this:



```

%* SAS output will be 100 characters per page with 12 lines per page.
%*
infile "&infile;" delimiter="," dds misvalues suplast firstobs=2;
input waveform1 10 insectaid 30 end 30;
data one; set one; outoff=10210;
Data one; set one;
  line=" ";
  * Determine time to start and time to end of each behavior;
  retain i0 i0start i0end dur1;
  if insectaid ne i0 then do;
    i0start=0; dur1=0;
    i0=insectaid;
  end;
  dur1=i0end-i0start;
  * group events by insectaid;
  @@;
  i0start=i0;
  i0end=i0+10000;
  * Data one; set one; stop i0;
  retain i0 marker1 marker2;
  if insectaid ne i0 then do; i0=insectaid; marker1=0; marker2=0; end;
  if i0start > outoff then do marker1=1; marker2=1; end;
  if i0start < outoff then do; if i0end > outoff then do; if marker1=1 then marker2=0; end; end;
  if i0end < outoff then do; if marker1=0 then do; if waveform="00" then marker2=1; end; end; end;
  * Data one; set one; group events by line;
  data one; set one; if marker2=0 then output;
  data one; set one; drop insectaid line i0 marker1 marker2 outoff i0start i0end dur1;
  data one; set one; insectaid=i0; waveform=waveform1; dur1=dur1;
  data one; set one; drop insectaid waveform;
  data one; set one; insectaid=insectaid1; waveform=waveform1; dur1=dur1;
  data one; set one; drop insectaid1 waveform1;
  * group output data into outfiles="&outfile";
run; quit;

```

- Run Trimmer