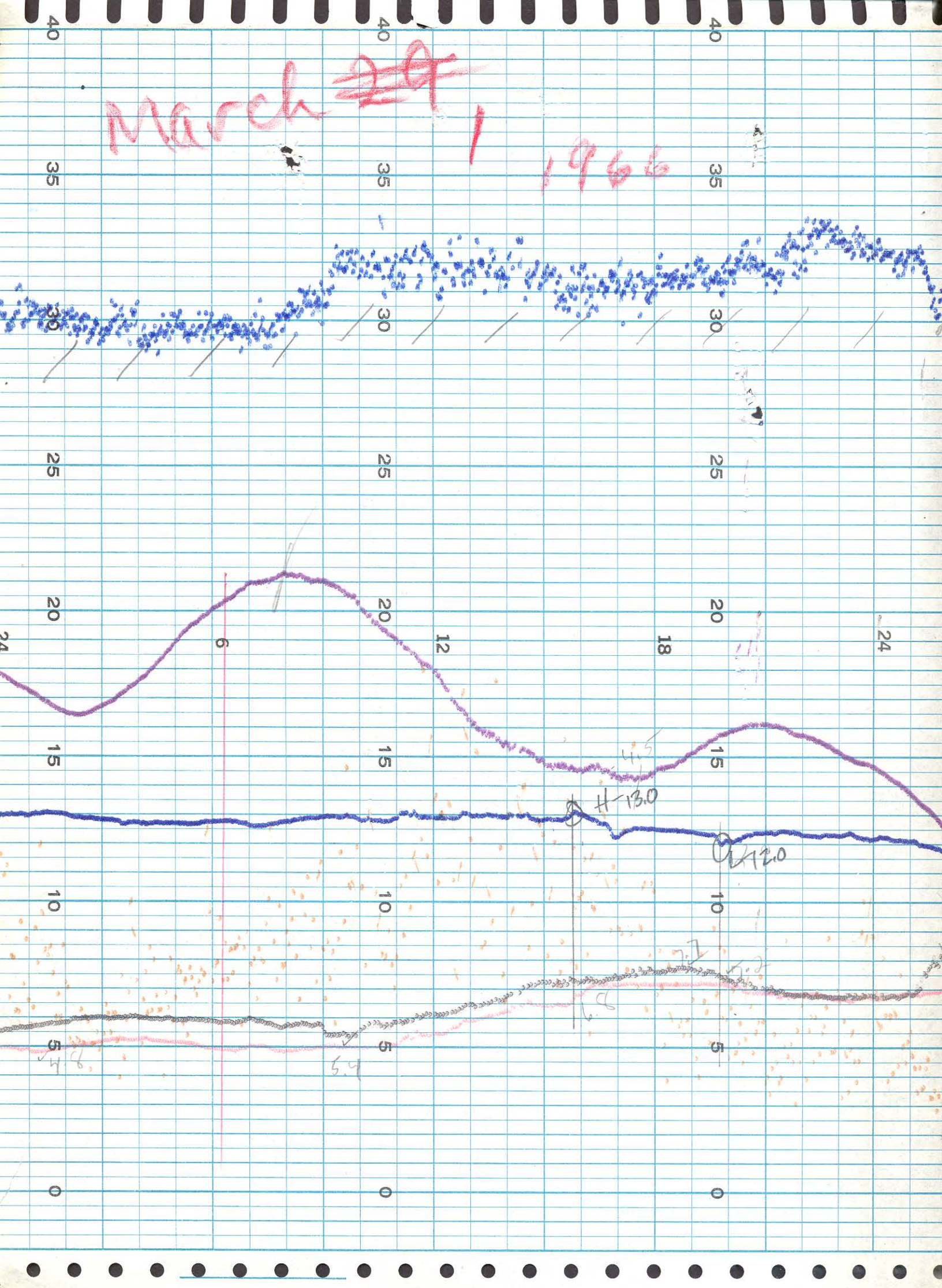

March 1 1966
40
35
30
25
20
15
10
5
0
6
12
18
24
H 13.0
12.0
4.5
7.1
5.2
4.8
5.4

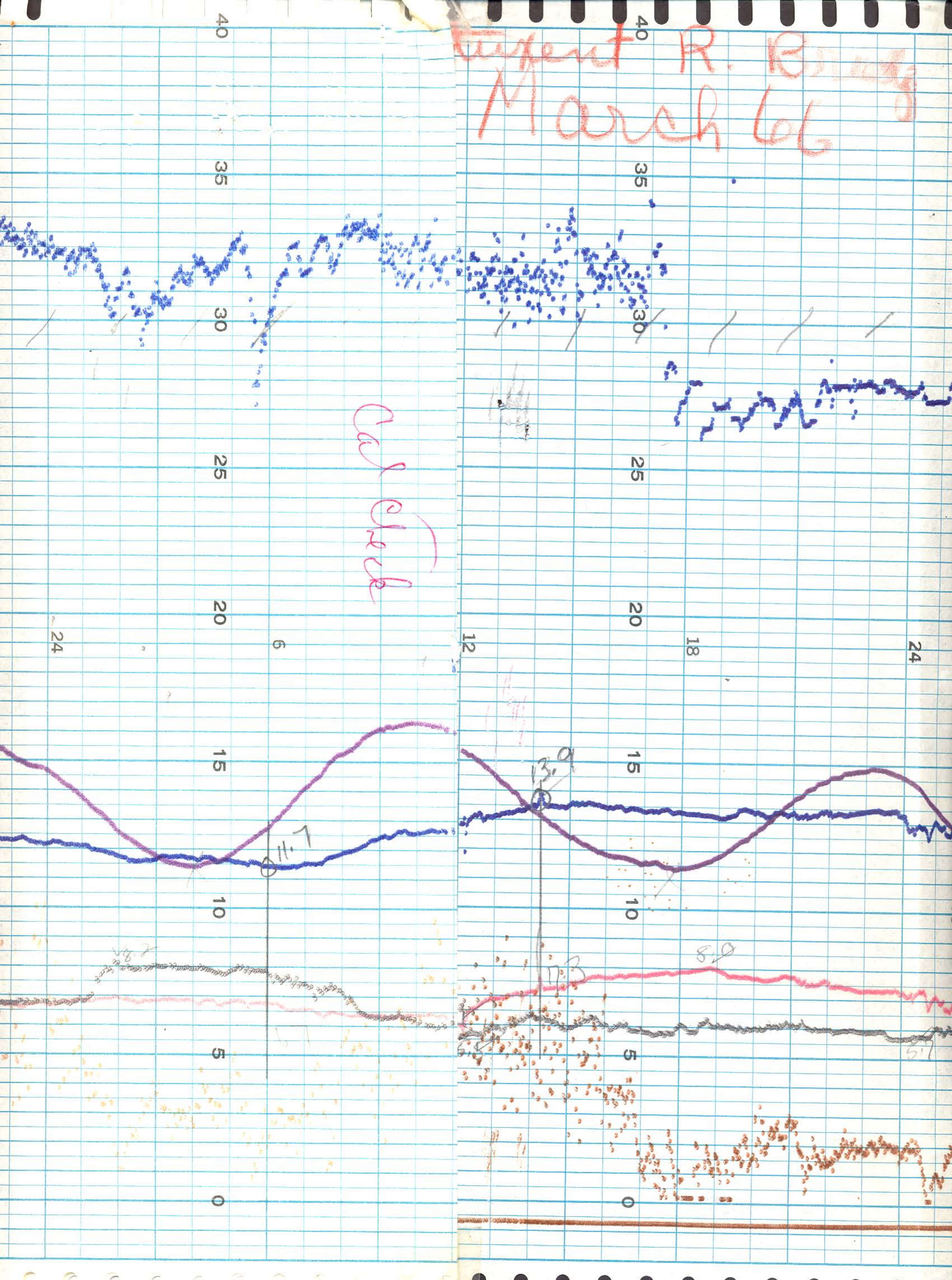
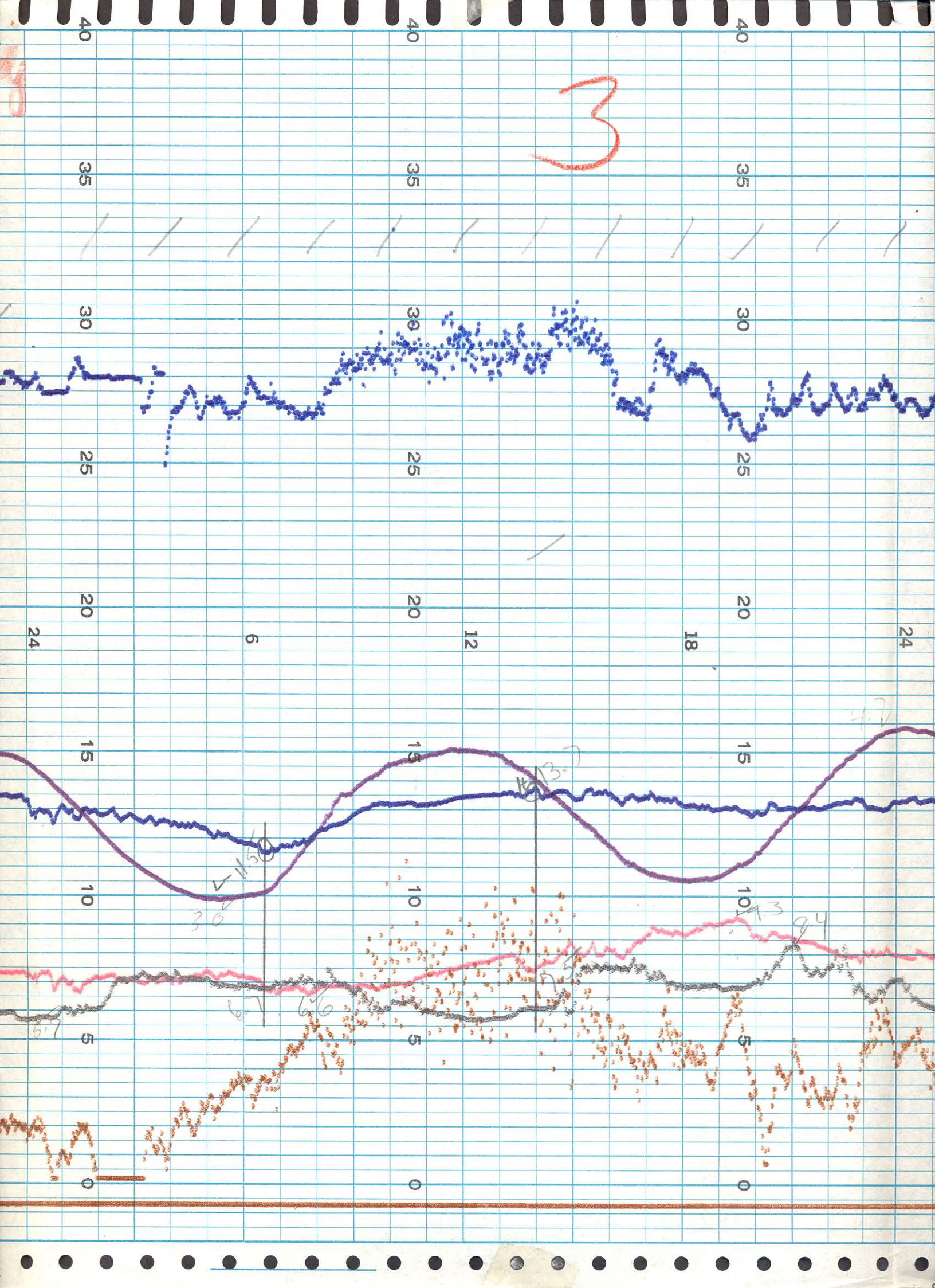
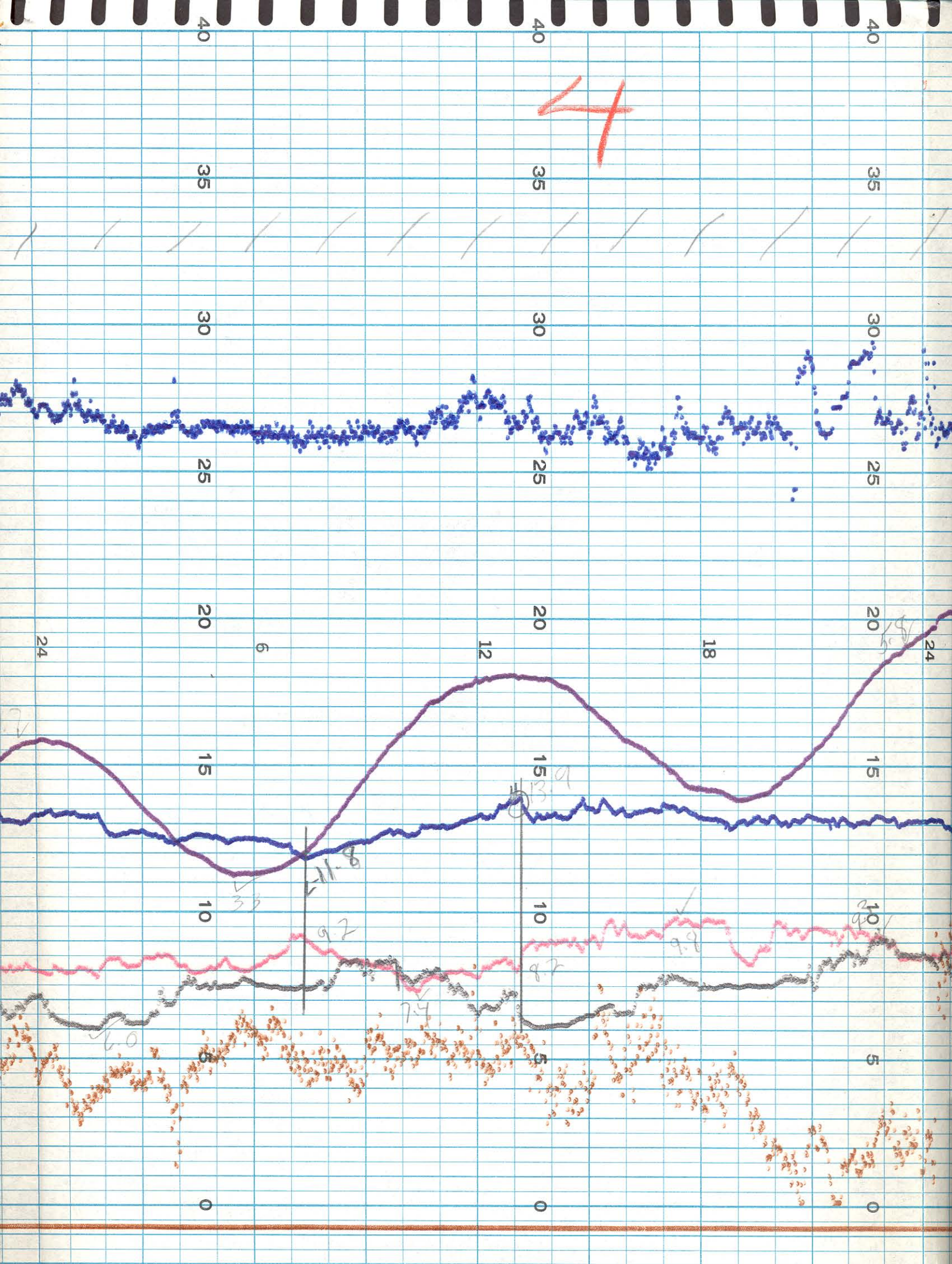


CHART NO. 9544-1/3 HONEYWELL, PHILADELPHIA, PA.

CHART NO. 9544-1/3 HONEYWELL, PHILADELPHIA, PA.


