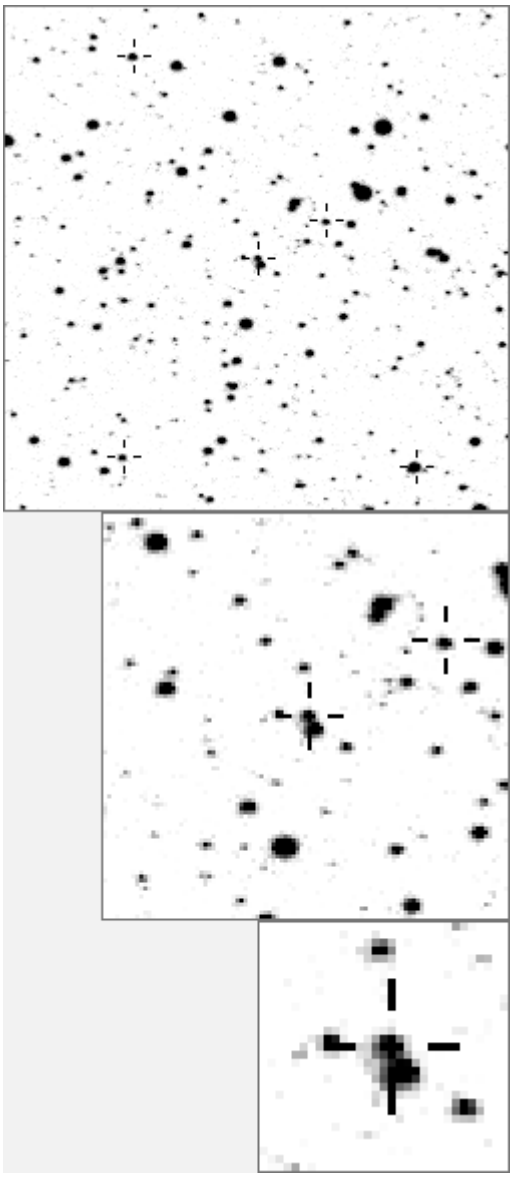
a09249



```
variable and brighter stars
. . . . . . . . . . . . . . . .   o  9249 v
. . . l . g . . f . . . . . . .   a   216
. . . . . . . . . . . . . . . .   b   240
. . i . . . c . . . . b . . . .   c  1340
. . . . . . j . . . . . . . . .   d  1344
. . . . . . . . . . a . . . . .   e  1401 v
. . . . . . . . . m . . . . . .   f  1816
. . . . . . . . o . . . . . . .   g  2373
. . . . . . . . . . . . . . . .   h  2390
. . . . . . . . d . . . . . . .   i  2410
. . . . . . . . . . . . . . . .   j  2668
. . . . . . . . . . . . . . . .   k  2806
. . . . . . . . . . . . . . k .   l  4822 v
. h . n . . . . . . . . e . . .   m  9157 v
. . . . . . . . . . . . . . . .   n 10142 v
--------------------------------      - -
. . . . . . . . . . . . . . . .   o  9249 v
. b . . . . . . . . . . . . . .   a  1344
. . . . . . . . . . . . . . d .   b  2668
. . . . . . . . . . k . . . . .   c  3212
. . . . . . . . . . . . l . h .   d  4257
. . . . . . . . . . . . . . . .   e  5081
. . f . . . . . . . . n . m . .   f  5722
. . . . . . . o . . . . . . . .   g  6370
. . . . . . . e . . . . . . . .   h  6576
. . . . . . . . . . . . . . . .   i  7343
. . . . . i . . . . . . . . . .   j  7509
. . . . . . . . . . . . . j . .   k  8991
. . . . . . a . . . . . . . . .   l  9157 v
. . . . . . . . . . . . . . . .   m 11121
. . . . . . . . . . . g . . . .   n 13969
```

Bitmap sizes are 251, 101 and 31 pixels square, South up. The keys to the right refer to the 1st two bitmaps. The numbers in the key are those in my catalogue 'starlistA'. Stars marked with a cross have been found to be variable.

Data and comments on star a09249

SWid: a09249 / **USNO id: 0 0 / other id: 3UC273-210692**

Co-ordinates, x,y in image z1051: 971.1 1533.5

J2000 sky co-ordinates: 21 4 15.91 +46 8 39.28

CMC r'magnitude and 2MASS J,H,K magnitudes: 13.265 12.274 11.823 11.703

USNO B1.0 magnitudes, B1,R1,B2,R2,I2: 0 0 0 0 0

Misc comments :

This is a meld with 5081 and is the variable one. Using 33 box , mags are 12.9 0.46, p 0.34998, Wuma

