```
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}
```

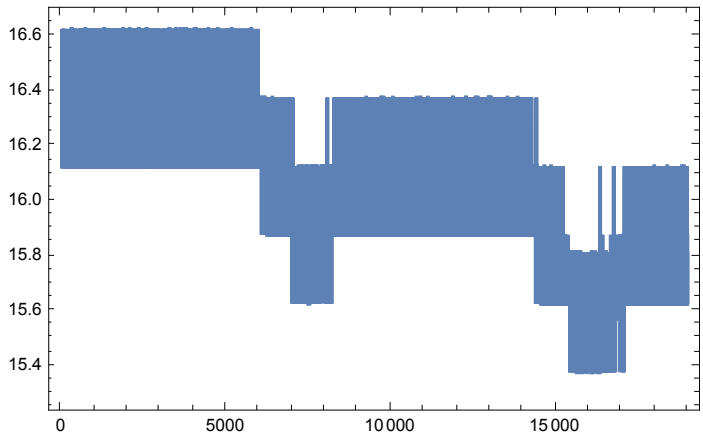
---

# N=60000~79000

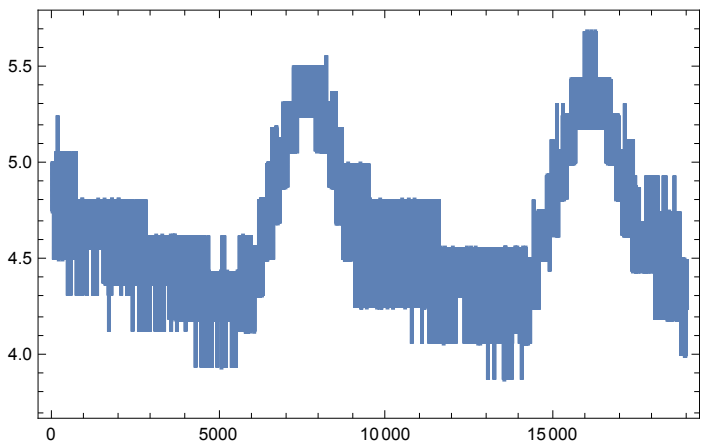
---

# cross correlation (1) / Tc 4 vs Tc 5

```
In[•]:= b1 = Table[at[[4, i]], {i, 60000, 79000}];

In[•]:= b2 = Table[at[[5, i]], {i, 60000, 79000}];

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

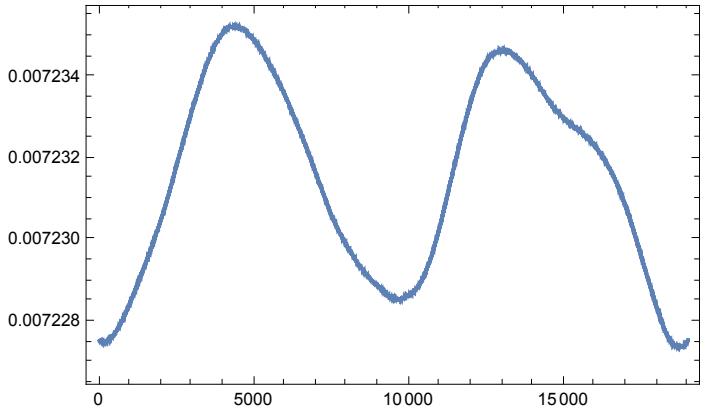



```
In[•]:= ListPlot[b2, Joined → True, PlotRange → All, Axes → False, Frame → True]
Out[•]=
```



```
In[•]:= f1 = Fourier[b1];

In[•]:= f2 = Conjugate[Fourier[b2]];

In[•]:= ff = f1 * f2;

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

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

Out[•]=




```
In[•]:= mc = Max[c1]
```

Out[•]=

```
0.00723527
```

```
In[•]:= z = 0;

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

In[•]:= Print[z]
```

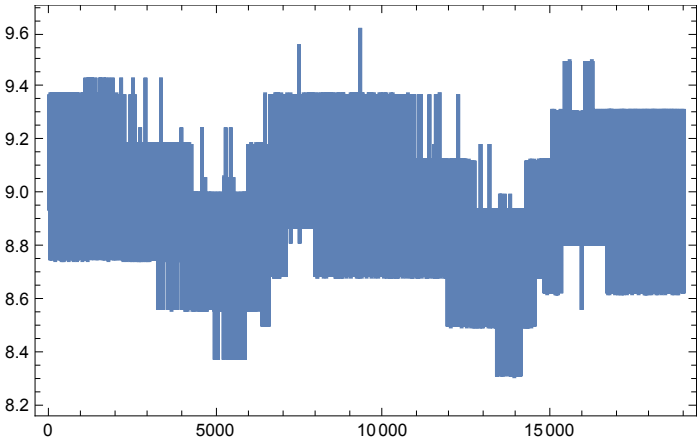
```
4442
```

# cross correlation (1) / Tc 6 vs Tc 7

```
In[•]:= b1 = Table[at[[6, i]], {i, 60 000, 79 000}];

In[•]:= b2 = Table[at[[7, i]], {i, 60 000, 79 000}];
```

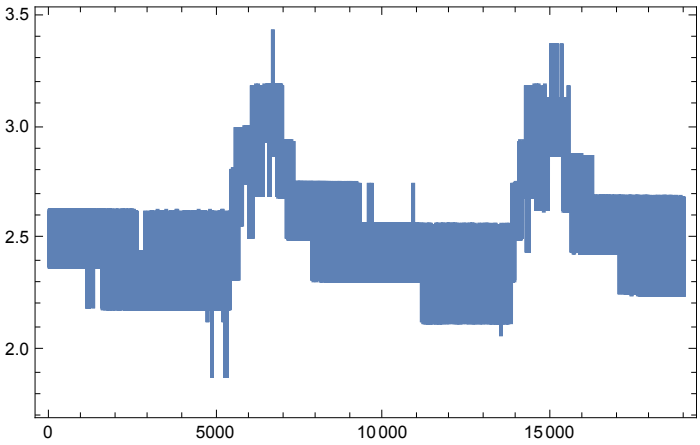
In[•]:=
```
ListPlot[b1, Joined → True, PlotRange → All, Axes → False, Frame → True]
```

Out[•]=




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

Out[•]=




In[•]:=
```
f1 = Fourier[b1];
```

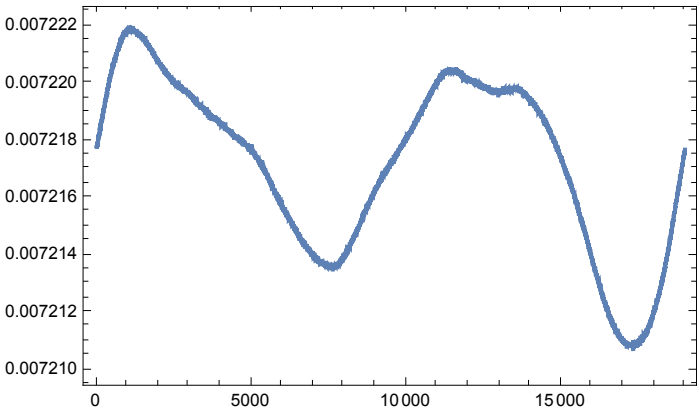
In[•]:=
```
f2 = Conjugate[Fourier[b2]];
```

In[•]:=
```
ff = f1 * f2;
```

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

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

Out[•]=



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

Out[ ]=
```
0.00722198
```

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

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

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

```
1165
```