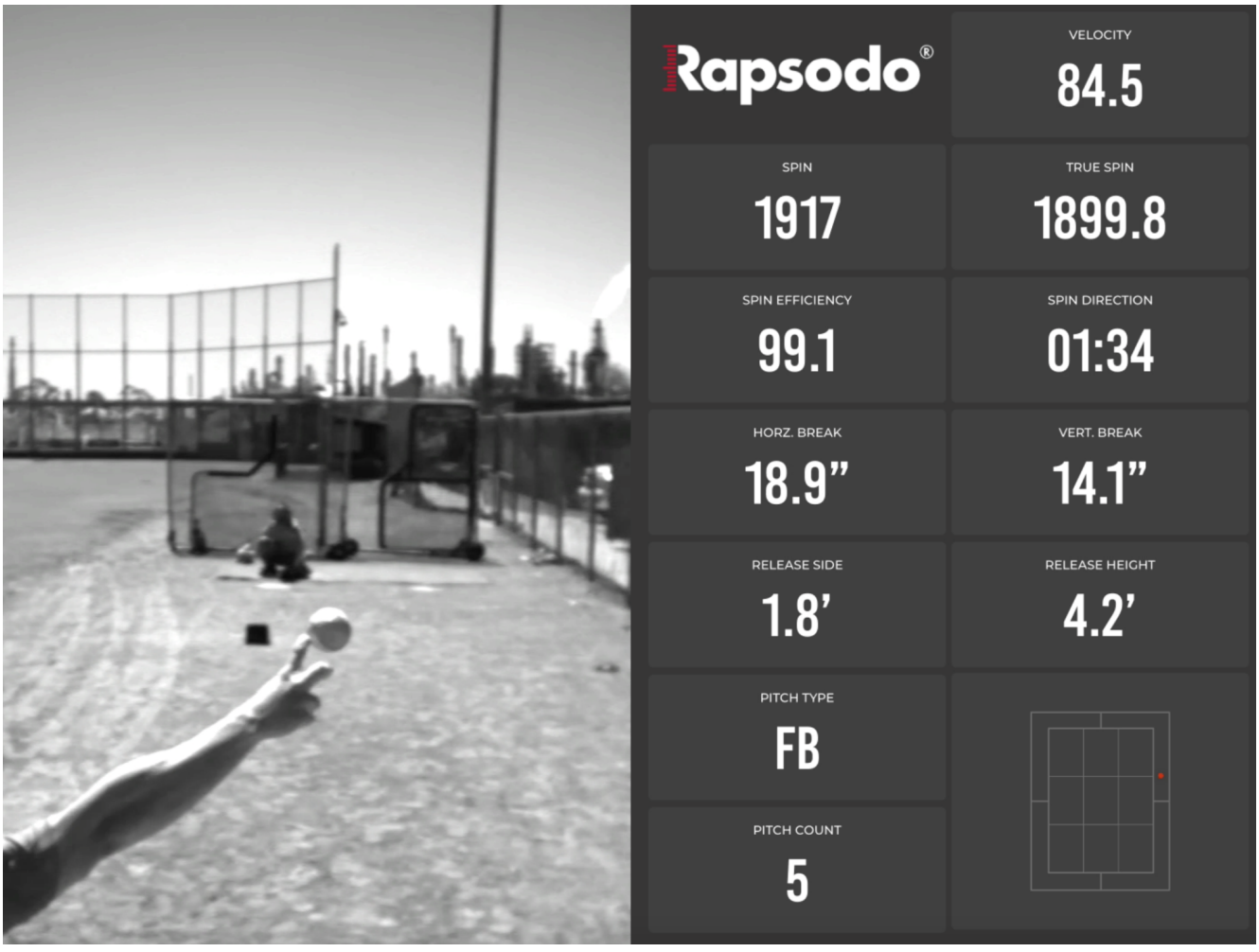
Fastball:

Observations:

- Good velocity and good spin efficiency, both signify a quality fastball
- Most peculiar aspect of this pitch profile is how low the spin rate is
    - Velocity is sitting around 86 mph on average and 1900 rpms on average
    - This is conflicting information because a high eighties fastball can compete at a high level, but most high level fastballs possess around 2200-2300 rpms
    - Looking at the insight video it seems that his release in terms of his finger placement is somewhat unique

What That means:

- If you watch the video closely you can see the index finger stays on the ball a split second longer than the middle finger
- However, spin efficiency is still great meaning that his index finger is likely what is dictating everything and the lack of spin might be due to a lack of middle finger help
- Trying to fix that would probably throw everything out of sorts and adjusting would take awhile, so the best option is probably to keep the fastball down in the zone
- The lack of rpms on this pitch creates a lack of vertical break, and this means at a higher level his fastball will not work up in the zone because it does not fight gravity well enough to avoid barrels from above
- This will likely be a ground ball inducing pitch as opposed to a swing and miss pitch



