

Tests for the streaming readout mode at various operating frequency

Raul, Tomoya, and Genki.

Streaming readout at various operating frequency

- Run: 25661 - 25683
- BigPartition local mode
- Configuration
 - same as the cosmic ray measurements
 - Run type: junk
- The streaming readout at
 - 15, 18, 25, 37, 75 kHz
- The new parameter endat0 (to me)
 - I asked Raul what it was, but no answer yet...
 - tested with 12 (run 25679-25681) and 750 (25682).

```
phnxrc@opc0:~/operations/INTT$ ls -1 *.scheduler
intt_cosmics_streamed_15KHz.scheduler
intt_cosmics_streamed_18_KHz.scheduler
intt_cosmics_streamed_25_KHz.scheduler
intt_cosmics_streamed_37KHz.scheduler
intt_cosmics_streamed_75KHz.scheduler
intt_cosmics_streamed.scheduler
intt_FA.scheduler
intt_raul.scheduler
intt_reset_clks.scheduler
intt.scheduler
```

INTT schedulers

Run	Run Length (min)	Operation Freq. (kHz)	Misc
25661	<1min	15	
25662		15	
25667-9	5sec	15	
25670-2	5sec	18	
25673-5	5sec	25	
25676-8	5sec	37	
25679-81	5sec	75	
25682	5sec	15	endat0 changed from 750 to 12
25683	5sec	15	