3
40
35
30
25
20
15
10
5
0
24
6
12
18
24


4
40
35
30
25
20
15
10
5
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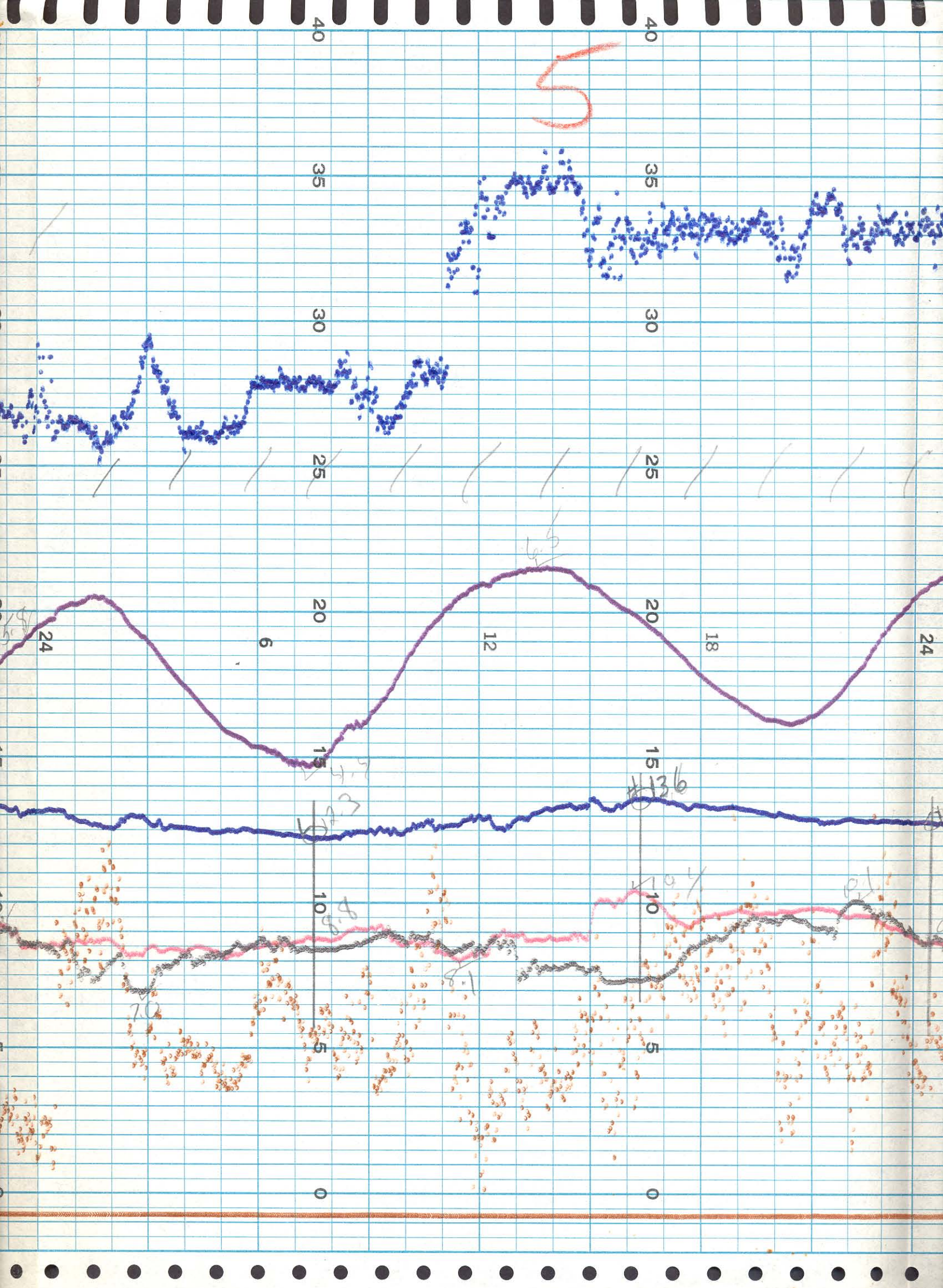
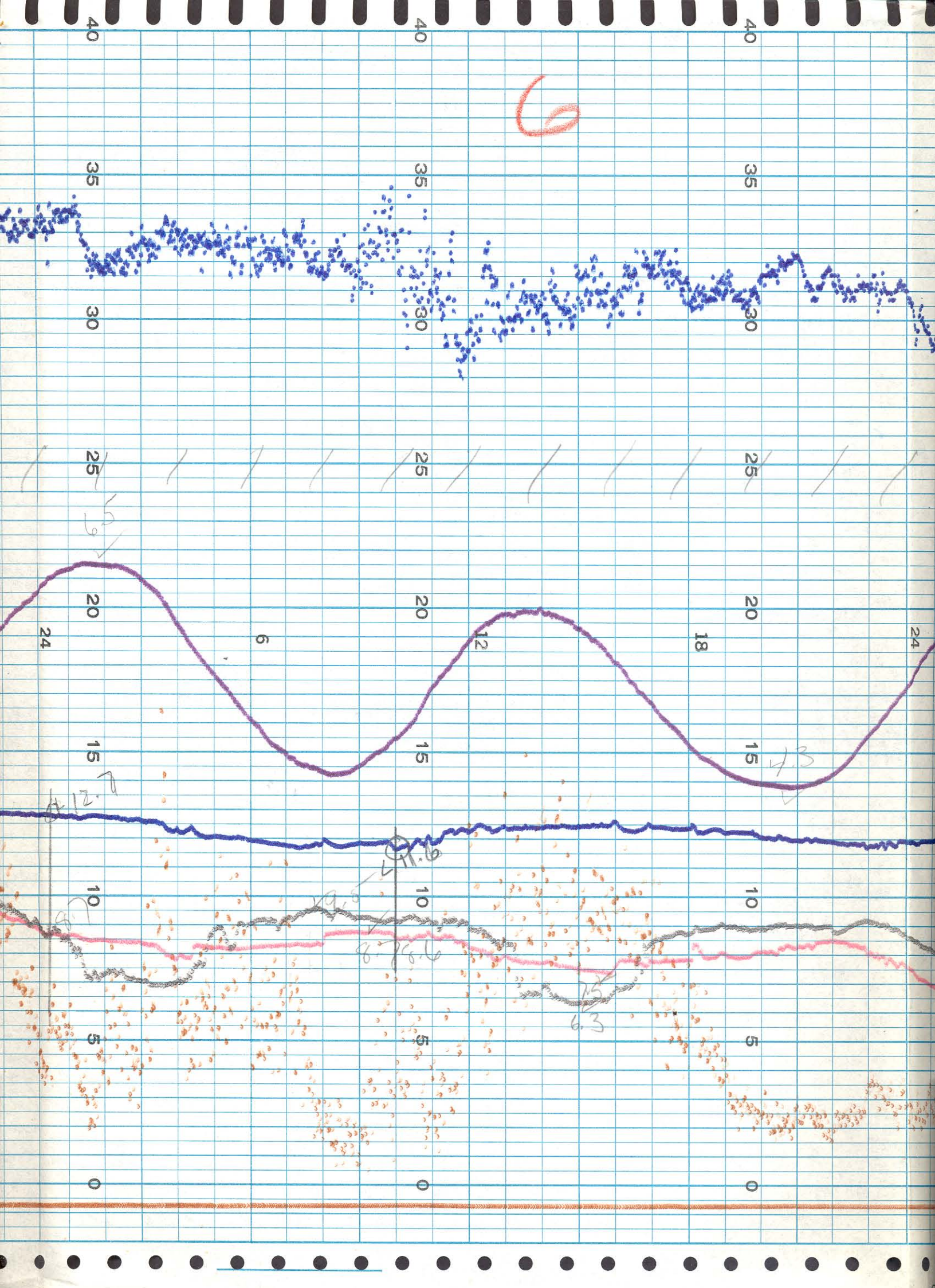
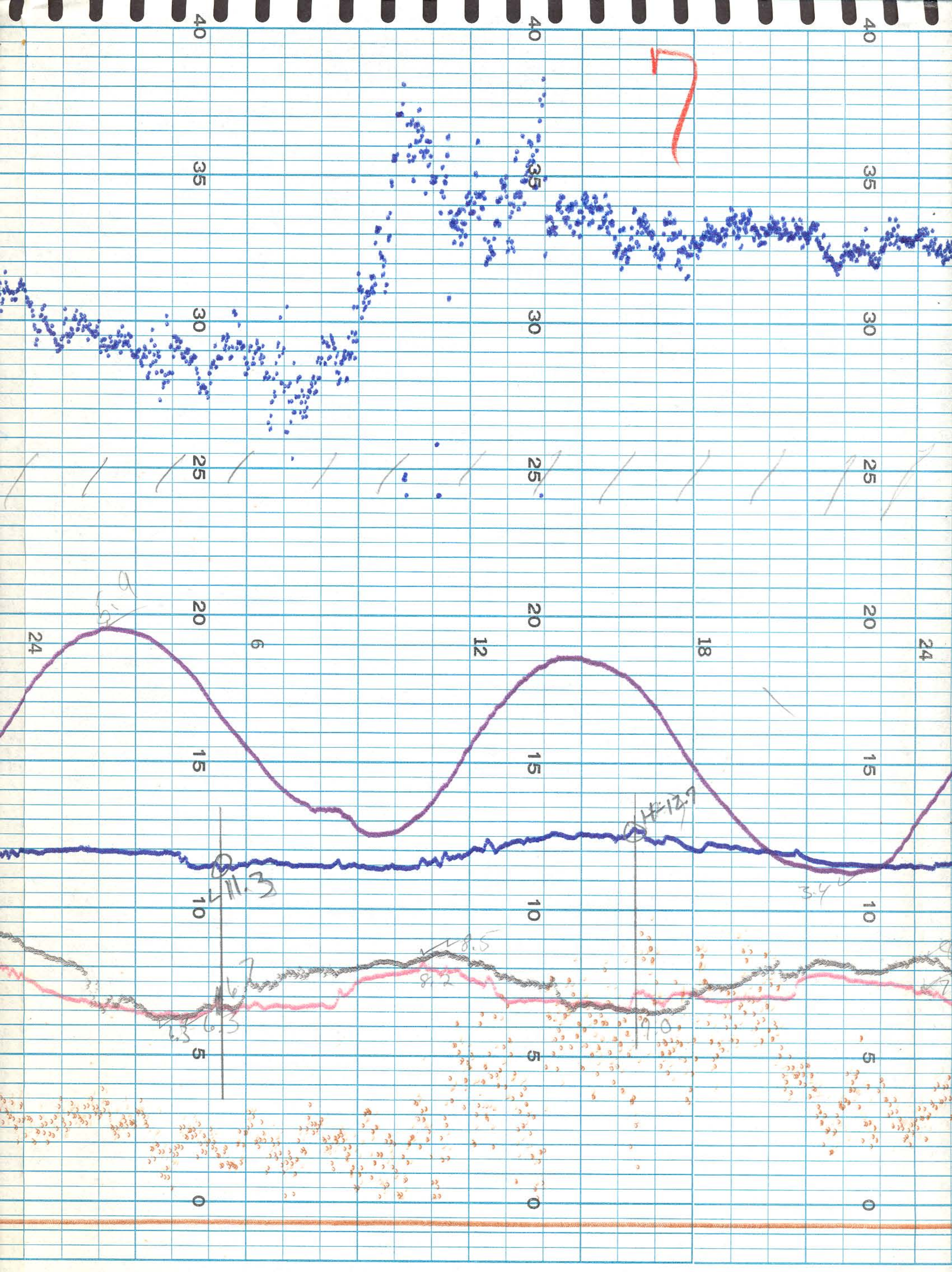
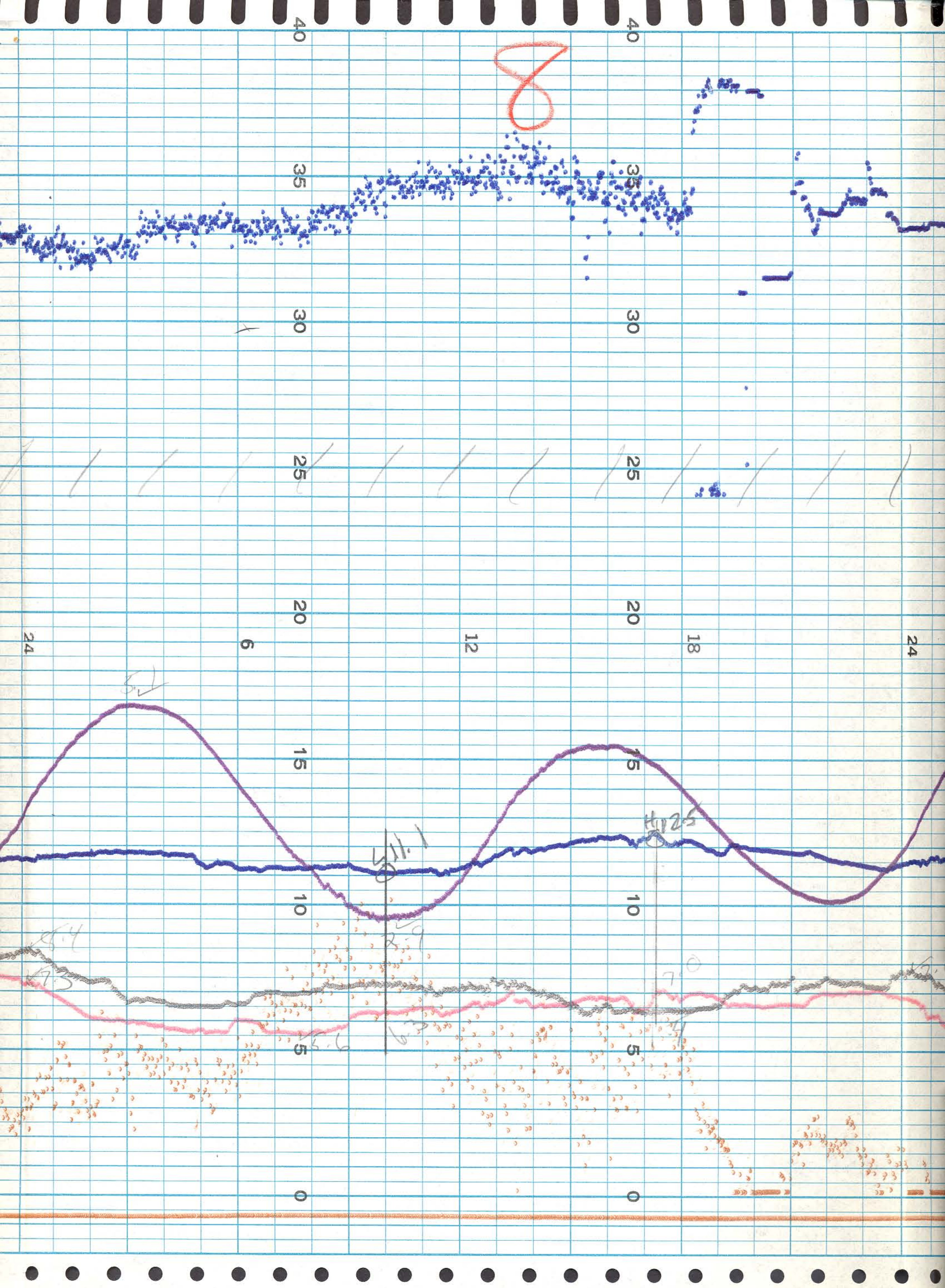
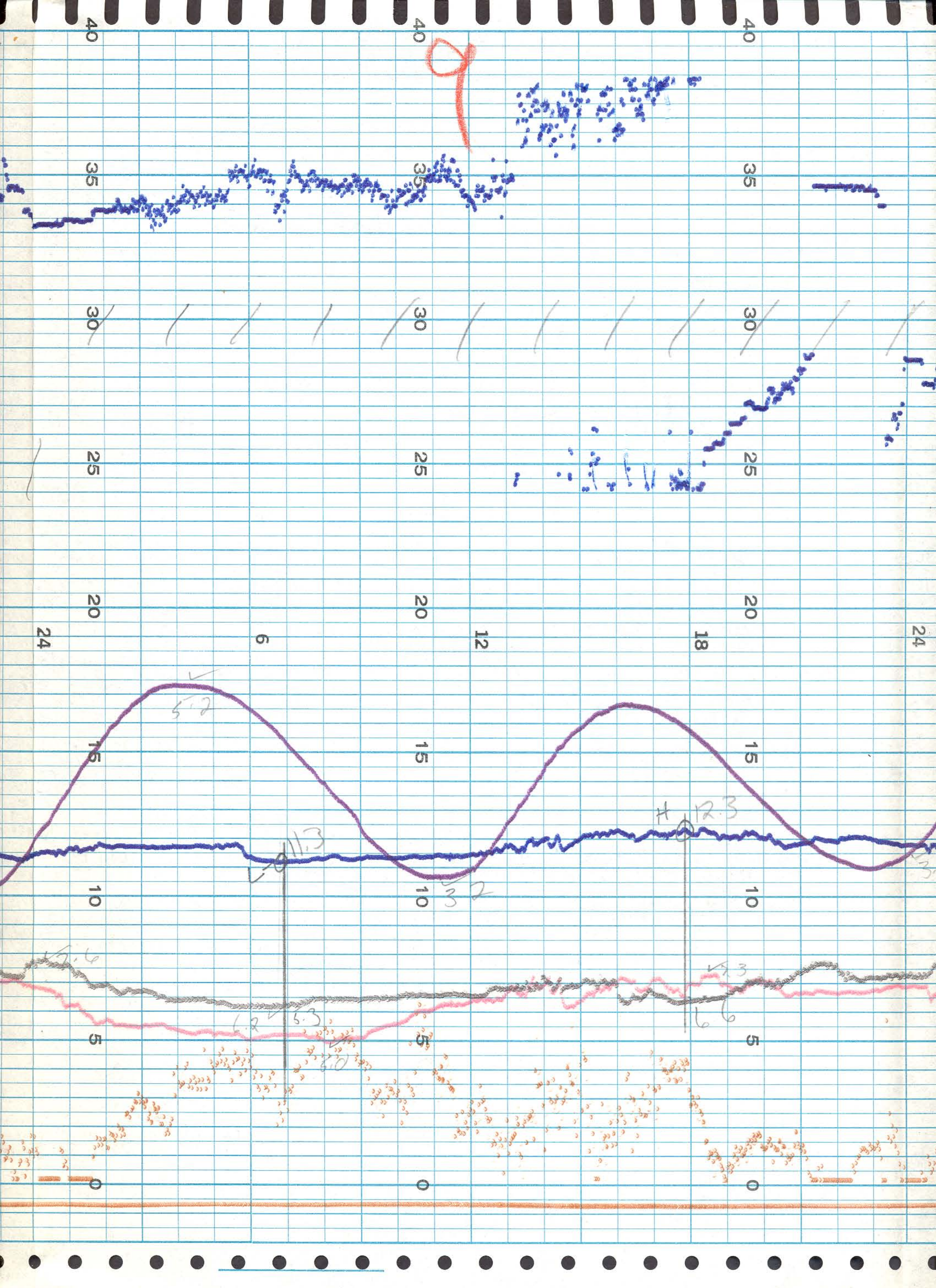
24
6
12
18
24
11.8
13.9
9.2
9.9
7.4
8.7
4.0