Changeup:

Observations:

- As we know, changeups should have more horizontal and less vertical break than their fastball counterparts, and his changeup accomplishes this which is good
    - However, not to the extent that will make it an extremely effective pitch
- Average fastball at 86 mph and average changeup at 80 mph
- We can see that we only get 3 or 4 inches more horizontal and less vertical which is not quite enough considering the lack of velocity differential as well
- The spin efficiency and break profiles are giving a "slow fastball" feeling

What that means:

- Two actions can be taken to develop an effective changeup
- You can kill spin efficiency/create gyro degree to make the pitch drop, or you can tilt your spin axis further towards 3:00 to make more of the active spin contribute to horizontal instead of vertical break, creating that desired break profile that separates from a fastball
- The video shows that his changeup throwing motion clearly lacks significant pronation, and his palm struggles to get inside of the ball
- If he worked on this pronation and toyed with adjusting his wrist angle, he would be able to improve his pitch to the desired spin direction (from 2:00 to closer to 3:00), while still maintaining a strong throwing motion, and may also kill some spin efficiency in the process, which would help the pitch drop in combination with more armside movement

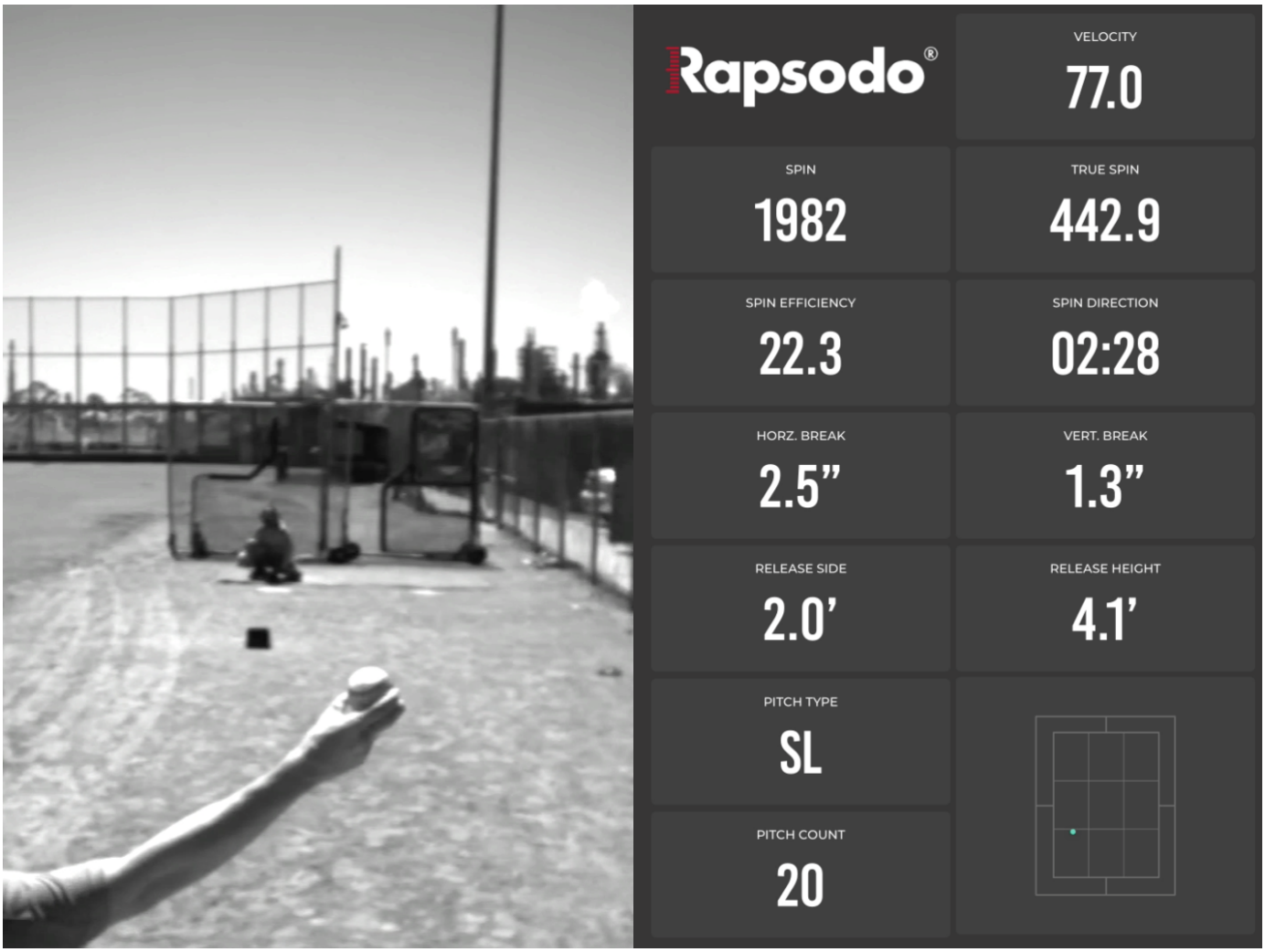
Slider:

Observations:

- When thinking about this pitch in conjunction with his other pitches, it is a very good looking and solid pitch
- Low spin efficiency allows for large disparity between the path of the fastball and this pitch, and ensures a consistently low vertical breaking pitch
- Consistency is good here and he seems to be at a level where he can replicate the grip and motion of this pitch enough for it be effective
- Tunneling seems to be very good as well since there are no prominent armslot trends when comparing release height and side for all his pitches

What this means:

- I would not envision that much tinkering needs to be done for this slider and in its current state it can play well off of the fastball and an improved changeup
- However, there is always room for improvement and he can attain more dramatic horizontal and vertical break numbers with higher spin but without changing the style of pitch
    - This could likely be done through increasing finger strength and obviously improving overall mechanics and pitching motion



○	75.6	1,878	336	17.9	05:38	3.1	-3.8	Y	4.0	1.8	2.7	-1.6	79.7	SL		
24	77.1	1,970	187	9.5	02:56	1.3	0.1	Y	4.1	1.8	2.6	-2.1	84.6	SL		
23	84.5	1,832	1,789	97.6	01:50	23.1	11.3	Y	3.9	2.1	1.9	-4.8	12.5	FB		
22	77.6	1,906	387	20.3	02:28	1.9	1.1	Y	3.8	2.0	3.5	-2.7	78.3	SL		
21	77.7	2,084	371	17.8	02:48	2.4	0.3	N	4.0	1.9	-0.5	-3.5	79.7	SL		
20	77.0	1,982	443	22.3	02:28	2.5	1.3	Y	4.1	2.0	1.9	-3.0	77.1	SL		
19	78.4	1,961	454	23.1	02:24	3.5	1.5	Y	4.0	1.8	1.8	-2.8	76.6	SL		
18	77.9	2,107	485	23.0	02:32	4.7	1.3	N	3.9	2.0	1.4	-3.7	76.7	SL		
17	80.7	1,625	1,567	96.4	02:12	22.6	7.8	N	3.8	2.2	1.6	-2.1	-15.4	CH		
16	79.8	1,531	1,500	98.0	02:12	21.0	7.8	Y	3.7	2.1	1.7	-3.5	-11.5	CH		
15	80.3	1,590	1,587	99.8	02:00	21.7	9.2	Y	3.9	2.1	1.1	-4.2	3.3	CH		
14	79.4	1,572	1,544	98.2	02:24	25.4	6.1	N	4.0	2.3	0.6	-2.7	-10.8	CH		
○	80.7	1,594	1,558	97.7	02:10	12.8	7.9	Y	4.0	2.0	0.7	-3.1	-12.2	CH		
12	81.2	1,530	1,504	98.3	01:58	19.2	9.6	N	3.8	2.1	-0.3	-4.4	-10.6	CH		
11	79.8	1,414	1,409	99.6	02:14	18.9	7.0	Y	3.8	2.0	1.7	-3.2	-4.8	CH		
10	85.1	1,906	1,868	98.0	01:38	21.6	13.1	Y	4.1	2.0	0.5	-3.4	11.6	FB		
9	87.0	1,979	1,978	100.0	01:36	18.9	13.6	Y	4.2	1.7	0.9	-3.3	-0.8	FB		
8	86.4	1,933	1,926	99.6	01:40	17.3	13.1	N	3.9	2.0	1.3	-1.9	4.9	FB		
7	87.0	1,952	1,951	100.0	01:52	22.5	11.4	Y	4.0	2.1	1.0	-3.7	1.6	FB		
6	85.2	1,934	1,869	96.7	01:24	22.8	14.5	N	4.1	2.0	2.9	-4.7	14.8	FB		
5	84.5	1,917	1,900	99.1	01:34	18.9	14.1	N	4.2	1.8	0.6	-2.7	-7.6	FB		
4	84.6	1,890	1,890	100.0	01:34	19.5	14.0	Y	4.0	1.9	0.5	-3.6	-0.4	FB		
3	83.5	1,803	1,803	100.0	01:36	22.0	13.3	Y	4.1	1.9	1.1	-3.7	0.3	FB		