The LC appears to change from y-y, prob due to the interference

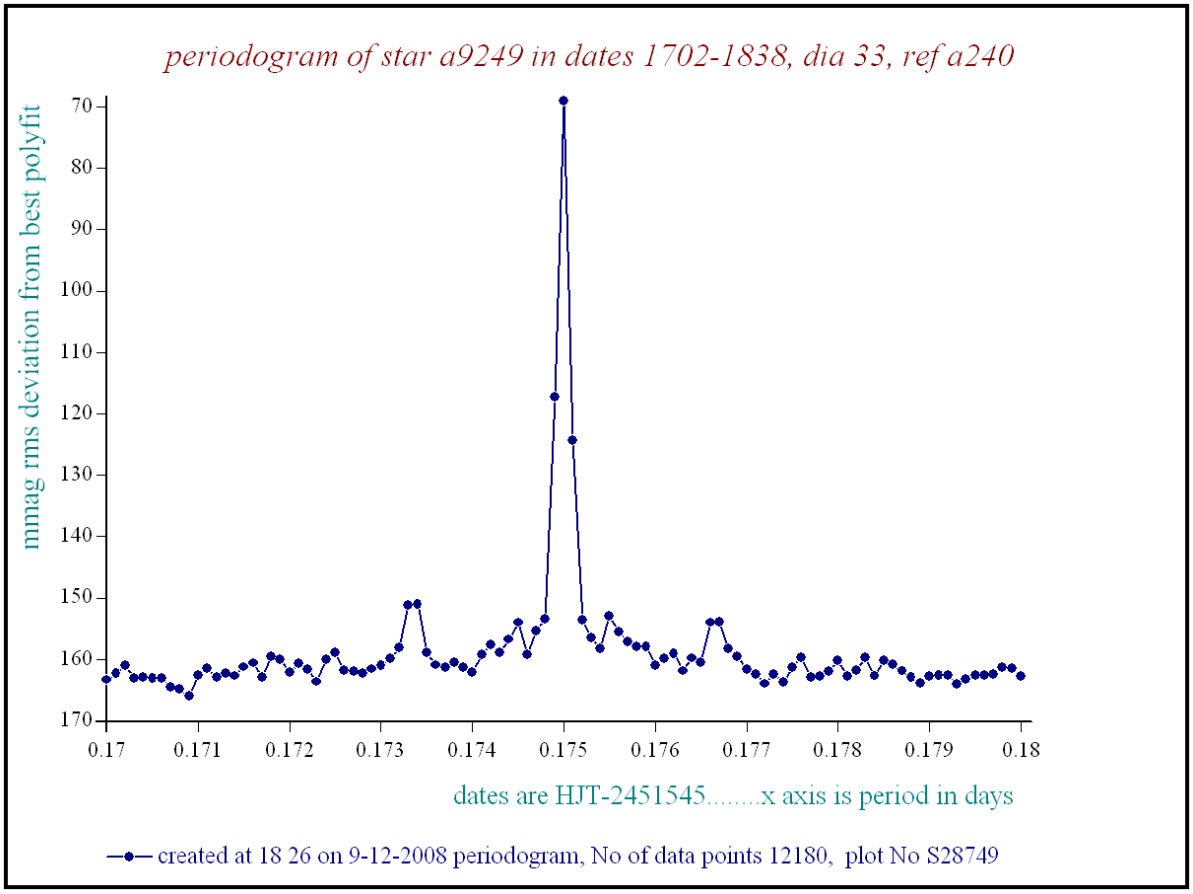
Comparison reference star(s) co-ordinates:
a00240: 21 4 30.53 +46 6 4.86

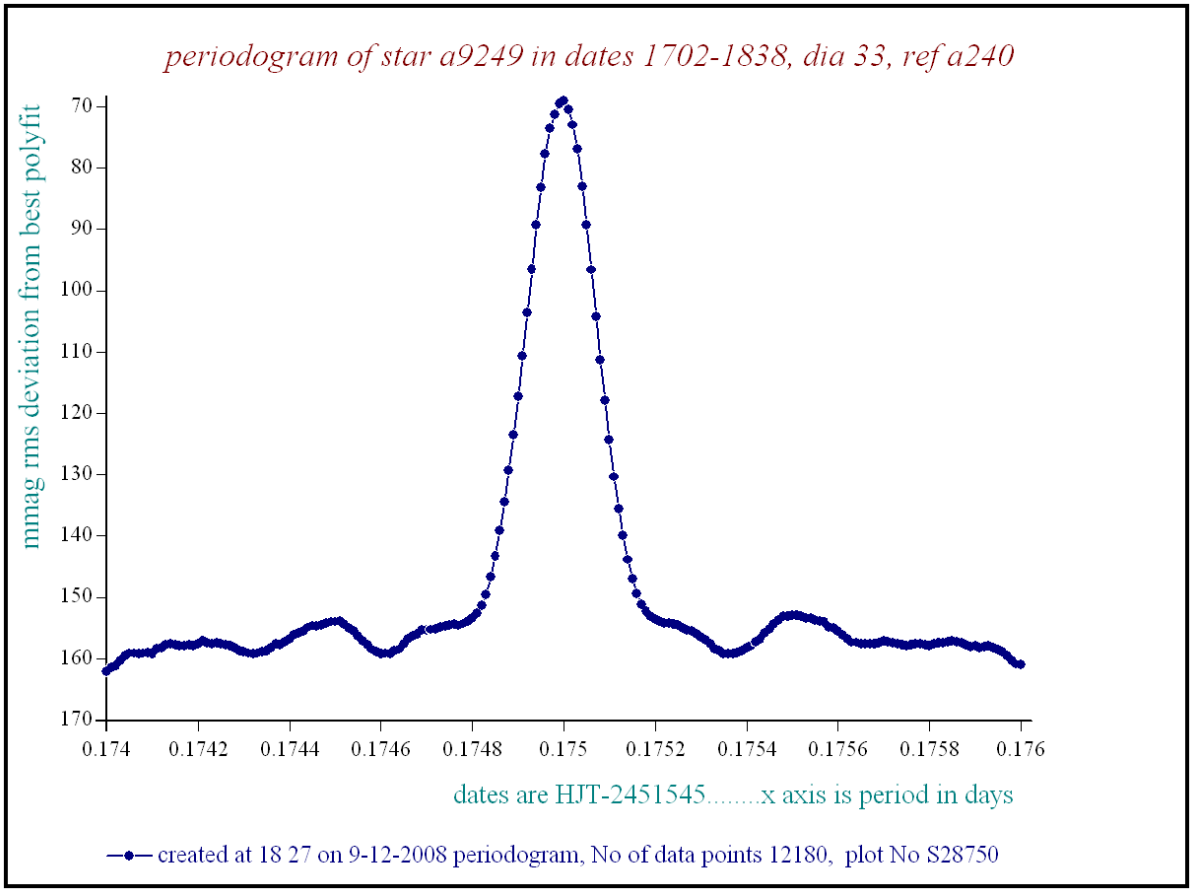
A diameter of 10 encompasses the target star and its interfering, and brighter, neighbour. A diameter marked as 33 signifies the use of a 3 by 3 pixel box centred on the target star to avoid most of the neighbour.