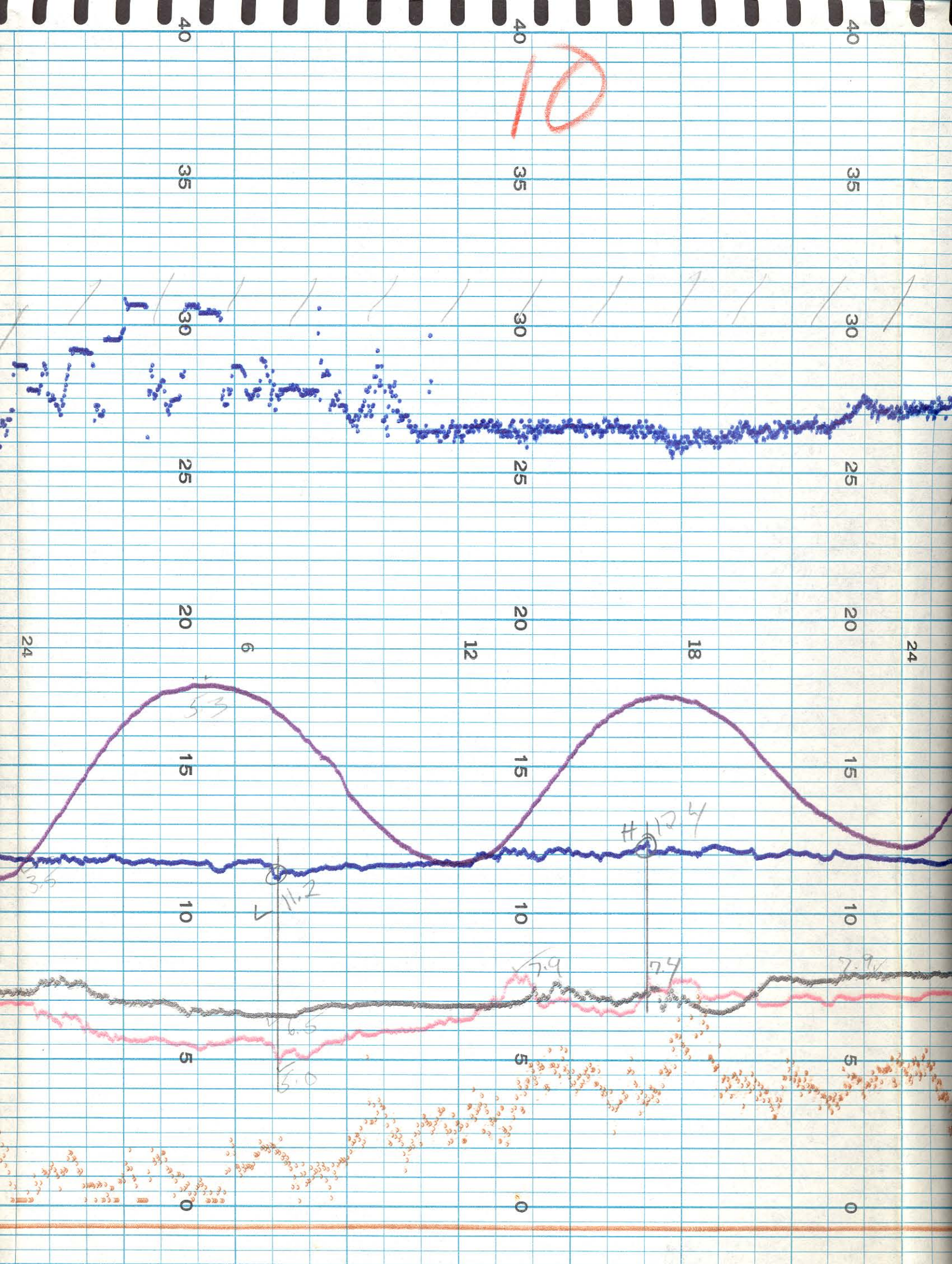

40
35
30
25
20
15
10
5
0
24
6
12
18
24
#136

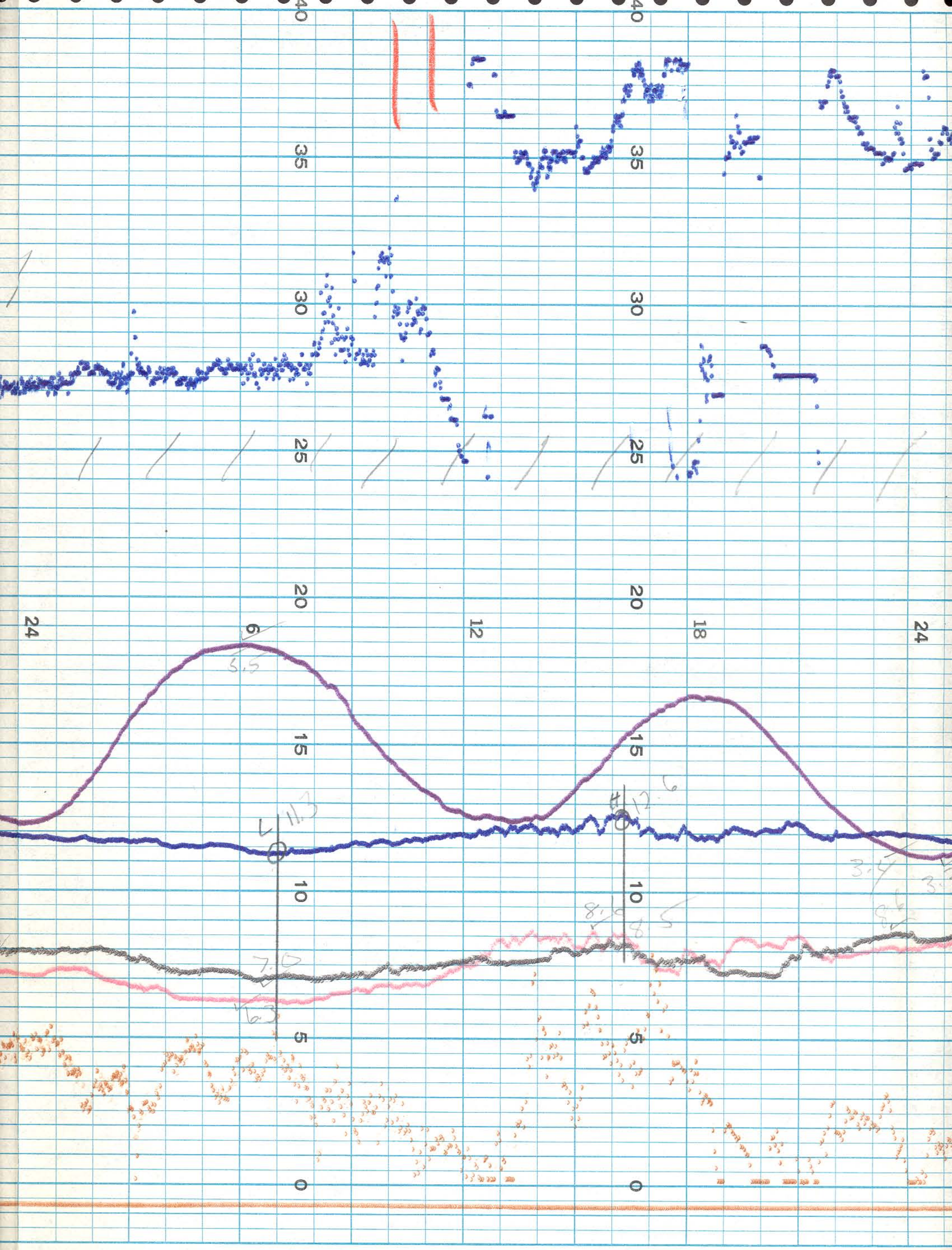

40
35
30
25
20
15
10
5
0
24
6
12
18
24

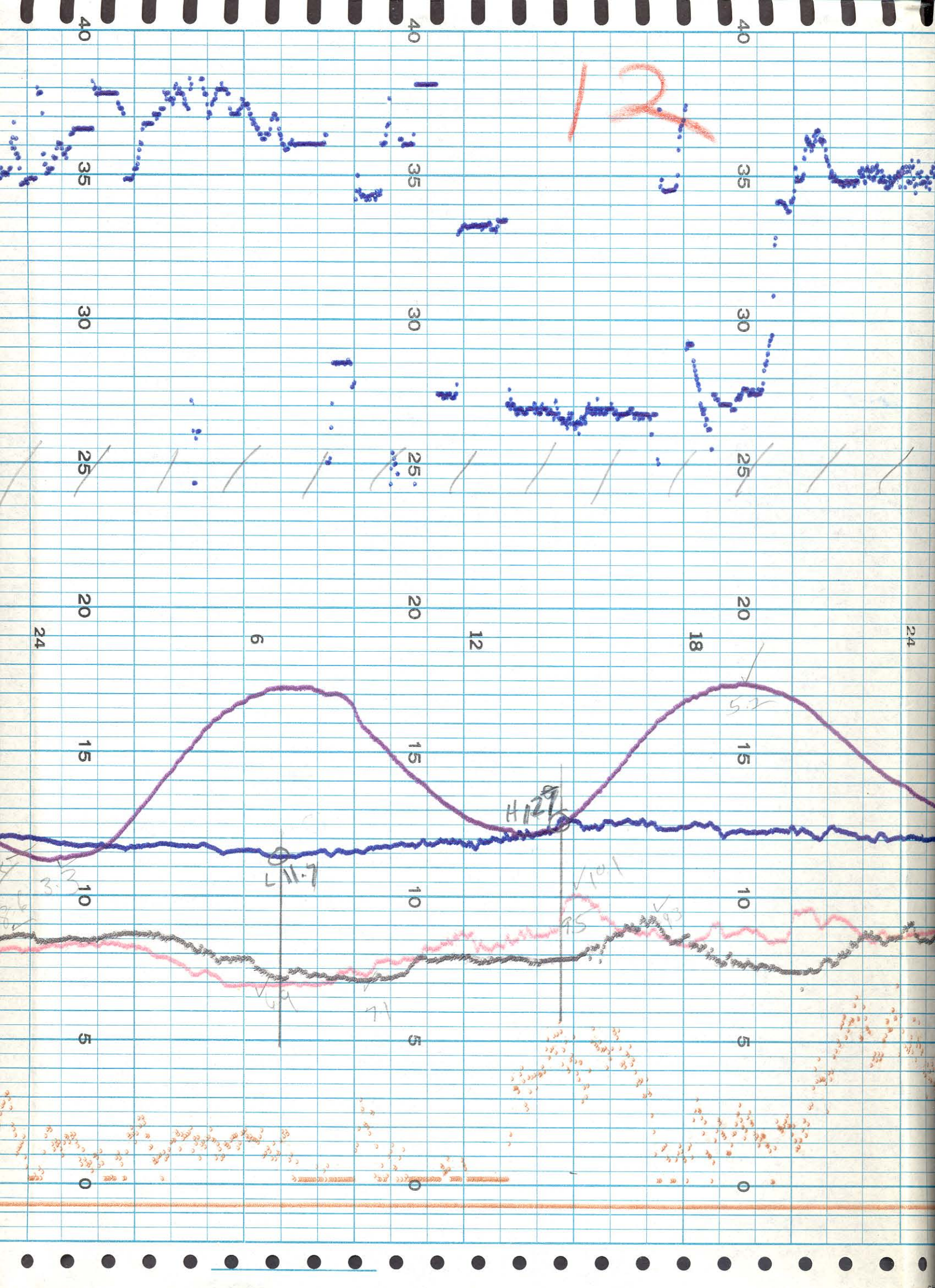


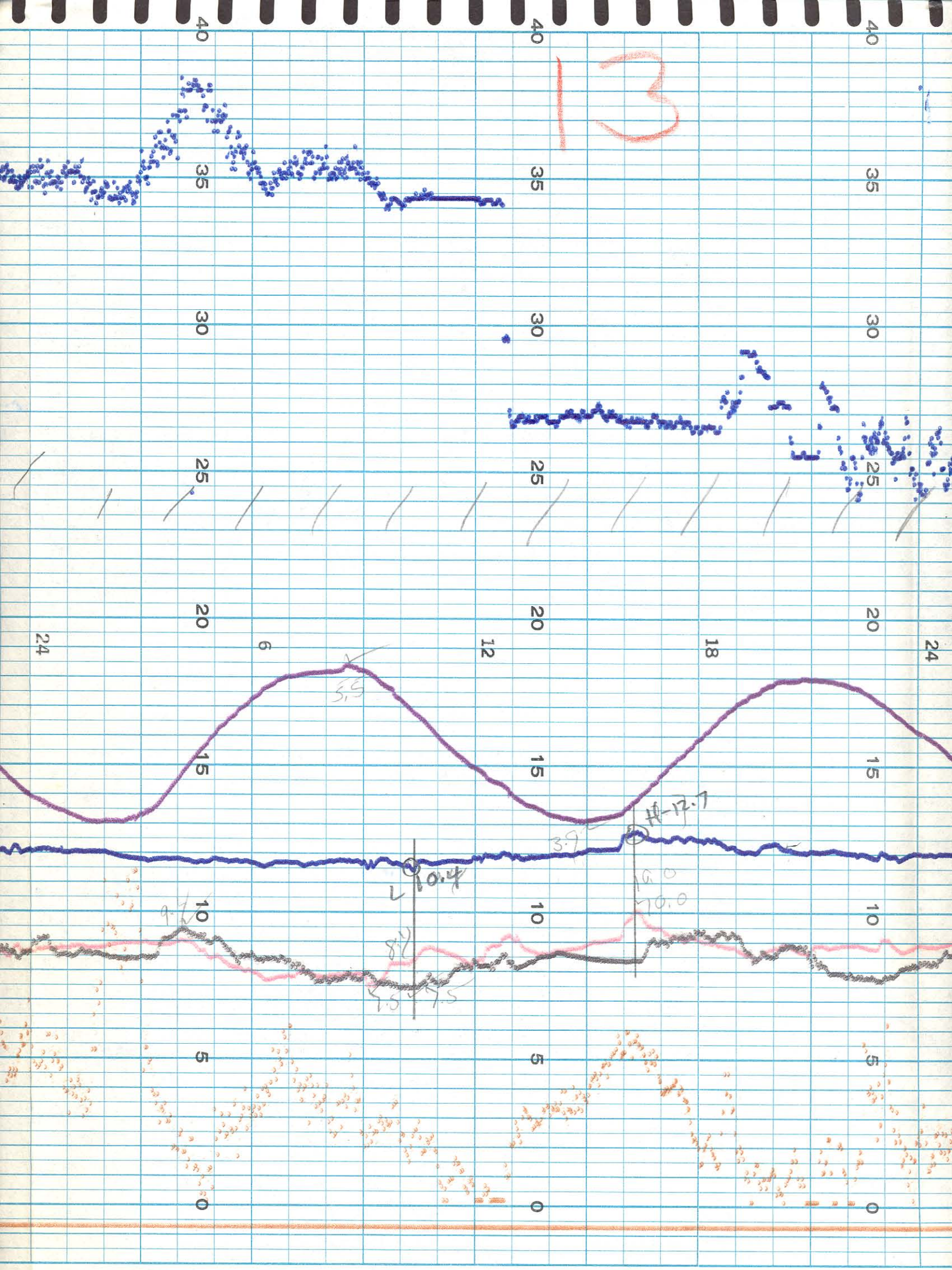


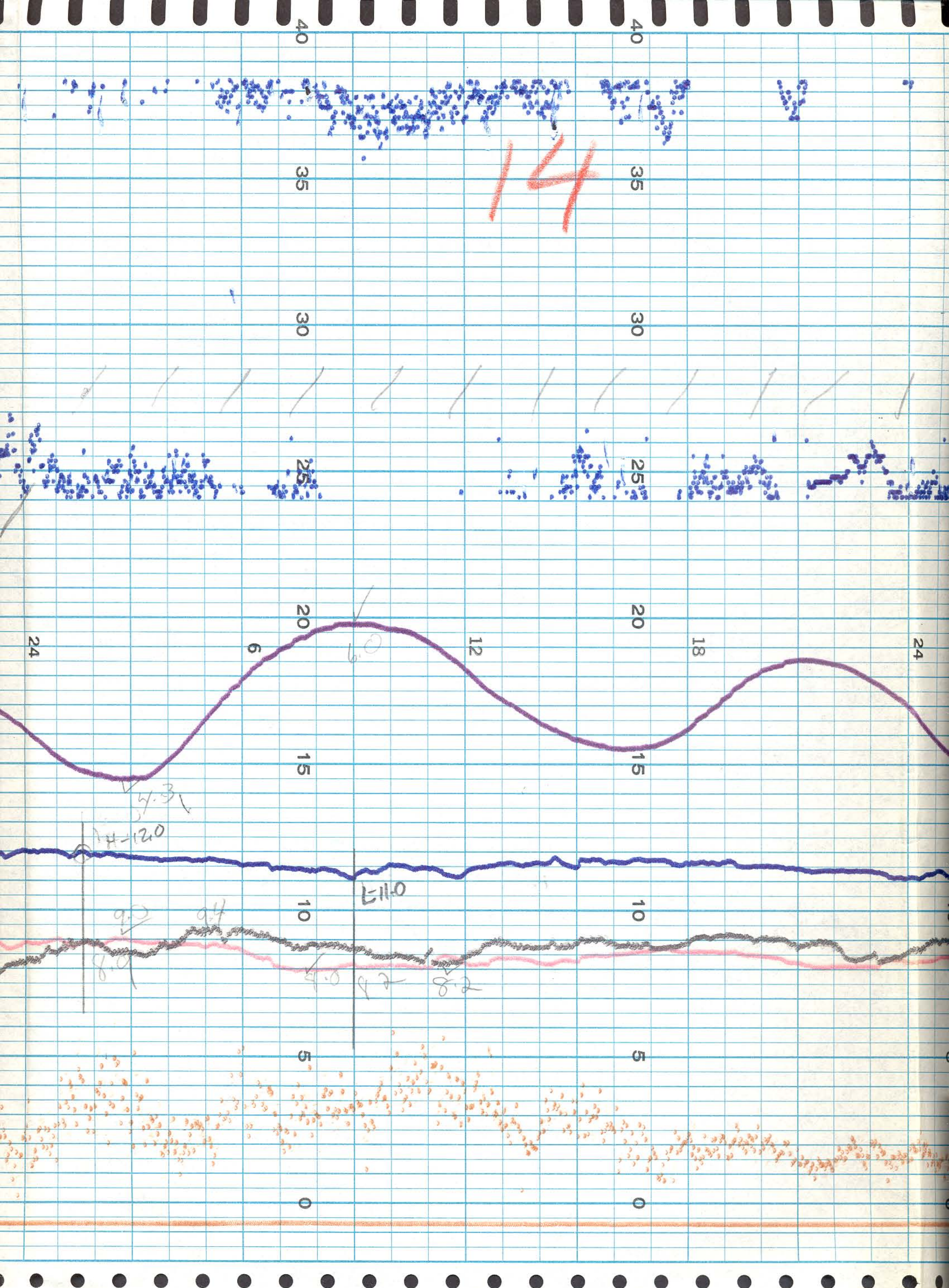

9
40
35
30
25
20
15
10
5
0
24
6
12
18
24

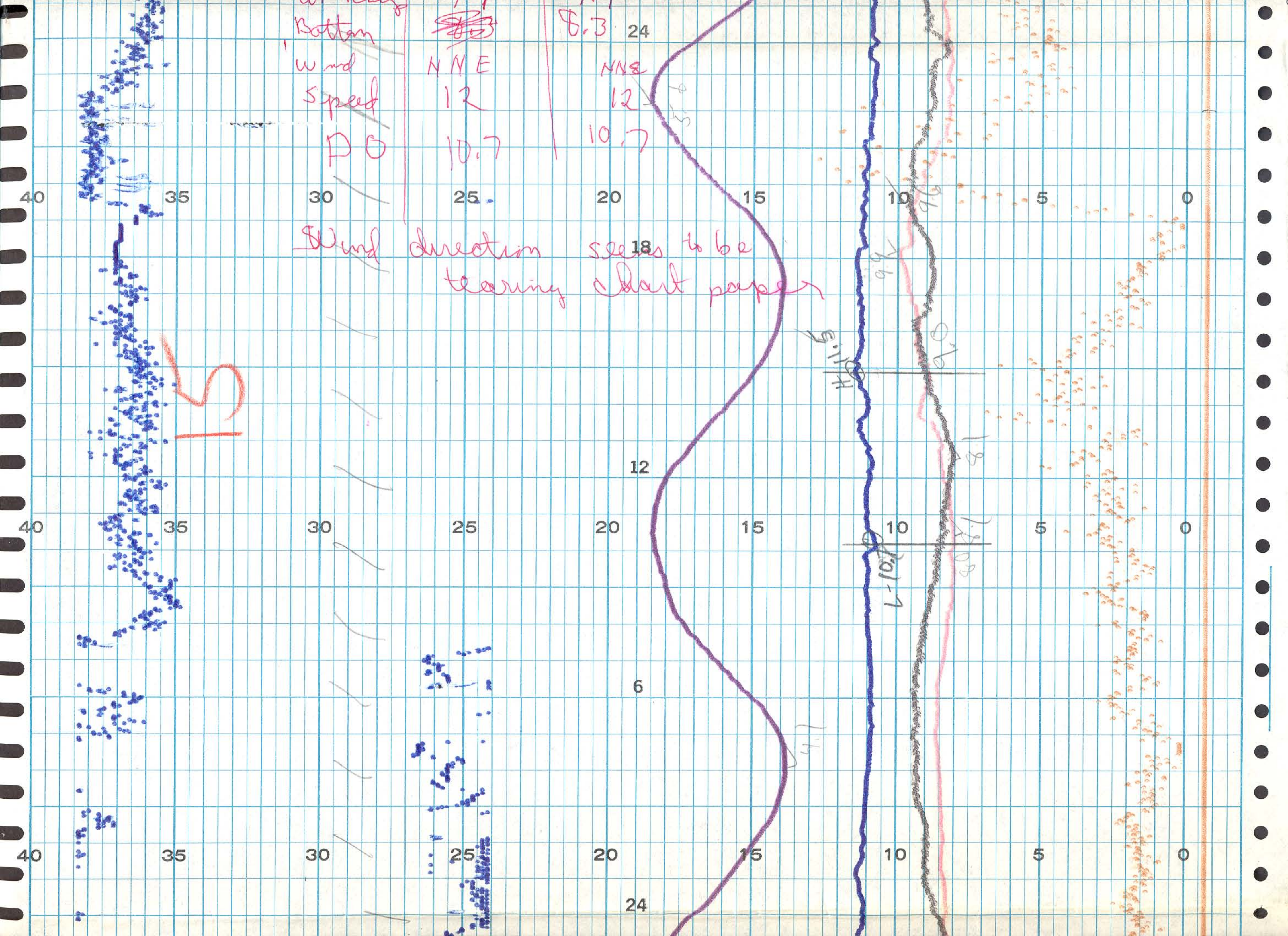

