

```

In[ ]:= a =
      Import["~/SL_2024-03-13_H11_M34_S52/L_2024-03-13_H11_M34_S52nz.csv", "CSV"];

In[ ]:= Dimensions[a]
Out[ ]:=
      {91498, 11}

In[ ]:= at = Transpose[a];

In[ ]:= Dimensions[at]
Out[ ]:=
      {11, 91498}

```

N = 50000~77500

cross correlation (2) / Tc 4 vs Tc 5

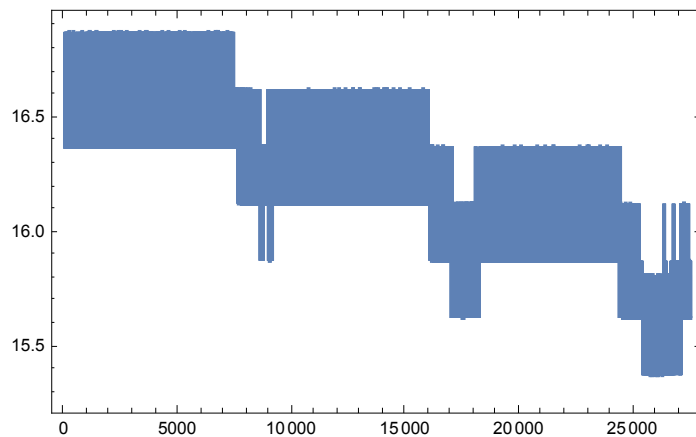
```

In[31]:= b1 = Table[at[[4, i]], {i, 50000, 77500}];

In[32]:= b2 = Table[at[[5, i]], {i, 50000, 77500}];

In[33]:= ListPlot[b1, Joined → True, PlotRange → All, Axes → False, Frame → True]
Out[33]:=

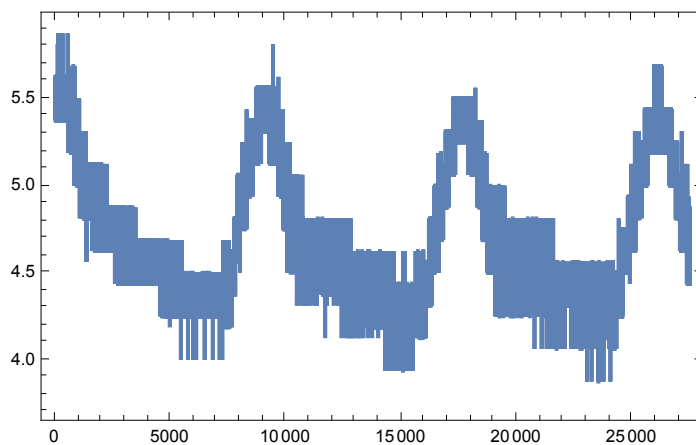
```



```

In[34]:= ListPlot[b2, Joined → True, PlotRange → All, Axes → False, Frame → True]
Out[34]:=

```



```
In[35]:= f1 = Fourier[b1];
```

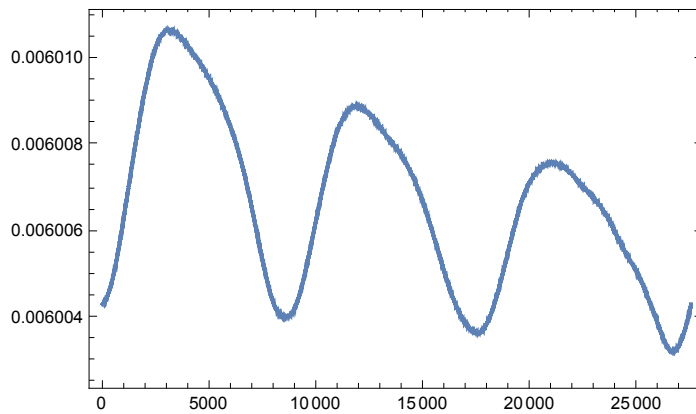
```
In[36]:= f2 = Conjugate[Fourier[b2]];
```

```
In[37]:= ff = f1 * f2;
```

```
In[38]:= c1 = Re[InverseFourier[ff]] / (Norm[b1] Norm[b2]);
```

```
In[39]:= ListPlot[Re[c1], Joined → True, PlotRange → All, Axes → False, Frame → True]
```

