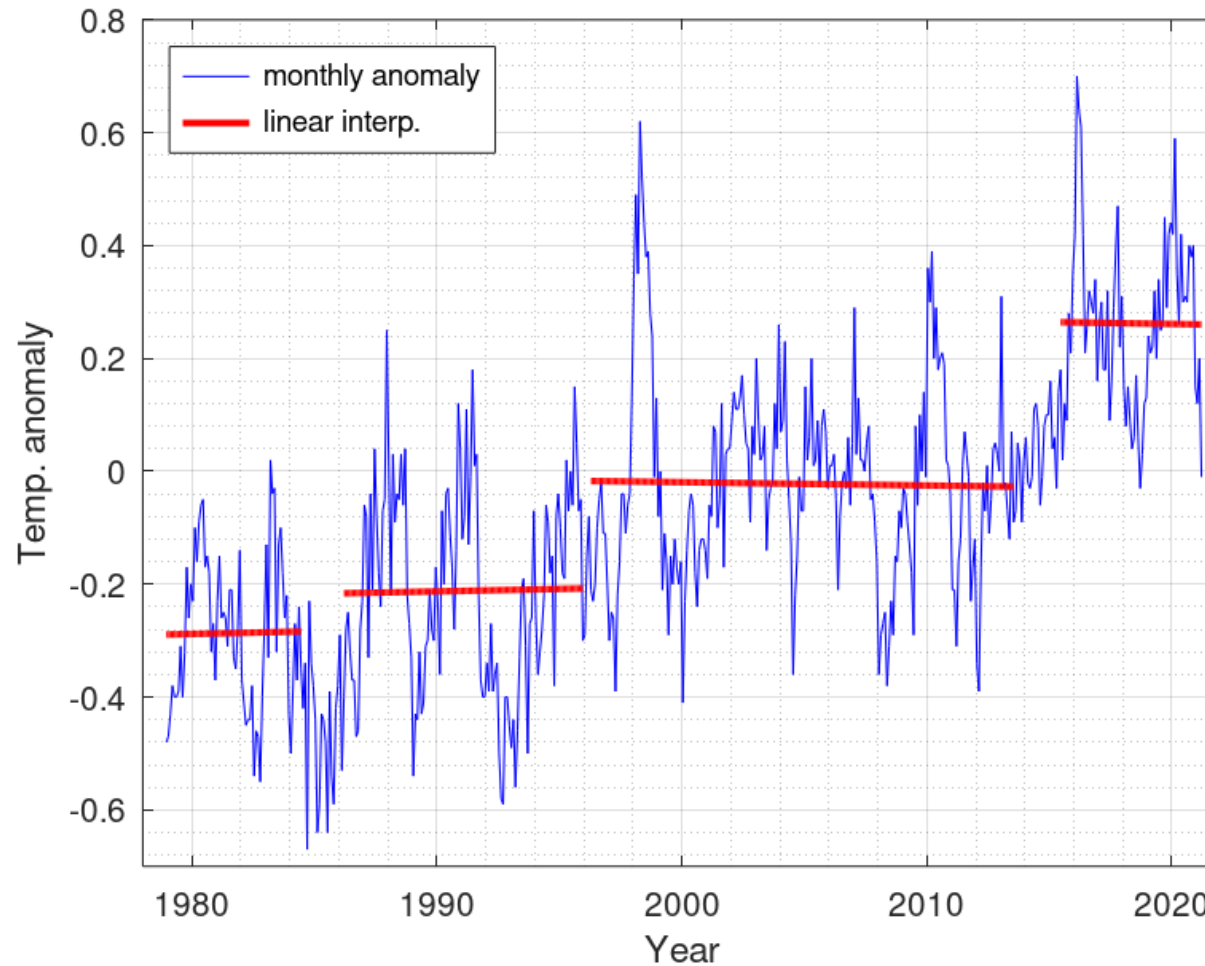


## UAH - Lower troposphere global temperature



The hypothesis of a **staircase global warming** is not new ([Belolipetsky,2017](#)). It is here re-confirmed, as seen from the above figure. The script for the step-wise linear interpolation follows :

```
clear;clc;format short;format compact;
%f = urlwrite('http://vortex.nsstc.uah.edu/data/msu/v6.0/tlt/uahncdc_lt_6.0.txt','uah.txt')
S = fileread('uah.txt'); % uah.txt is the downloaded text-file.
choice = 3;

a1 = index(S,'1978');
a2 = rindex(S,'Year Mo') - 2;
M = S(a1:a2);
```

```

X = str2num(M);xYear = X(':',1) + (X(:,2)-0.5)./12;
yd = X(:,choice);
a1 = index(S,'1978 12');
a2 = index(S,'1984 7') - 2;
M = S(a1:a2);
X0 = str2num(M);xYear0 = X0(':',1) + (X0(:,2)-0.5)./12;
yd0 = X0(:,choice);
a1 = index(S,'1986 3');
a2 = index(S,'1996 1') - 2;
M = S(a1:a2);
X1 = str2num(M);xYear1 = X1(':',1) + (X1(:,2)-0.5)./12;
yd1 = X1(:,choice);

a1 = index(S,'1996 4');
a2 = index(S,'2013 8') - 2;
M = S(a1:a2);
X2 = str2num(M);xYear2 = X2(':',1) + (X2(:,2)-0.5)./12;
yd2 = X2(:,choice);

a1 = index(S,'2015 6');
a2 = rindex(S,'Year Mo') - 2;
M = S(a1:a2);
X3 = str2num(M);xYear3 = X3(':',1) + (X3(:,2)-0.5)./12;
yd3 = X3(:,choice);

plot (xYear,yd,'b');grid on;grid minor on;axis([1978,2022,-0.7,0.8]);hold on;

p = polyfit(xYear0,yd0,1);y = polyval(p,xYear0);
plot (xYear0,y,'r','LineWidth',2);

p = polyfit(xYear1,yd1,1);y = polyval(p,xYear1);
plot (xYear1,y,'r','LineWidth',2);

p = polyfit(xYear2,yd2,1);y = polyval(p,xYear2);
plot (xYear2,y,'r','LineWidth',2);

p = polyfit(xYear3,yd3,1);y = polyval(p,xYear3);
plot (xYear3,y,'r','LineWidth',2);

xlabel ('Year');ylabel ('Temp. anomaly');
legend ('monthly anomaly','linear interp.','location','northwest');
title ('UAH - Lower troposphere global temperature');

```