40
35
30
25
20
15
10
5
0
24
6
12
18
24
10
5.3
3.5
11.2
12.4
7.4
5.9
6.5
5.0
2.9

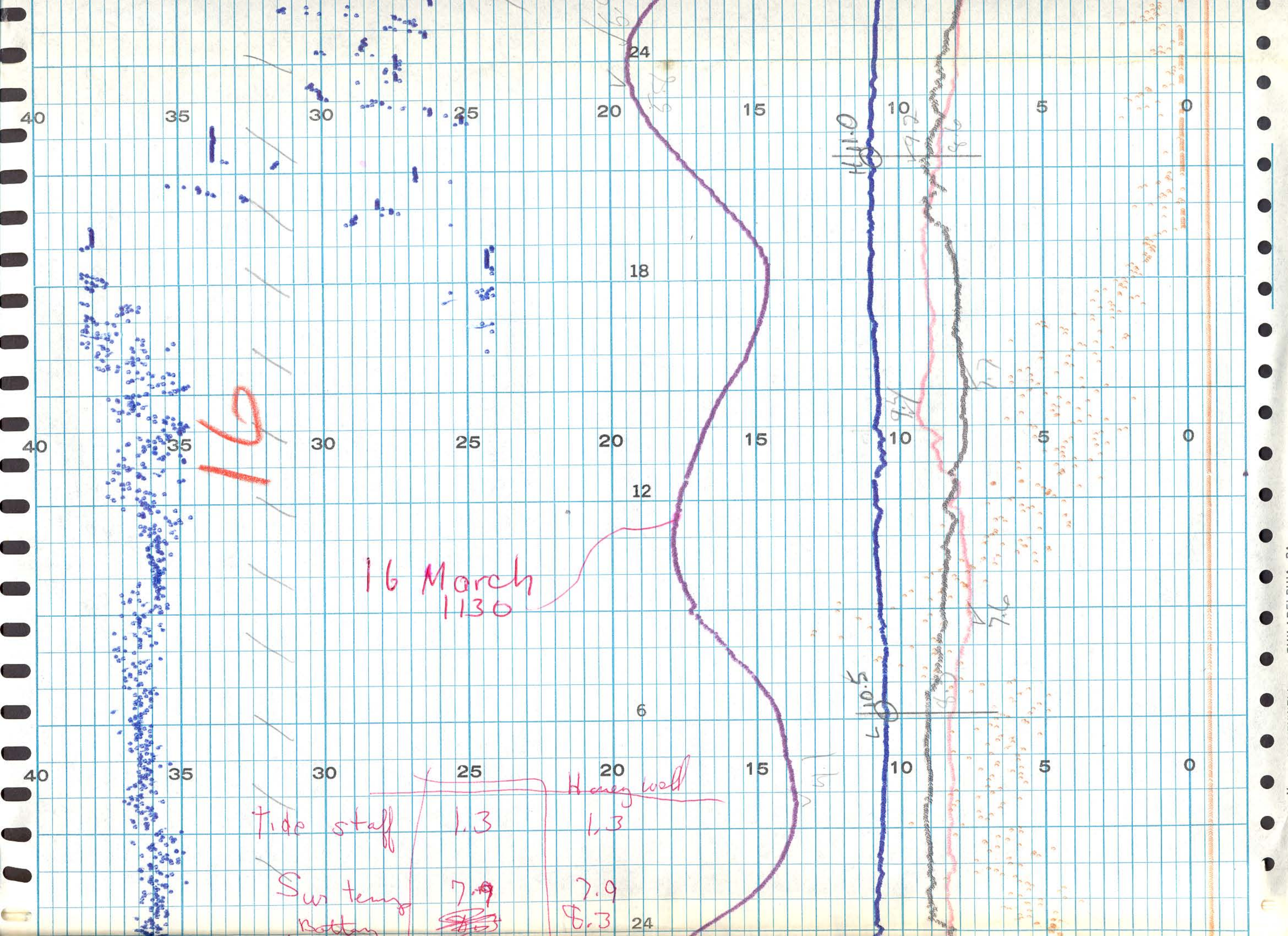


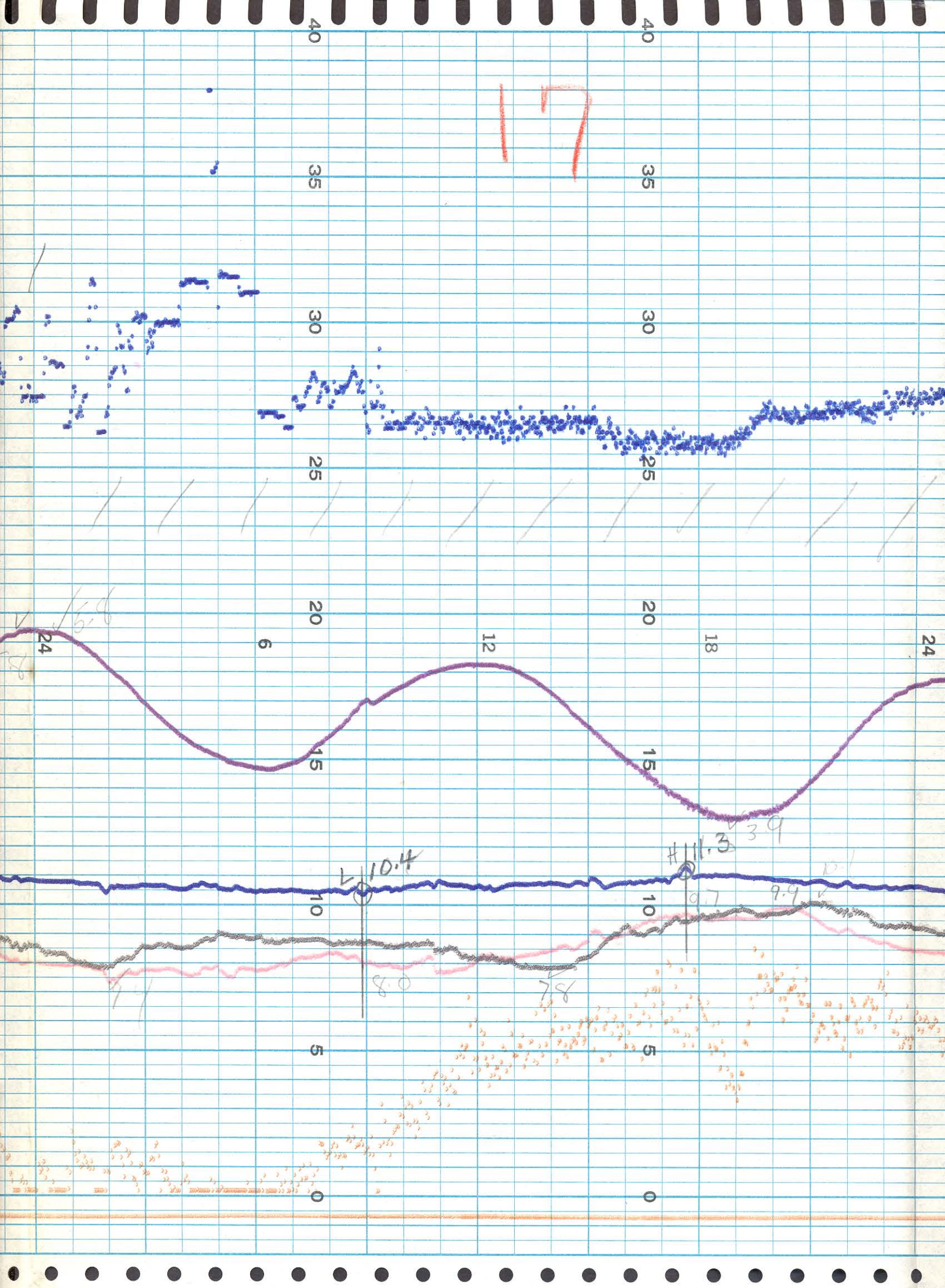

12
40
35
30
25
20
15
10
5
0
24
6
12
18
24
H 12
L 11.7

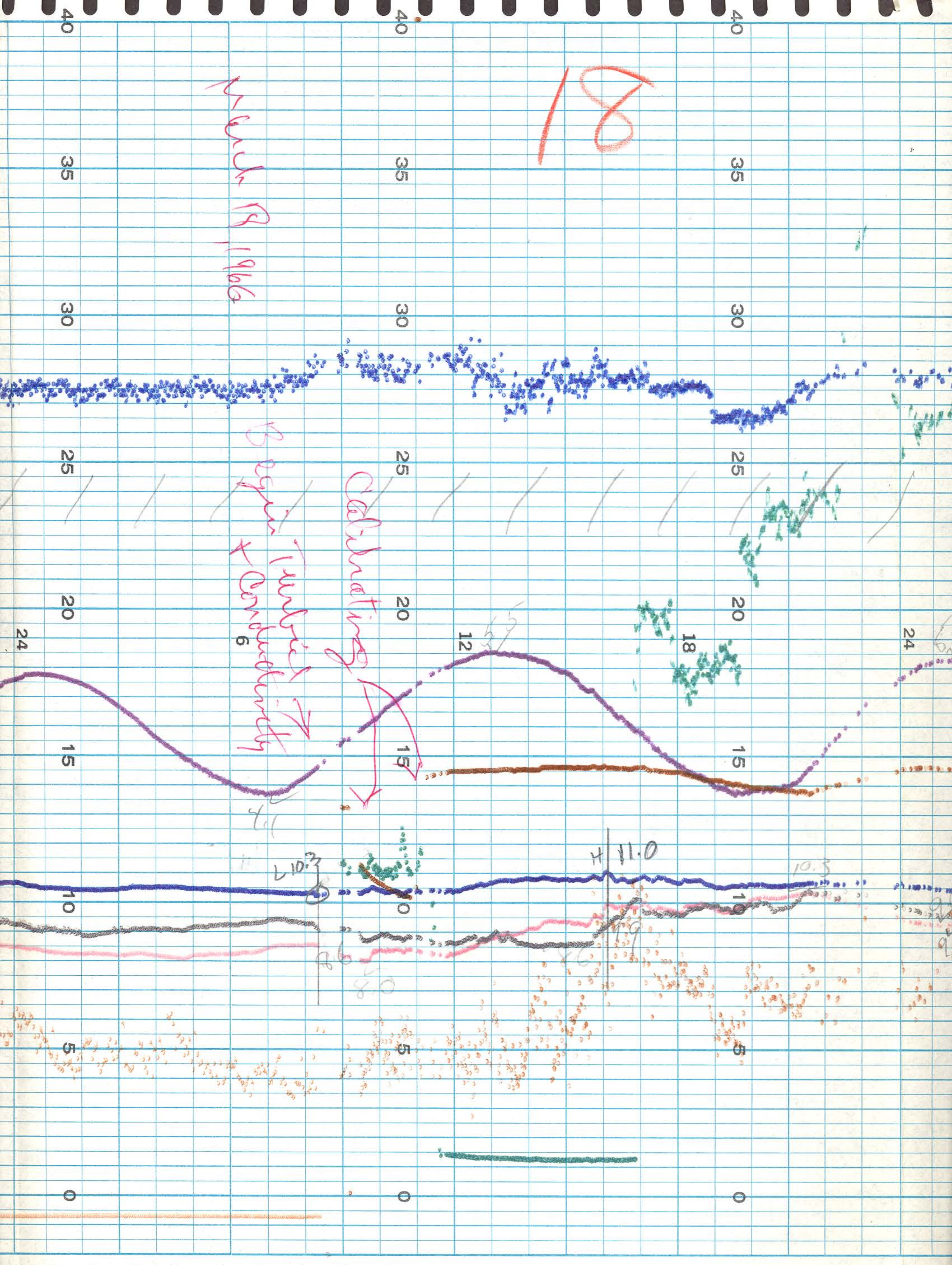

13
40
35
30
25
20
15
10
5
0
24
6
12
18
5.9
3.9
H-12.7
L 10.4
9.7
8.2
7.5
7.5
10.0
10.0

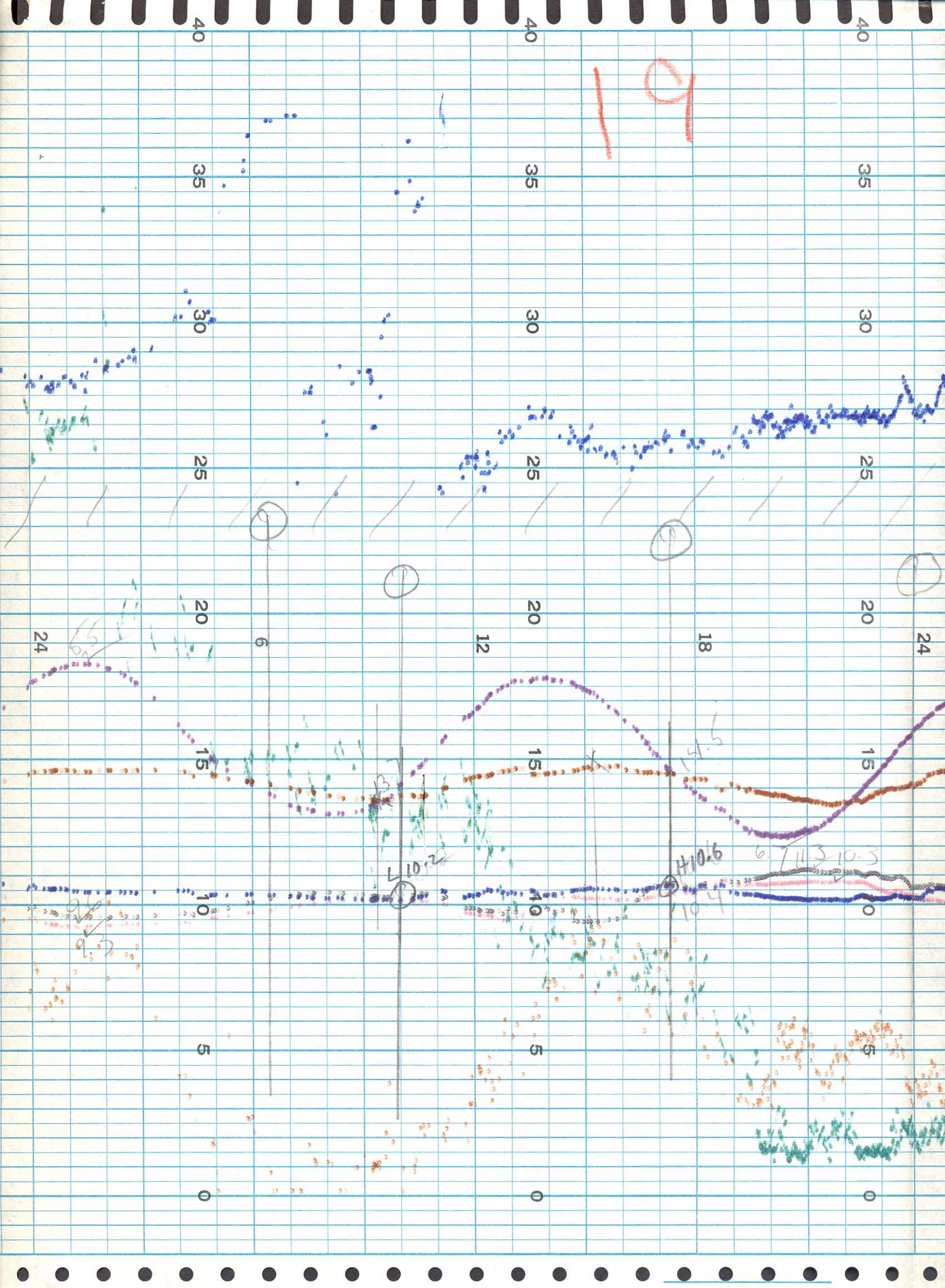