Streaming readout at various operating frequency

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Fri Aug 18 16:36:01 2023

Tomoya Kato

8/19

23-8-19 Tomoya,Genki,Raul

data taking by junk

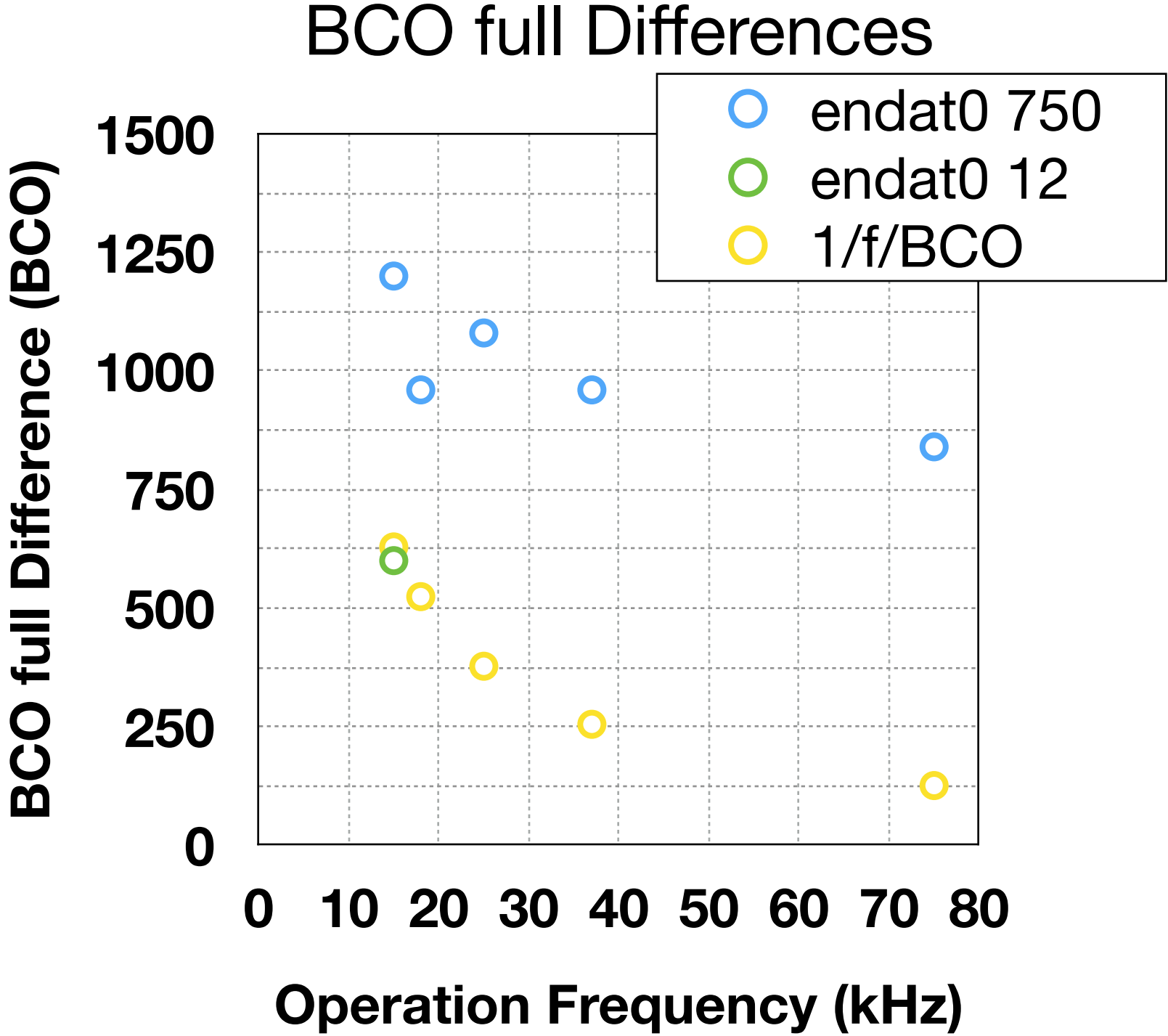
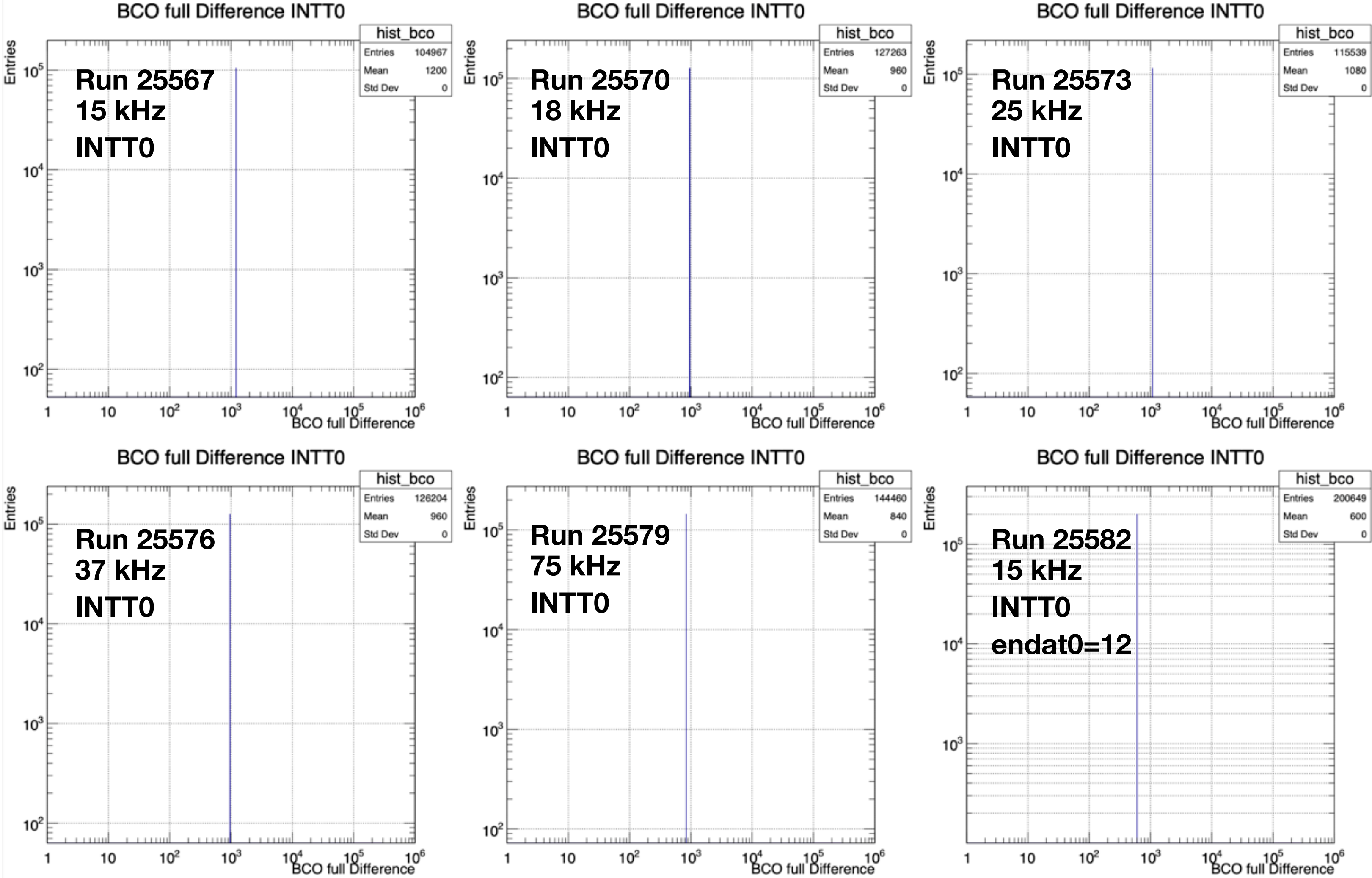
todays plan : chang strom frequency for(15,18,25,37,75kHz)