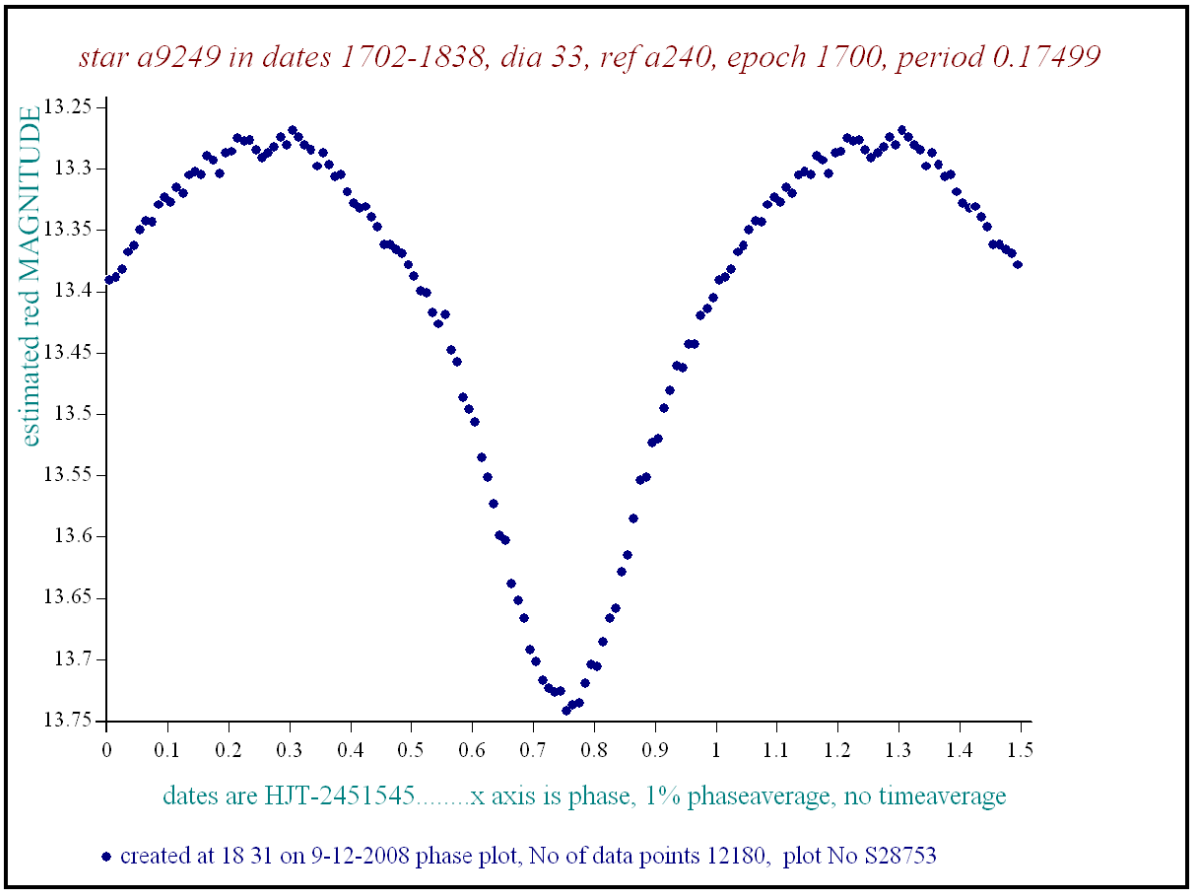
Reminder: **All dates, JD and HJD are from Jan 1st 2000**