14
40
35
30
25
20
15
10
5
0
24
6
12
18
24

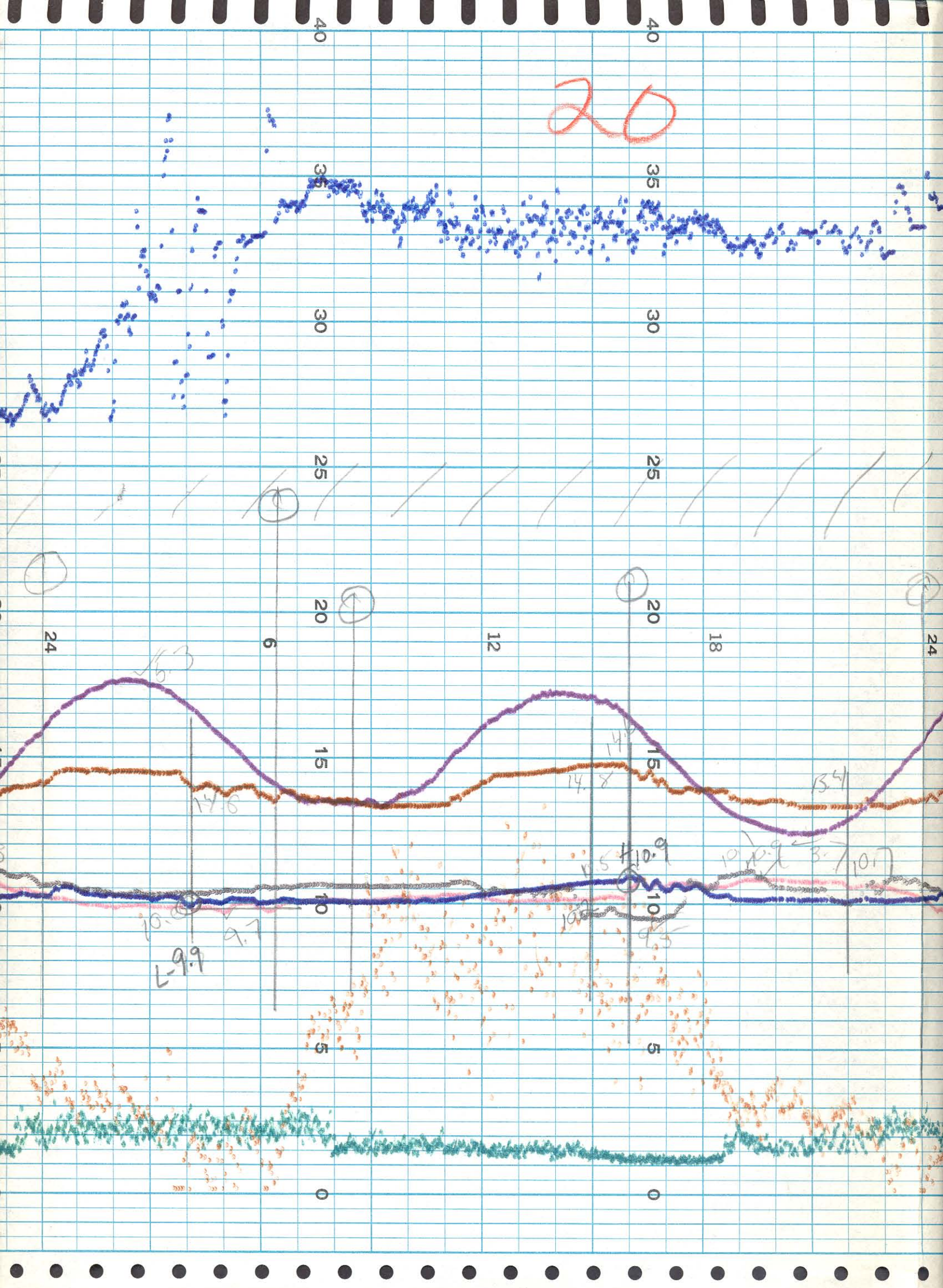

Bottom
Wind
Speed
DO
NNE
12
10.7
8.3
NNE
12
10.7
Wind direction seems to be tearing chart paper
15
H 11.5
L-10.7
24
18
12
6
24
40
35
30
25
20
15
10
5
0

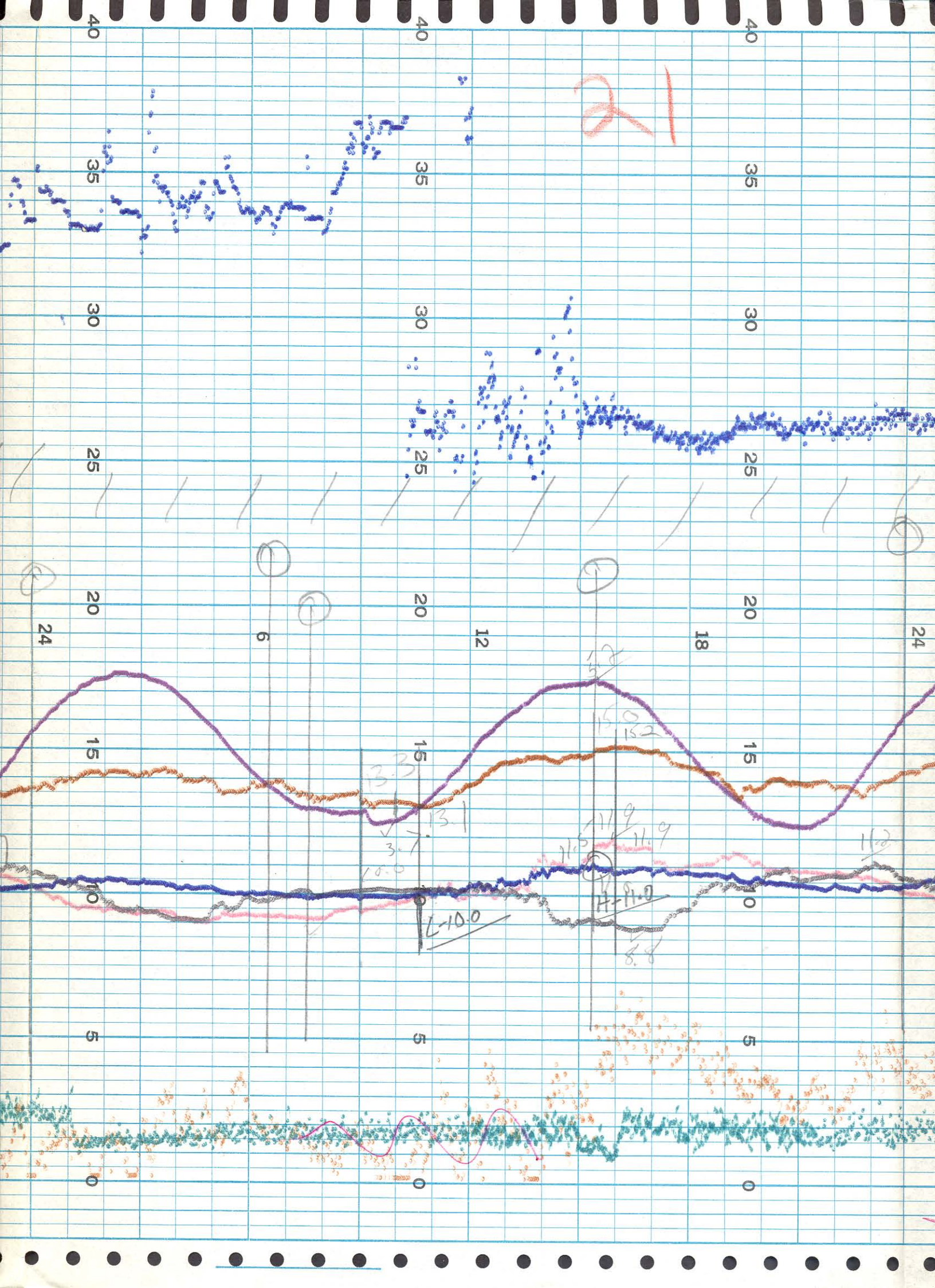

16
16 March
1130
H 11.0
L 10.5
Honeywell
Tide staff 1.3 1.3
Sur temp 7.9 7.9
Bottom 8.3