Out[39]=



```
In[40]:= mc = Max[c1]
```

Out[40]=

```
0.00601068
```

```
In[41]:= z = 0;
```

```
In[42]:= Do[If[c1[[i]] == mc, z = i], {i, Length[c1]}]
```

```
In[43]:= Print[z]
```

```
3200
```

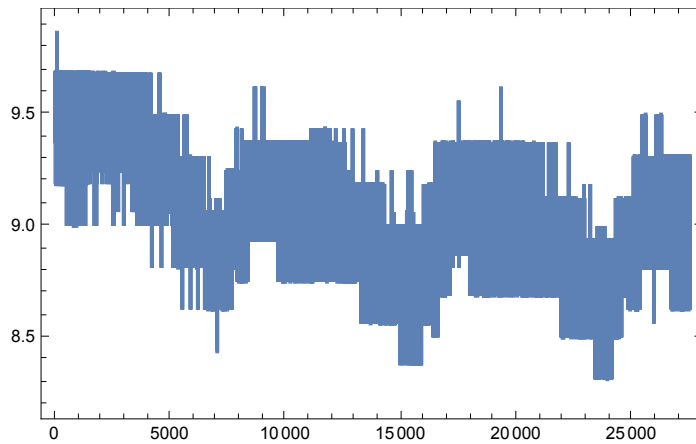
cross correlation (2) / Tc 6 vs Tc 7

```
In[44]:= b1 = Table[at[[6, i]], {i, 50000, 77500}];
```

```
In[45]:= b2 = Table[at[[7, i]], {i, 50000, 77500}];
```

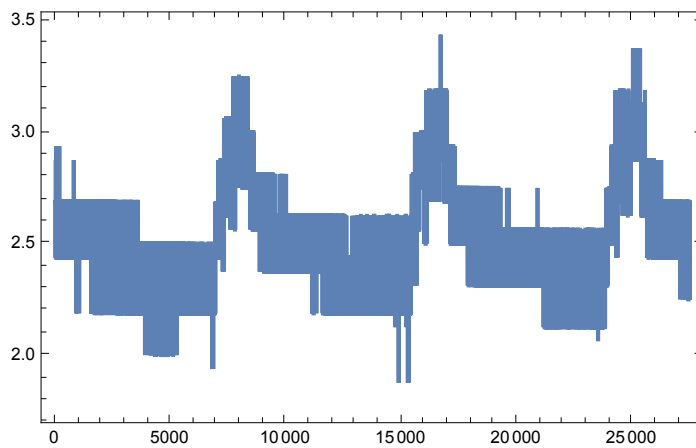
```
In[46]:= ListPlot[b1, Joined → True, PlotRange → All, Axes → False, Frame → True]
```

Out[46]=



```
In[47]:= ListPlot[b2, Joined → True, PlotRange → All, Axes → False, Frame → True]
```

Out[47]=



```
In[48]:= f1 = Fourier[b1];
```

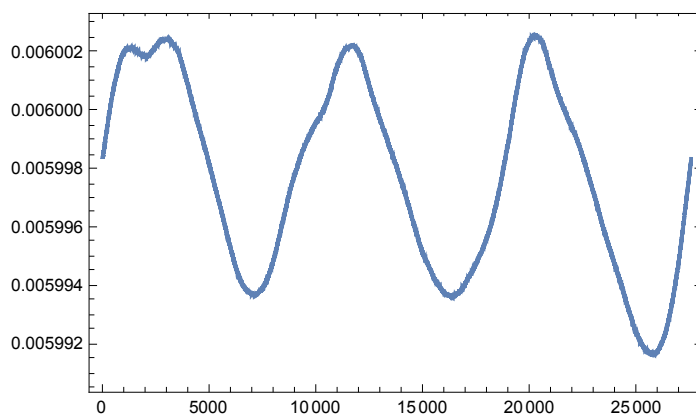
```
In[49]:= f2 = Conjugate[Fourier[b2]];
```

```
In[50]:= ff = f1 * f2;
```

```
In[51]:= c1 = Re[InverseFourier[ff]] / (Norm[b1] Norm[b2]);
```

```
In[52]:= ListPlot[Re[c1], Joined → True, PlotRange → All, Axes → False, Frame → True]
```

Out[52]=



```
In[53]:= mc = Max[c1]
```

```
Out[53]=
```

```
0.00600268
```

```
In[54]:= z = 0;
```

```
In[55]:= Do[If[c1[[i]] == mc, z = i], {i, Length[c1]}]
```

```
In[56]:= Print[z]
```

```
20 258
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