season 1: dates 1316 to 1553 is 9/8/2003 to 3/4/2004	**(a)**
season 2: dates 1696 to 1838 is 23/8/2004 to 12/01/2005	**(z)**
season 3: dates 2085 to 2177 is 16/9/2005 to 17/12/2005	**(y)**
season 4: dates 2442 to 2755 is 8/9/2006 to 19/7/2007	**(w)**
season 5: dates 2772 to 2903 is 4/8/2007 to 13/12/2007	**(v)**
season 6: dates 2930 to 3266 is 9/1/2008 to 10/12/2008	**(u)**
season 7: dates 3403 to 3539 is 26/4/2009 to 10/9/2009	**(t)**

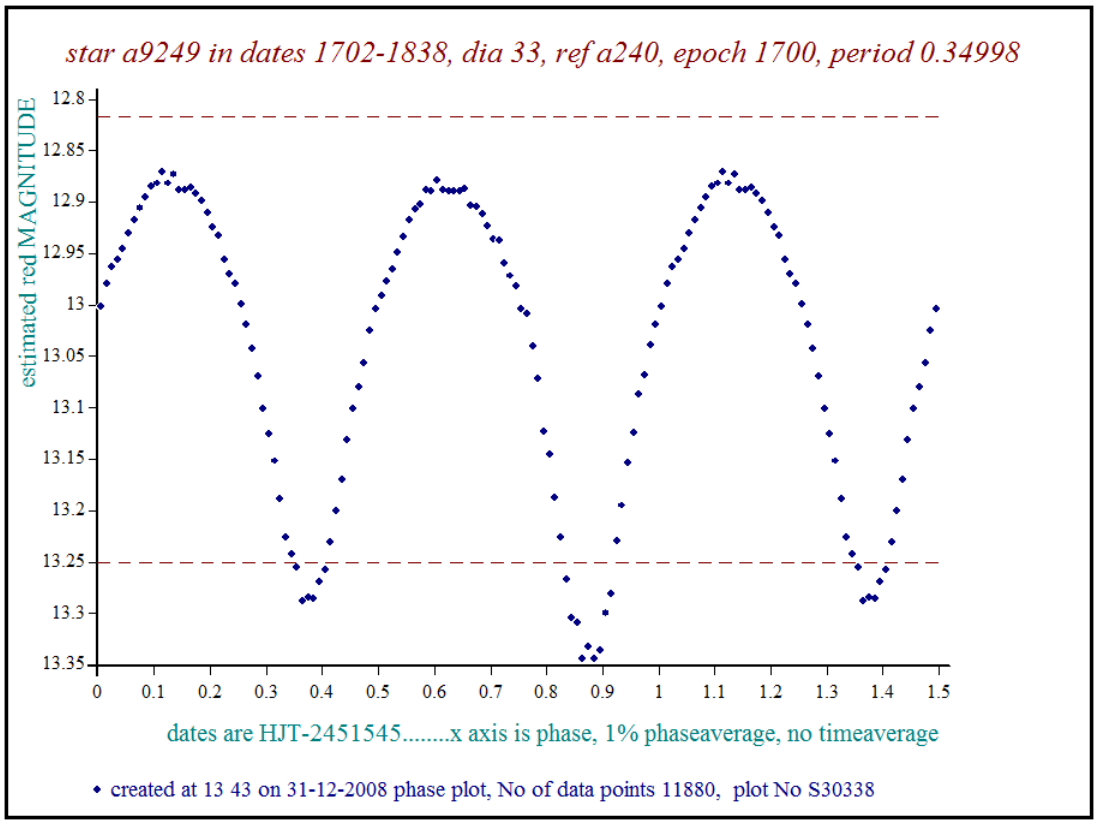
Some CMC mags would be good

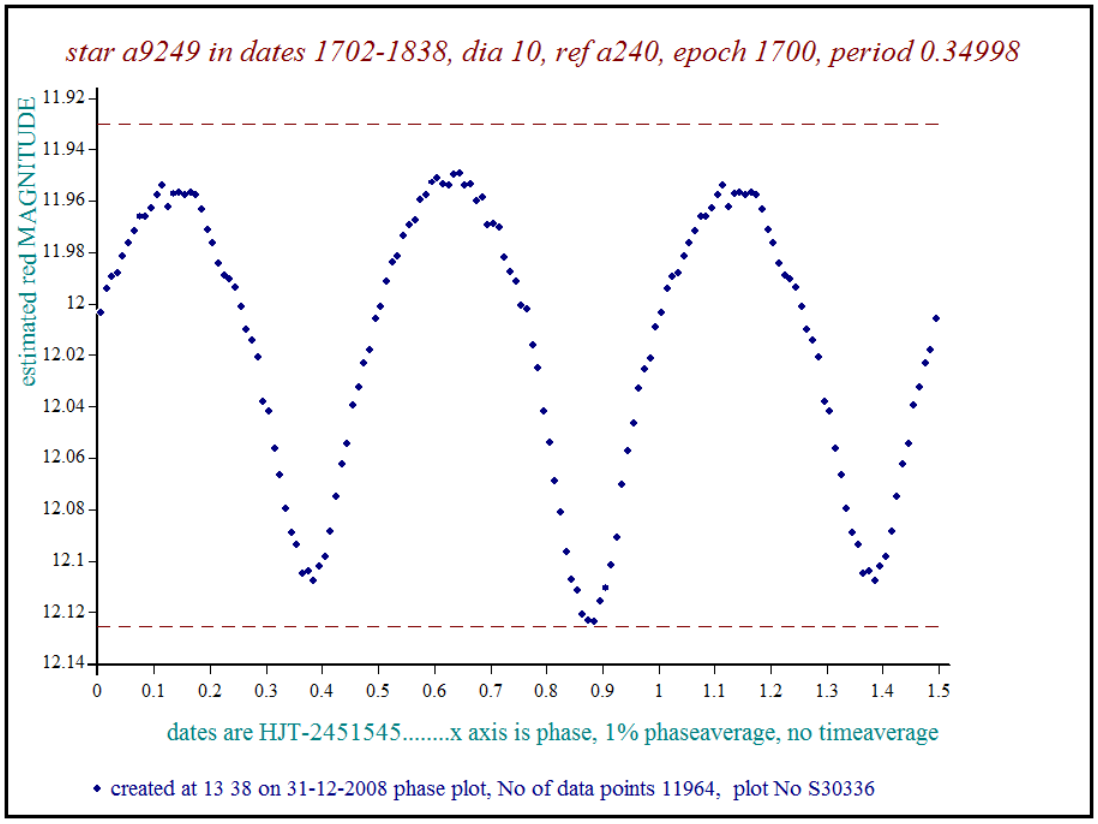


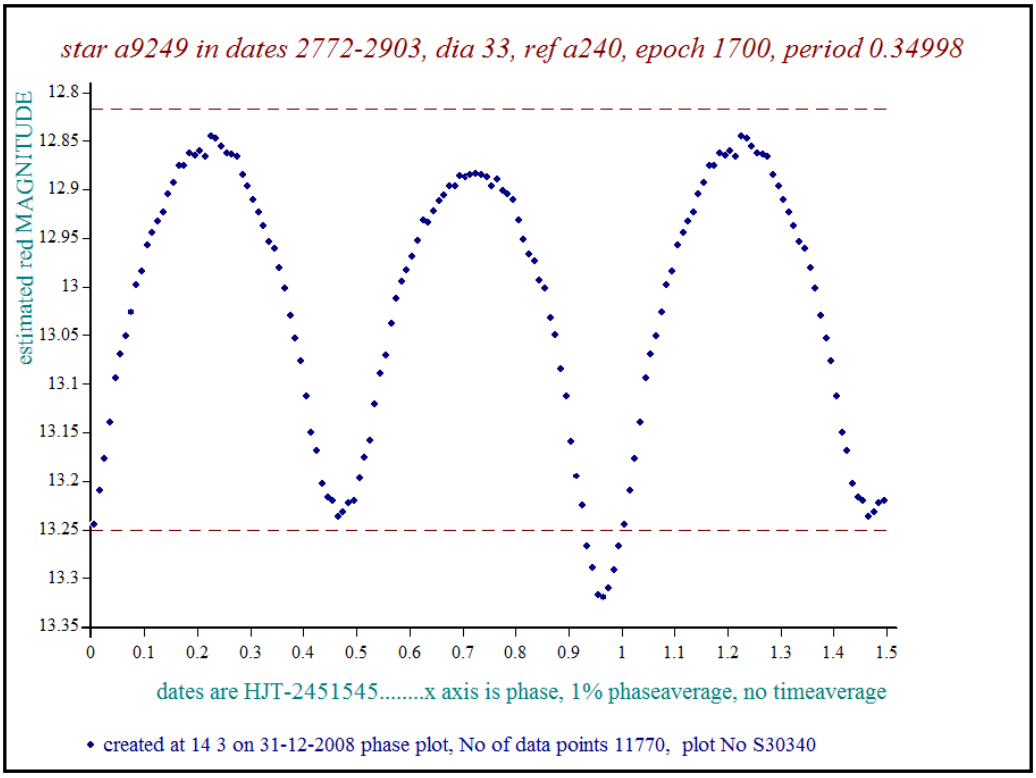

periodogram of star a9249 in dates 1702-1838, dia 33, ref a240
mmag rms deviation from best polyfit
70
80
90
100
110
120
130
140
150
160
170
0.174
0.1742
0.1744
0.1746
0.1748
0.175
0.1752
0.1754
0.1756
0.1758
0.176
dates are HJT-2451545.....x axis is period in days
created at 18 27 on 9-12-2008 periodogram, No of data points 12180, plot No S28750


star a9249 in dates 1702-1838, dia 33, ref a240, epoch 1700, period 0.17499
estimated red MAGNITUDE
13.25
13.3
13.35
13.4
13.45
13.5
13.55
13.6
13.65
13.7
13.75
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
dates are HJT-2451545.....x axis is phase, 1% phaseaverage, no timeaverage
created at 18 31 on 9-12-2008 phase plot, No of data points 12180, plot No S28753