40
35
30
25
20
15
10
5
0
24
6
12
18
24
10.4
11.3
3.9
9.7
9.4
8.0
7.8


18
March 18, 1966
Begin Turbidity + Conductivity
Calibrating
L 10.3
H 11.0
10.3
40
35
30
25
20
15
10
5
0
24
6
12
18


40
35
30
25
20
15
10
5
0
24
6
12
18
10.2
10.6


20
40
35
30
25
20
15
10
5
0
24
6
12
18
24
L-9.9


21
40
35
30
25
20
15
10
5
0
24
6
12
18
24
H=11.0
L=10.0

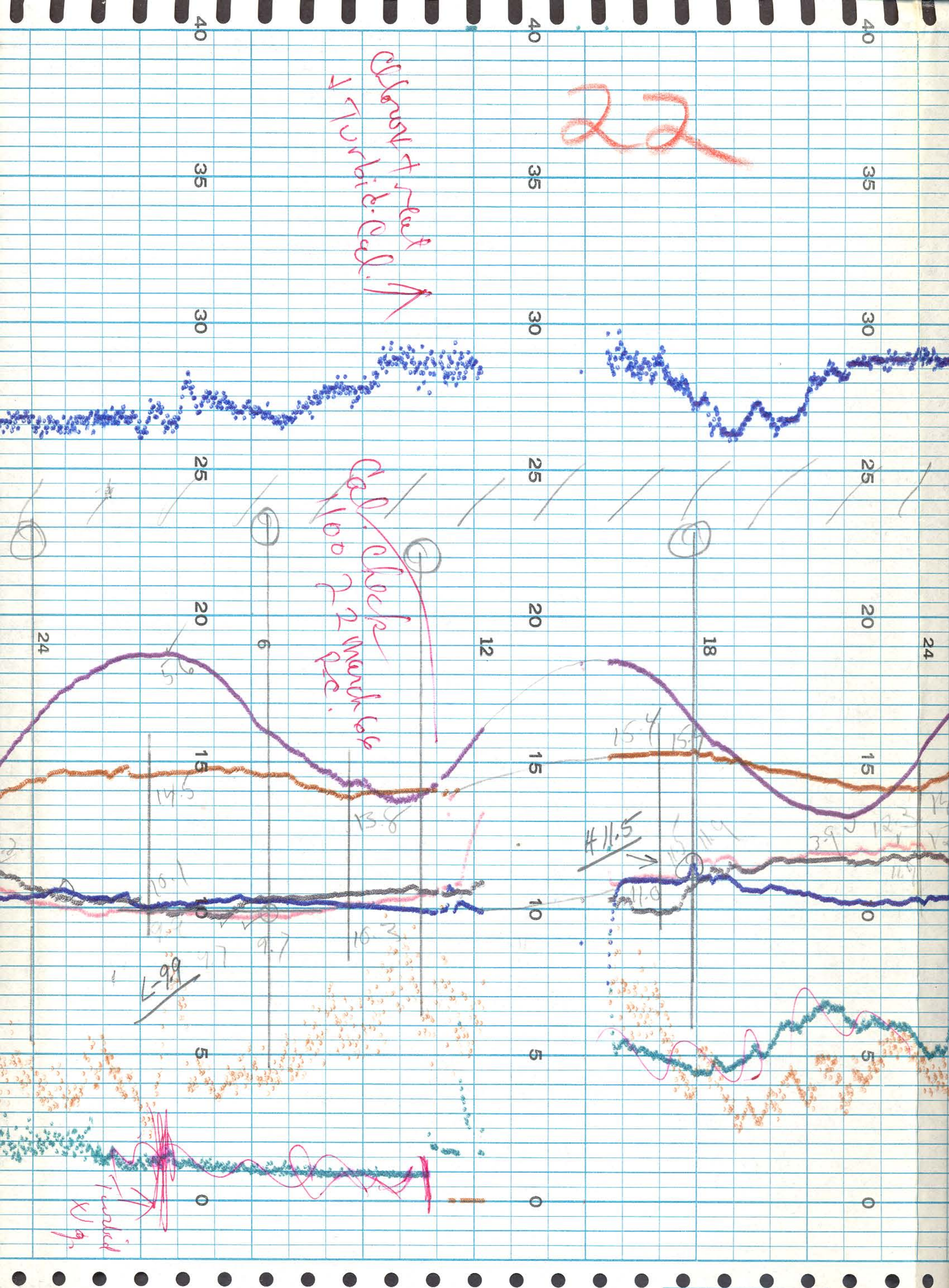
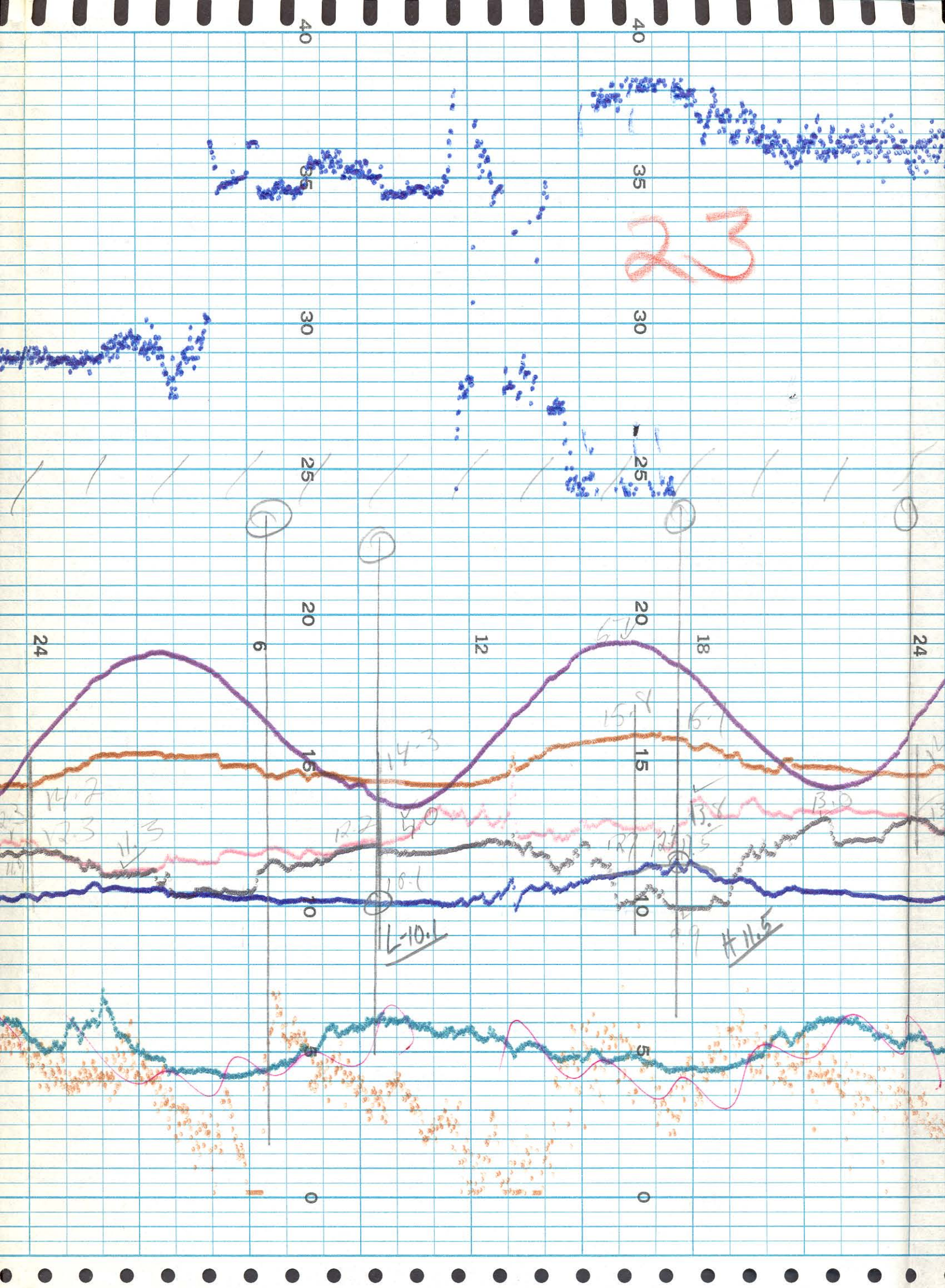
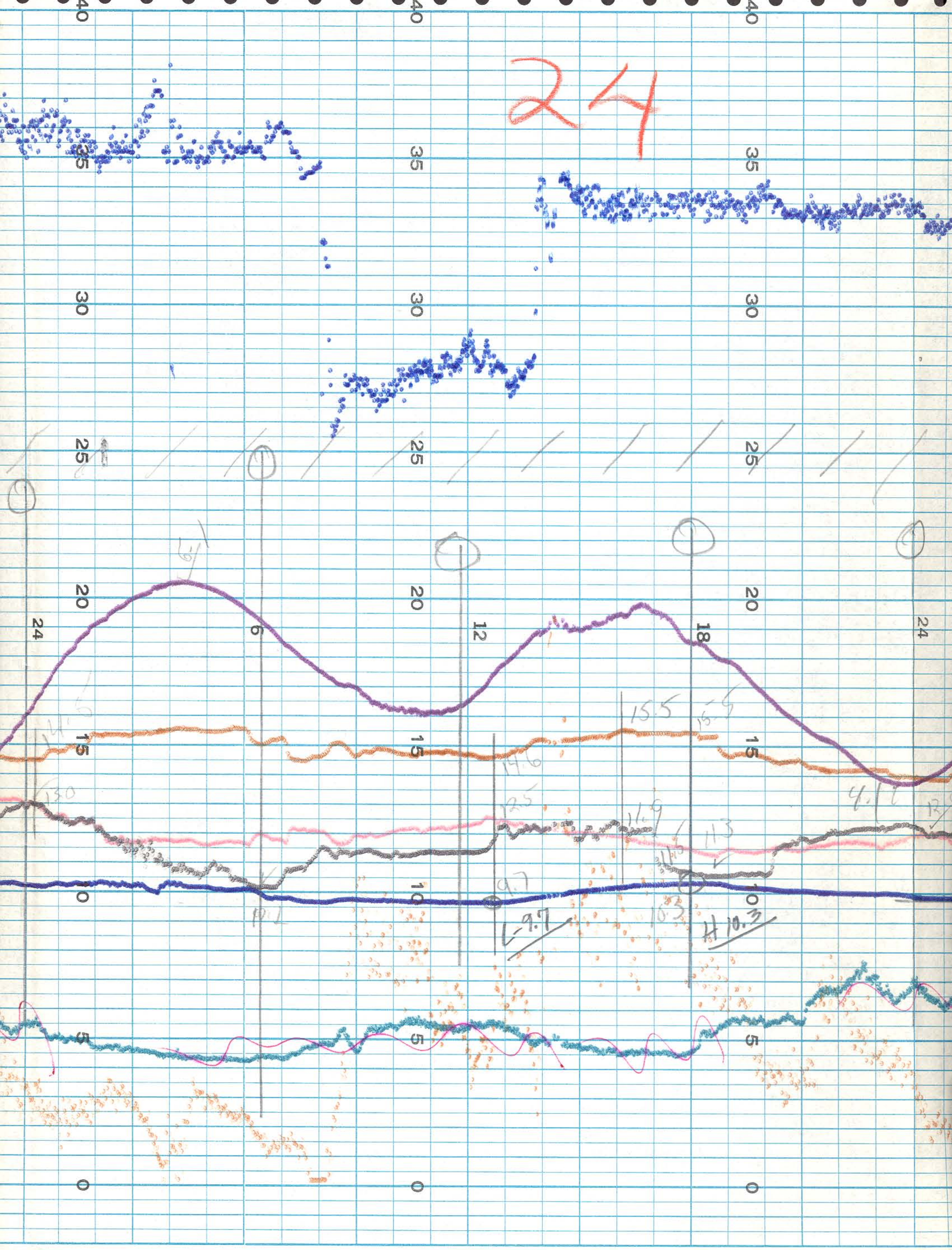
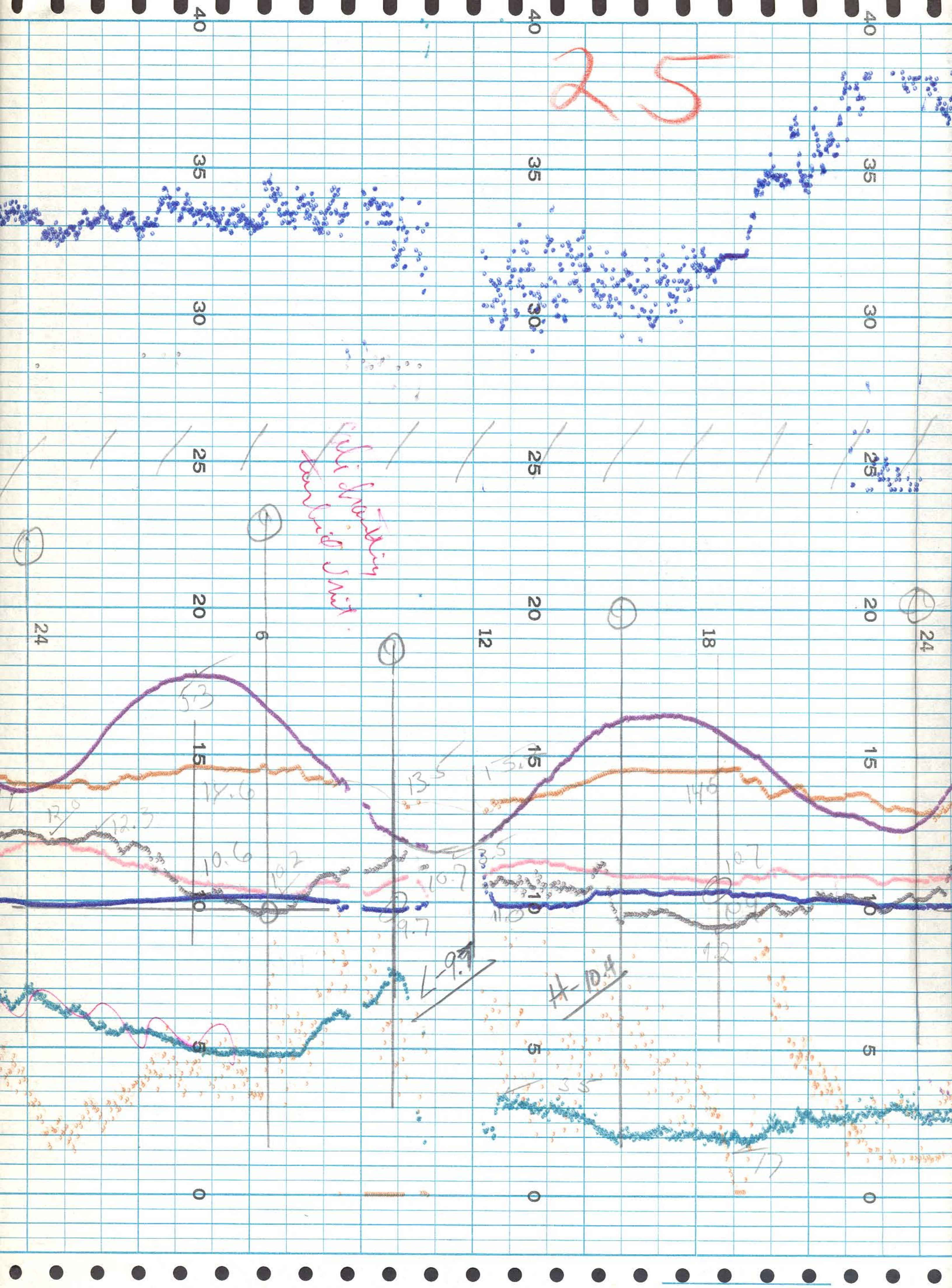
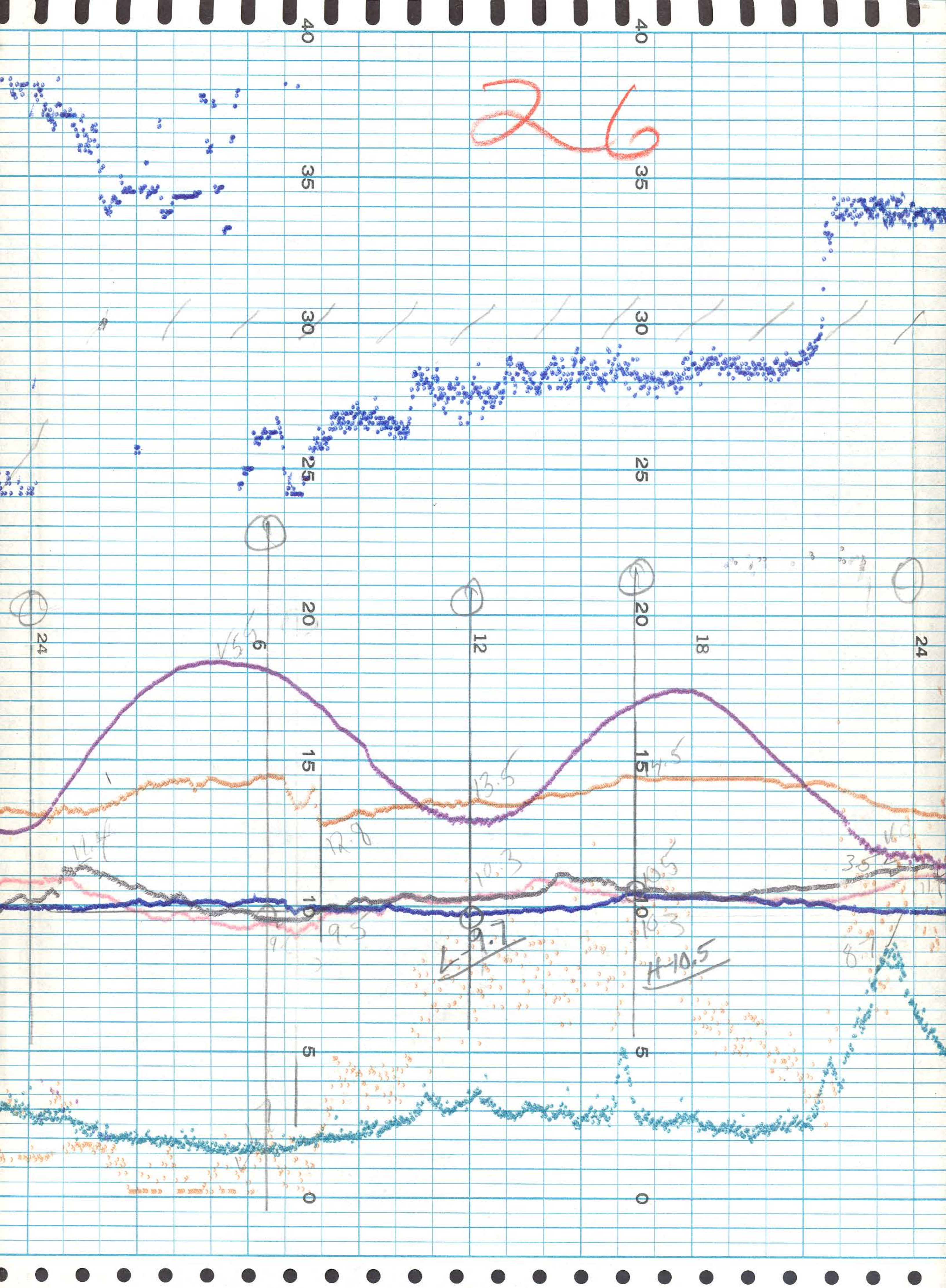