conclusion::all intt server was 1 peak . But our miss plotting ,we saw wrong result like run 25661's comment.

bcofull diffrence means "Difference in bcofull from one previous event"

Time	Run	Run Length (min)	Event(intt0s packet)	setting	n_coll	trigger	porpose	coment
16:36	25661	less than 1min		junk	8	15khz (strom)	fix firmware	event counter in 1 difference ,bcofull difference
16:50	25662			junk	8	15kHz (strom)		intt-server 0~5 are same . intt6 is 1 peak in mabe 12,00 bcofull . intt7 is simmir to intt 0.
	25667-9	5sec			8	15kHz (strom)		we check 25667 .intt-server 0~5 are same and 1200bcofull . intt6 is 1 peak at 1200 bcofull . intt7 is simmir to intt 0.
16:50	25670-2	5sec		junk	8	18kHz (strom)		intt6,intt2 have 1 peak at 960 bco full difference.
16:50	25673-5	5sec		junk	8	25kHz (strom)		intt6 is at 1080 bcofull difference . no one has 1 peak.
16:50	25676-8	5sec		junk	8	37kHz (strom)	no one has 1 peak.	intt6 has 1 peak at 840 bcofull diffrence
16:50	25679-81	5sec		junk	8	75kHz (strom)		
18:55	25682	5sec		junk	8	15kHz (strom)	change endat to 12 from 750(run 25667)	intt6 has 1 peak at 600 bcofull difference
18:55	25683	5sec		junk	8	15kHz (strom)		intt6 has 1 peak at 600 bcofull difference
	25684	5sec		junk	8	18kHz (strom)		
	25685	5sec		junk	8	25kHz (strom)		360
	25686	5sec		junk	8	37kHz (strom)		240
	25687	5sec		junk	8	75kHz (strom)		120
	25688	5sec		junk	8	1kHz (strom)		9000
	25689	5sec		junk	8	1kHz (strom)		
	256	5sec		junk	8	kHz (strom)		
	256	5sec		junk	8	kHz (strom)		

Difference of BCO full of neighboring events



Data with endat0 = 12 agrees with the calculation. Itaru explained the tiny difference in measurements and calculations last week, but I don't remember it well...

All BCO full differences are at the same value for each frequency setting.

Difference of BCO full of neighboring events

All results

Run	Freq (kHz)	INTT0		INTT1		INTT2		INTT3		INTT4		INTT5		INTT6		INTT7	
		μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ
25661	15	4330.1	9698.4	4330.1	9698.4	4330.1	9698.4	4330.1	9698.4	4330.1	9698.4	4330.1	9698.4	4335.4	9723.4	4330.1	9698.4
25667	15	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0
25668	15	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0
25669	15	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0	1200.0	0.0
25670	18	960.0	0.0	960.0	0.7	960.0	0.0	960.0	0.0	960.0	0.7	960.0	0.0	960.0	0.0	960.0	0.8
25671	18	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0
25672	18	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0
25673	25	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.4	1080.0	0.0	1080.0	0.4	1080.0	0.0	1080.0	0.4
25674	25	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0
25675	25	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0	1080.0	0.0
25676	37	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0
25677	37	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0
25678	37	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0	960.0	0.0
25679	75	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0
25680	75	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0
25681	75	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0	840.0	0.0
25682	15	600.0	0.0	600.0	0.0	600.0	0.0	600.0	0.0	600.0	0.6	600.0	0.6	600.0	0.6	600.0	0.6
25683	15	600.0	0.0	600.0	0.0	600.0	0.0	600.0	0.0	600.0	0.0	600.0	0.0	600.0	0.0	600.0	0.0

All BCO full differences are at the same value for each frequency setting.

Next

I need to understand what `endat0` means