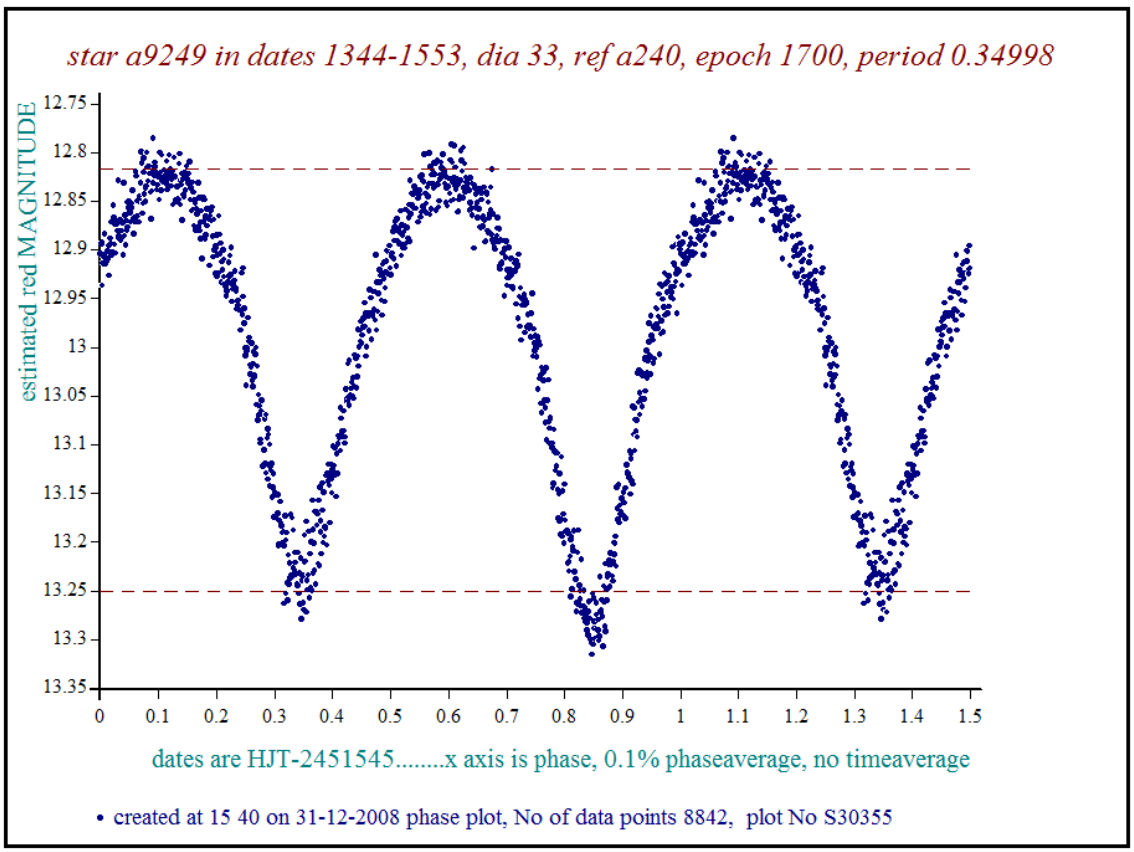
This shows the difference if the neighbour is included or not. The amplitude with the dilution is 0.170 mag, without it, it is 0.460 mag.