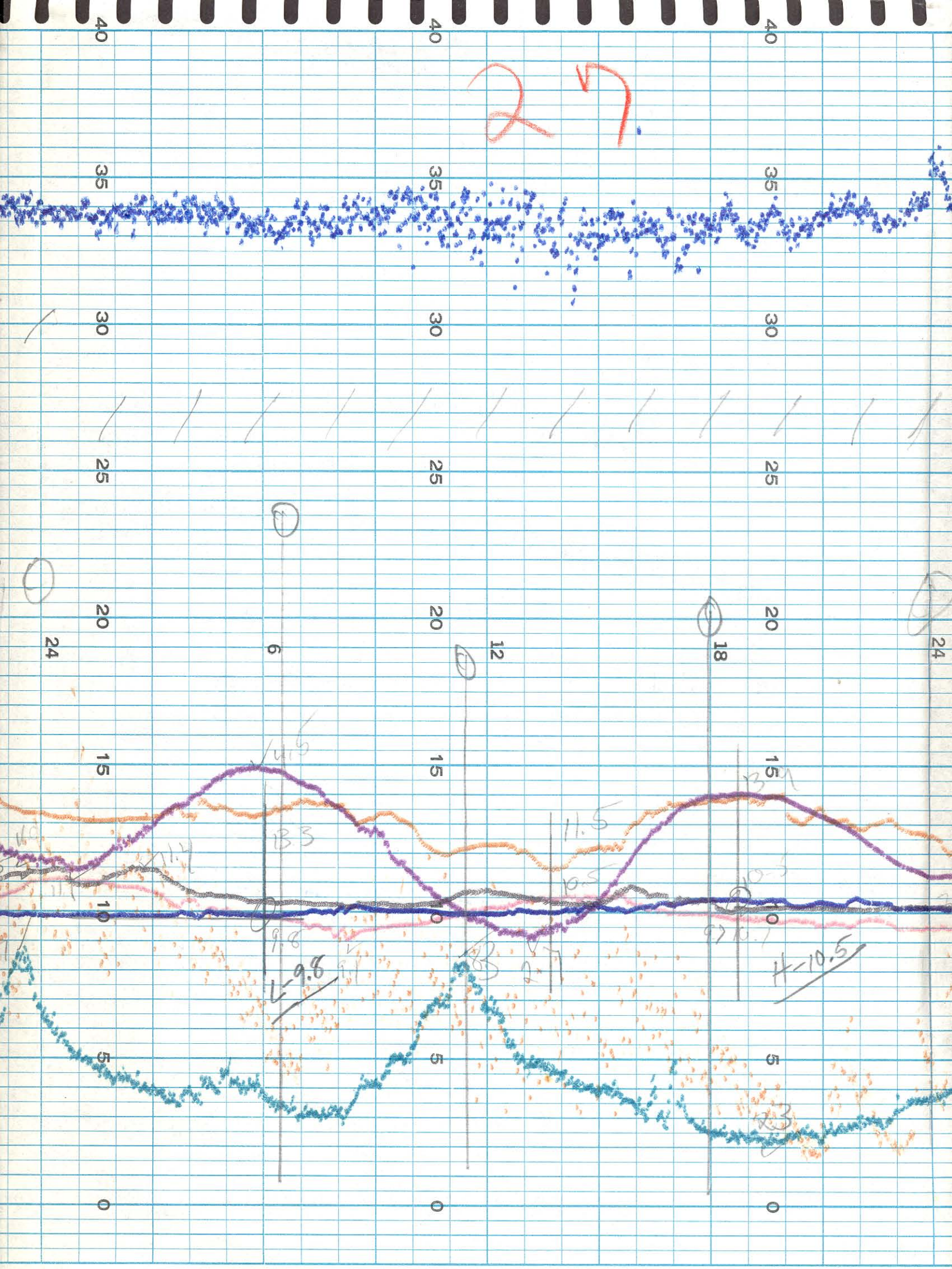
CHART NO. 9544-1/3 HONEYWELL, PHILADELPHIA, PA.

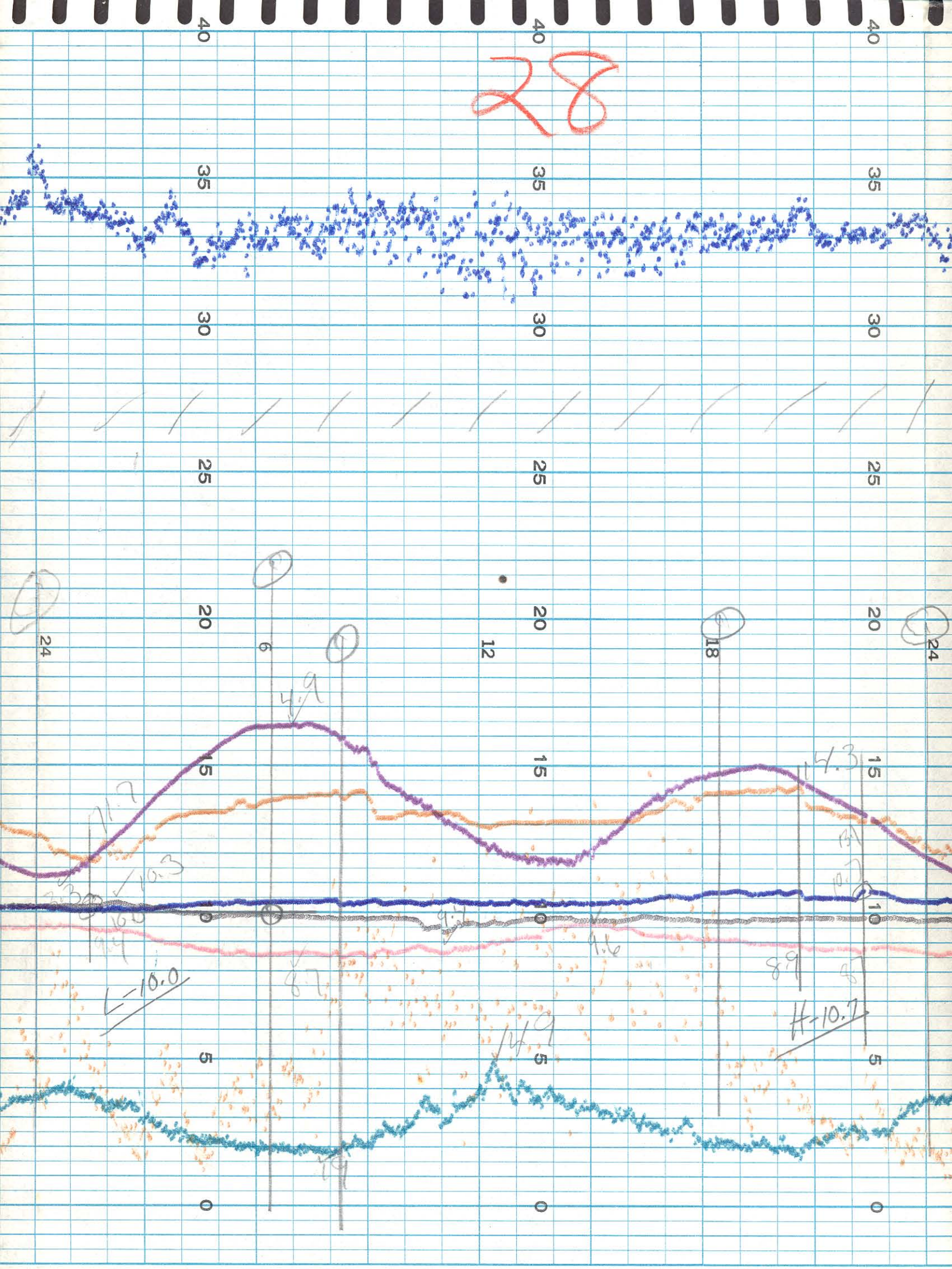

23
40
35
30
25
20
15
10
5
0
24
6
12
18
24
L-10.1
H 16.5

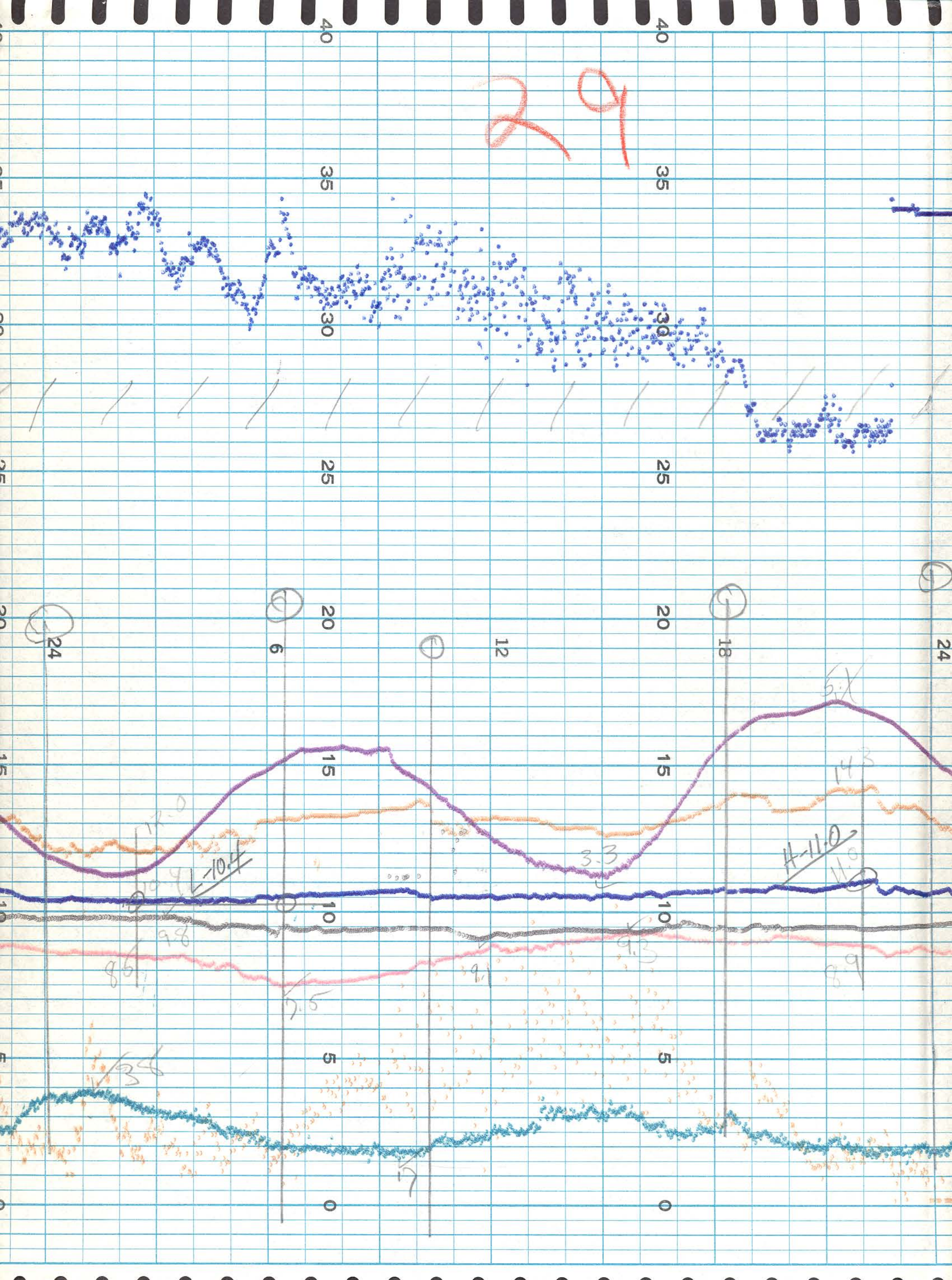

24
24
6
12
18
24
L 9.7
H 10.3

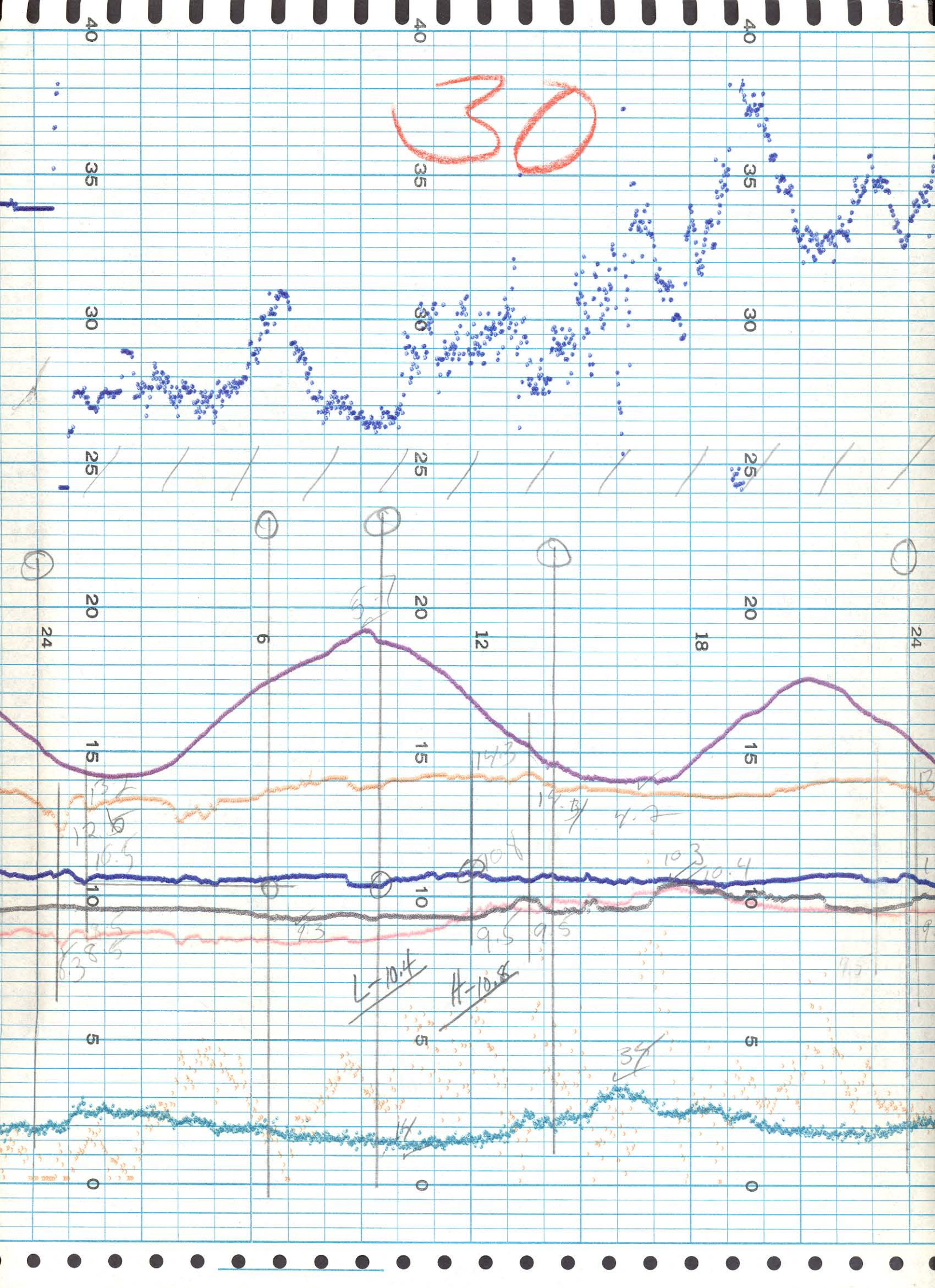


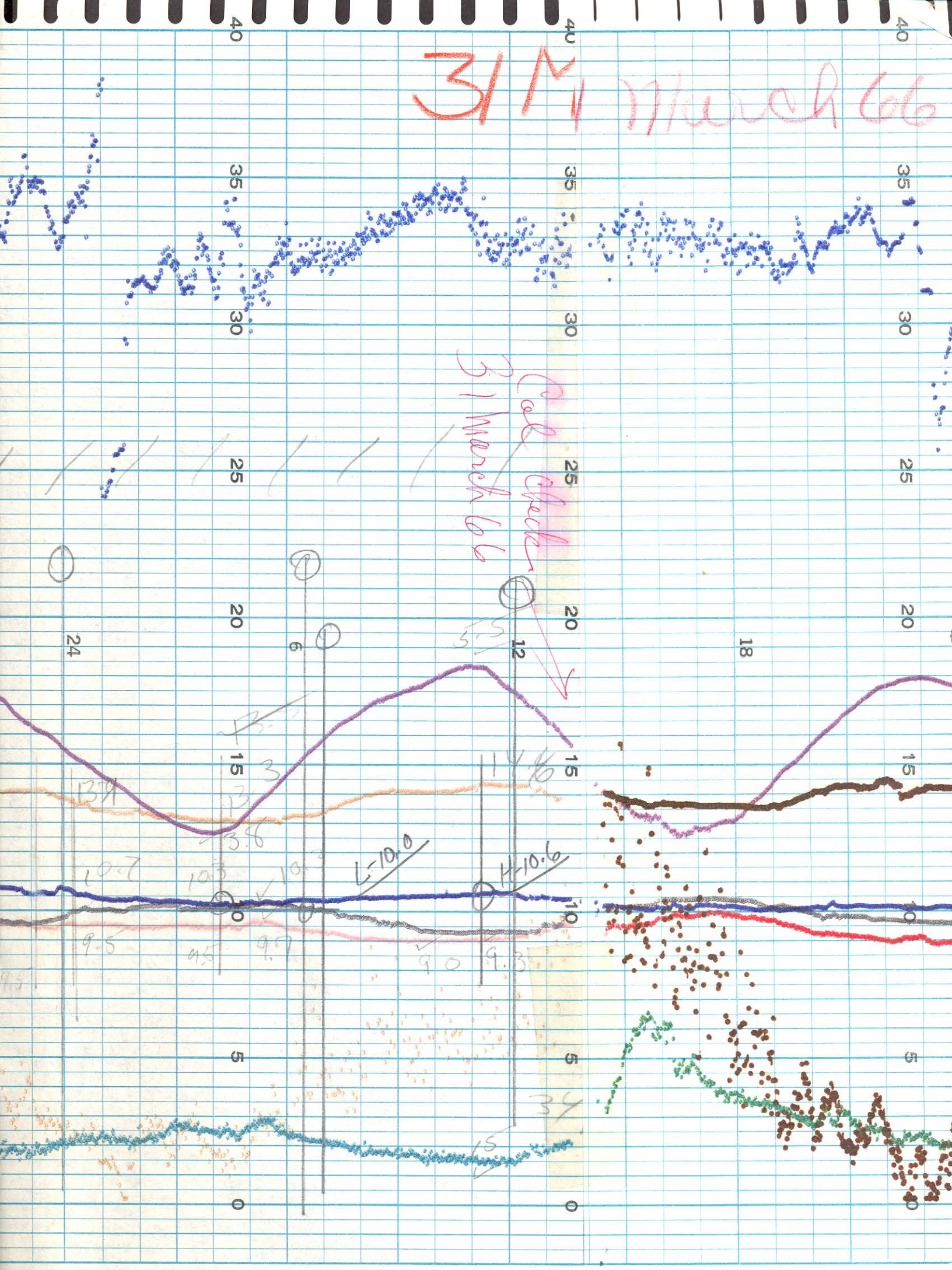

26
40
35
30
25
20
15
10
5
0
24
6
12
18
24
L-9.7
H-10.5


27.
40
35
30
25
20
15
10
5
0
24
6
12
18
L-9.8
H-10.5


28
40
35
30
25
20
15
10
5
0
24
6
12
18
24
L-10.0
H-10.7




30
40
35
30
25
20
15
10
5
0
24
6
12
18
L-10.4
H-10.4


31 March 66
Cal Check
31 March 66
L-10.0
H-10.6
40
35
30
25
20
15
10
5
0
24
6
12
18

WIND OBSERVATION — March

	1	2	3	4	5	T	1	2	3	4	T
N	9	25	6	2	—	42	2	7	2	.5	11
NE	5	24	3	—	—	32	1	7	.8	—	9
E	7	17	1	—	—	25	2	5	.2	—	7
SE	4	33	5	2	—	44	1	9	1	.5	12
S	11	53	14	—	—	78	3	14	4	—	21
SW	3	15	9	1	—	28	.8	4	2	.2	8
W	2	19	7	5	—	33	.5	5	2	1	9
NW	11	47	23	1	—	82	3	13	6	.2	22
O	3		—	—		3	.8	—	—	—	.8
	55	233	68	14		367	15	63	19	3	100

31
12
---
6 2

31
---
37 12
5

36.7

Month	March						March		Mm	
Day	22	25		31			16		18	
Time Local	1035			1310			2.9		\ begin	
Surf ~~Air~~ Temp. C° Honeywell	10.5			9.5			7.9			Turb +
Surf ~~Air~~ Temp. C°	10.3			9.3			8.3			cond.
Bot Water Temp. C° Honeywell	10.5			9.5						
Bot. Water Temp. C°	10.3			—						
Conductivity Micromhos ~~Honeywell~~	9.9	begin Turbid reading		8.60						
Conductivity Micromhos ~~Serfass~~ INKEL	@13.3°C 9.85			8.80						
Water Samp. Bottle No.	—			—						
Dissolved O_2 Honeywell	9.9			10.4	10.3		10.7			
Dissolved O_2 Winkler	9.95			10.0	10.0		10.7			
Turbidity JCU Honeywell	20			20						
Turbidity Hellige	25									
Tide Honeywell	+.3			+.8						
Tide Staff	+.1			+.7						
Wind Vel. MPH Honeywell	15			25		12				
Wind Vel. Air Speed Ind MPH	15			25		12				
Wind Direc. Honeywell	SSW			NW		NNE				
Wind Direc. Air Speed Ind	SSW			NW		NNE				
	3	e for	Note	9°C correct ±.2						

Surf Air Temp. C°	10.3				9.3			8.2						
Bot Water Temp. C° Honeywell	10.5				9.5									
Bot. Water Temp. C°	10.3				—									
Conductivity Micromhos ~~Honeywell~~	9.9				8.60									
Conductivity Micromhos ~~Serfass~~ INKEL	@13.3°C 9.85				8.80									
Water Samp. Bottle No.	—				—									
Dissolved O_2 Honeywell	9.9				10.4	10.3		10.7						
Dissolved O_2 Winkler	9.95				10.0	10.0		10.7						
Turbidity JCU Honeywell	20				20									
Turbidity Hellige	25													
Tide Honeywell	+.3				+.8									
Tide Staff	+.1				+.7									
Wind Vel. MPH Honeywell	15				25		12							
Wind Vel. Air Speed Ind. MPH	15				25		12							
Wind Direc. Honeywell	SSW				NW		NNE							
Wind Direc. Air Speed Ind	SSW				NW		NNE							
Remarks	Chlorination Turbidity Flow too low P.O. Burette = 34.45 - SEE other side for Turbid. Cal.			Conductivity Note. .3 N KCl = 25.16 @ 9°C Honeywell = 24.9 @ 9° next 7.2 D.O. = 34.7										

Turbid. Readings began

Sample	Time	Honeywell	Hellige = PPM	Remarks
1	1215	16	27 w/50 = 21	~~Rich~~ Sample from River
2	1230	59-60	50 w/20	Reset Turbid unit. Cal.
3	1330	100	~~100~~ 50 = 100	
4	1400	175	50 x 2 = 200	reset - Rich span.
5	1415	330	48 x 3 = 380	
6	1445	290	50 x 3 = 400	
7	1500	220	85 = 340	- Reset Turbid sensor
8	1510	255	~~38~~ = 180	

March 25

set low end of Turbid w/ zero set at 25 ppm - filled bucket w/ turbid water and set high end with span adj in slowing load Honeywell was reading 395 - Repeated samples with Hellige as follows

375 x 5 = 375
77 x 5 = 385
68 x 5 = 340
72 x 5 = 360
4 | 1460
365 = value set at high end w/ span.

Checked low end w/ Hellige -

Honeywell = 25

3 1330 100 50 = 100

4 1400 175 50x2 = 200 reset - Rich. span.

5 1415 330 48x3 = 380

6 1445 290 50x3 = 400

7 1500 220 85 = 340 - Reset Turbidsensor

8 1510 255 - 38 = 180

March 25

set low end of Turbid w/ zero set at 25 ppm - Filled bucket w/ turbid water and set high end with span adj in sensing head. Honeywell was reading 395 - Repeated samples with Helige as follows

375 x 5 = 375
77 x 5 = 385
68 x 5 = 340
72 x 5 = 360
4 | 1460
365 = value set at high end w/ span.

Checked low end w/ Helige -

Honeywell = 25
Helige = 23
22
24

S DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Cory No.	Beaufort	MPH
No. 1	(0-1)	(1-3)
No 2	(2-3)	(4-12)
No. 3	(4)	(13-18)
No. 4	(5-6)	(19-31)
No. 5	(7-12)	32

FILE

No Wind			Week	Month	Day	N	NE	E	SE	S	SW	W	NW	No Wind
			9	March	1						333	34444 332	3	
					2					122	2	2222	221	
					3				12	12222 2	3332			1
					4				22222 222	2222				
					5	2			44	322		2	23222	
					6						34	22432 22	222	
					7	22				2	212		22232 2	
						3-2			1-1	2-1	1-1	11-2	1-1	1-1
									9-2	14-2	4-2	4-3	14-2	
									2-4	1-3	7-3	5-4	3-3	
											1-4			
			10		8	3223		1					22232 21	
					9	222221	2	22		2	1		2	
					10				22222 2	22122	1			
					11	21	22	12		22221	2			
					12	22	2111	11		222			1	
					13	12121	2	12	22	21				
					14		222	22221 22211						
1						3-1 13-2 21-3	3-1 8-2	6-1 12-2	8-2	3-1 13-2	2-1 1-2		2-1 6-2 1-3	
						1-4								
			11		15		22222 212	232	1					
					16	32	33232 2	2		11			1	
					17				22223	12312		11		
					18				3	22221 21333				
					19	1	2		12332	32322				
					20	34				21			13332 221	
					21	1	1	2	22222 2				221	
						2-1	2-1	4-2	2-1	4-1		2-1	4-1	
						1-2	11-2	1-3	12-2	14-2			5-2	
						2-3	3-3		4-3	15			3-3	
34						1-4								

FOLD

U.S. GOVERNMENT PRINTING OFFICE: 1964—O-726-355

9-230-a
(October 1947)

COMPUTATION FORM—DOUBLE

UNITED STATES DEPARTMENT OF TH
GEOLOGICAL SURVEY

Location Benedict Bridge, Benedict, Ind.

Year 1946 Month FEB - MARCH

Week	Month	Day	N	NE	E	SE	S	SW	W	NW	No Wind			Week
6	FEB	8	2221 1	1		2	11			2 NW				
		9			11	2	2122 22	1	11					9
		10		2		122	2222 3	11		1				
		11	111	1		1.	43424	32						
		12	22222 2212	12			2							
		13		2	2	1244	2	44	433					
		14				222	2	22	32222	3				
			7-1	3-1	2-1	3-1	8-1 12-2	3-1	2-1	1-1 1-2				
			12-2	3-2	1-2	8-2 2-4	2-3	3-2 1-3	4-2	1-3				
							2-4	2-4	3-3 1-4					
7		15	23222	21	2		222			3				
		16		1	22	221	11	121	1					10
		17	2				21	1	122	23333				
		18	2			2222 2 2	1122		1	1				
		19	22222 444	2222		2				2				
		20	34333						222	3352				
		21							222	33322 2	111			
			10-2 5-3 4-4	2-1 4-3	3-2	1-1 4-2	5-1 6-2	3-1 1-2	3-1 8-2	1-1 6-2 11-3	3-1			
8		22						1		2332232 32277				
		23	22222 2	2	2	21			1	1.				11
		24	23332 3	222	1	2				3.				
		25	2					1	2	2322533 312				
		26				1				1223342 43222				
		27	1	1	2	2222	2		1	221				
		28				2222333 3	3	4	.	222	1			
			1-1 4-3	1-1	1-1	2-1	1-2	2-1	2-1	4-1	1-1			
			4-3	4-2	2-2	9-2	1-3	1-4	1-2	23-2				
						3-3				10-3 a-4				

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