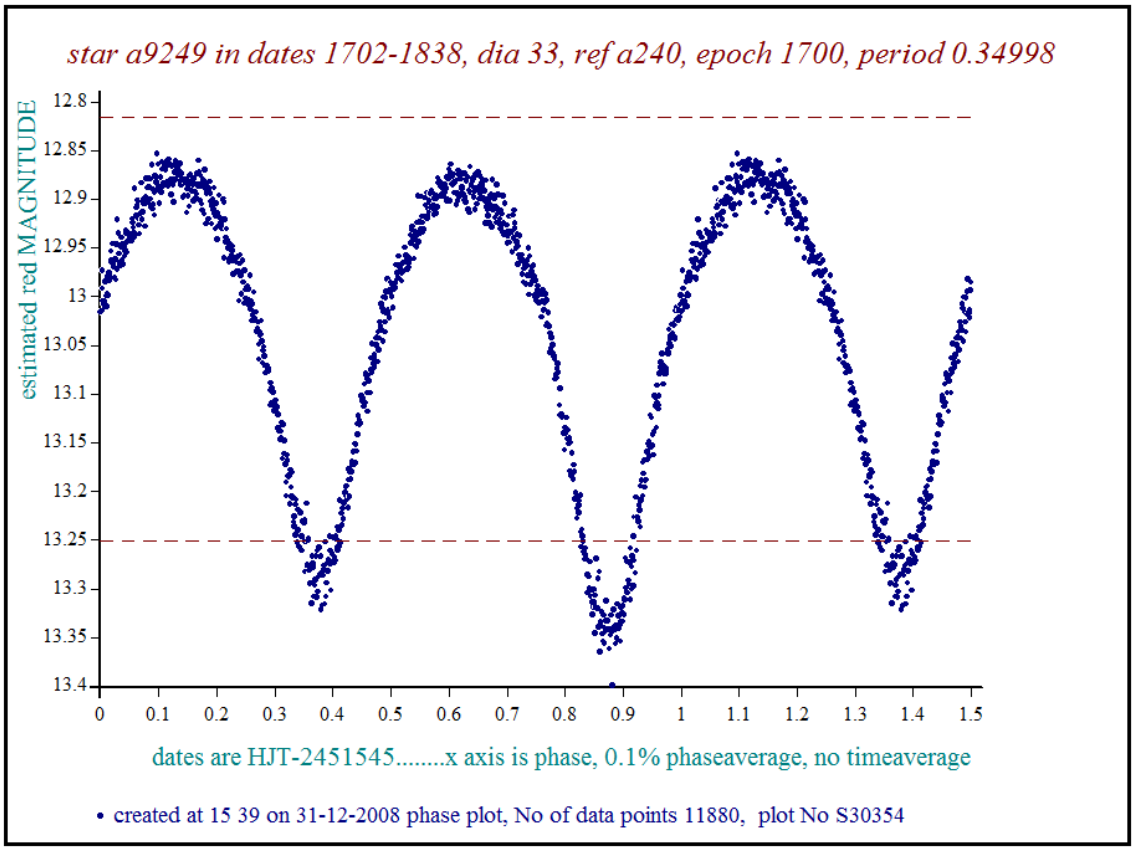


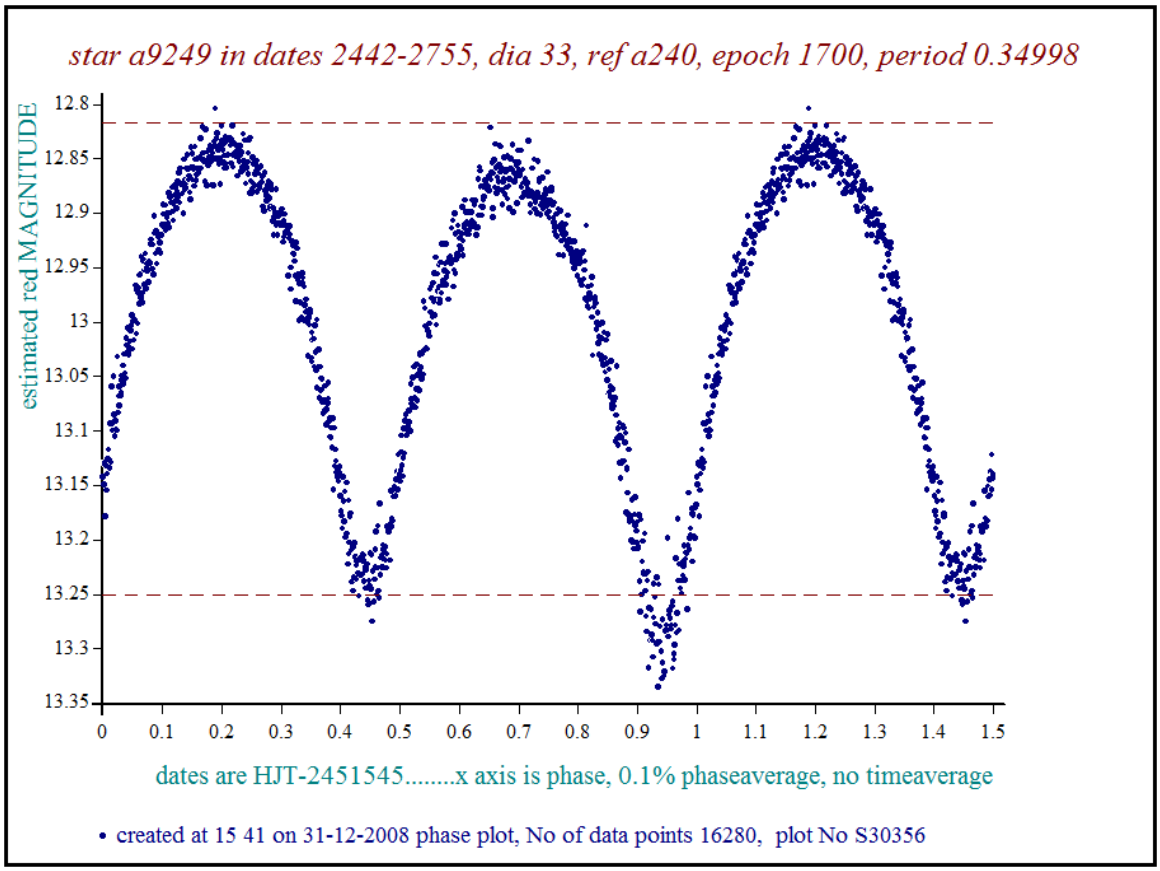


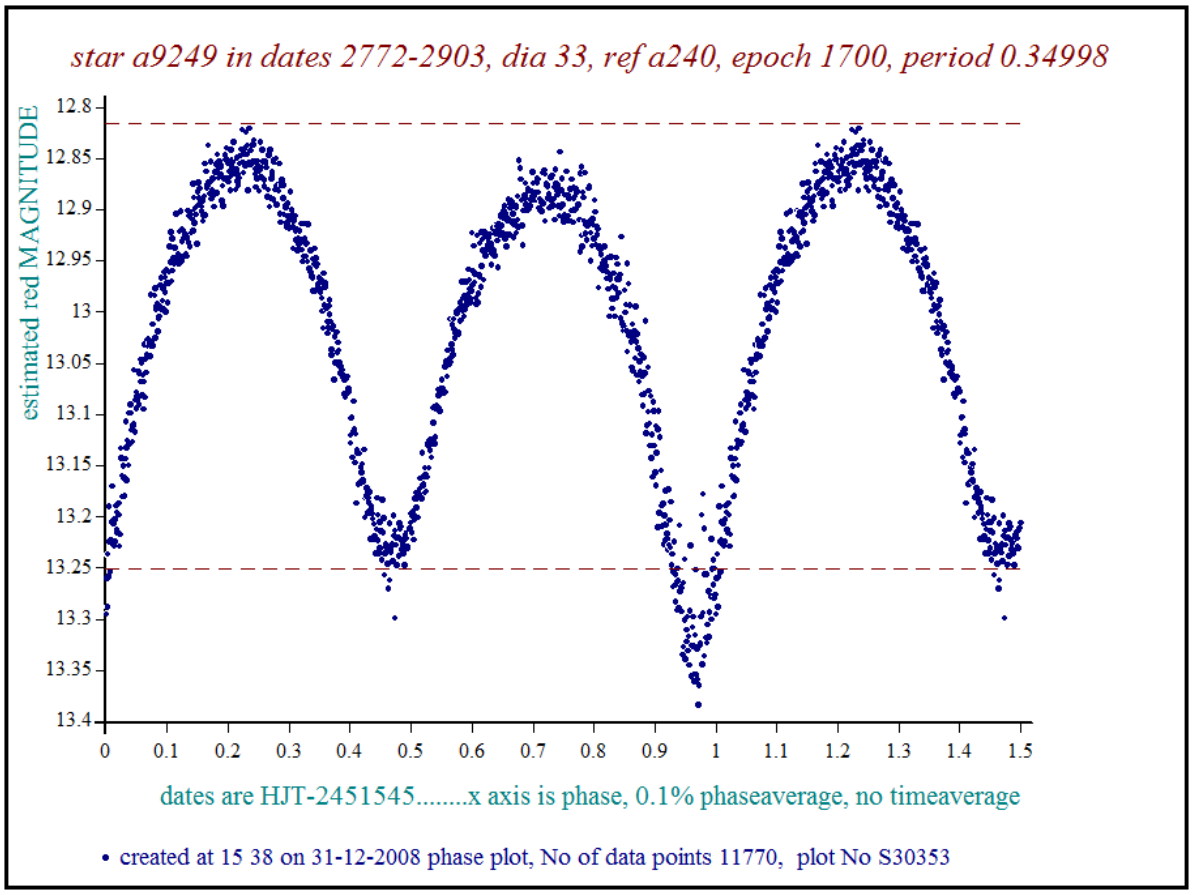


The seeming changes in the phaseplots from year to year in the next 4 plots may be real but is more likely to be due to the effect of interfering flux from the neighbouring star




star a9249 in dates 1702-1838, dia 33, ref a240, epoch 1700, period 0.34998
estimated red MAGNITUDE
12.8
12.85
12.9
12.95
13
13.05
13.1
13.15
13.2
13.25
13.3
13.35
13.4
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5
dates are HJT-2451545.....x axis is phase, 0.1% phaseaverage, no timeaverage
• created at 15 39 on 31-12-2008 phase plot, No of data points 11880, plot No S30354


star a9249 in dates 2442-2755, dia 33, ref a240, epoch 1700, period 0.34998
estimated red MAGNITUDE
12.8
12.85
12.9
12.95
13
13.05
13.1
13.15
13.2
13.25
13.3
13.35
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5
dates are HJT-2451545.....x axis is phase, 0.1% phaseaverage, no timeaverage
• created at 15 41 on 31-12-2008 phase plot, No of data points 16280, plot No S30356


star a9249 in dates 2772-2903, dia 33, ref a240, epoch 1700, period 0.34998
estimated red MAGNITUDE
12.8
12.85
12.9
12.95
13
13.05
13.1
13.15
13.2
13.25
13.3
13.35
13.4
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
dates are HJT-2451545.....x axis is phase, 0.1% phaseaverage, no timeaverage
• created at 15 38 on 31-12-2008 phase plot, No of data points 11770, plot No S30353