



Mitch Haniger Batted Ball Report

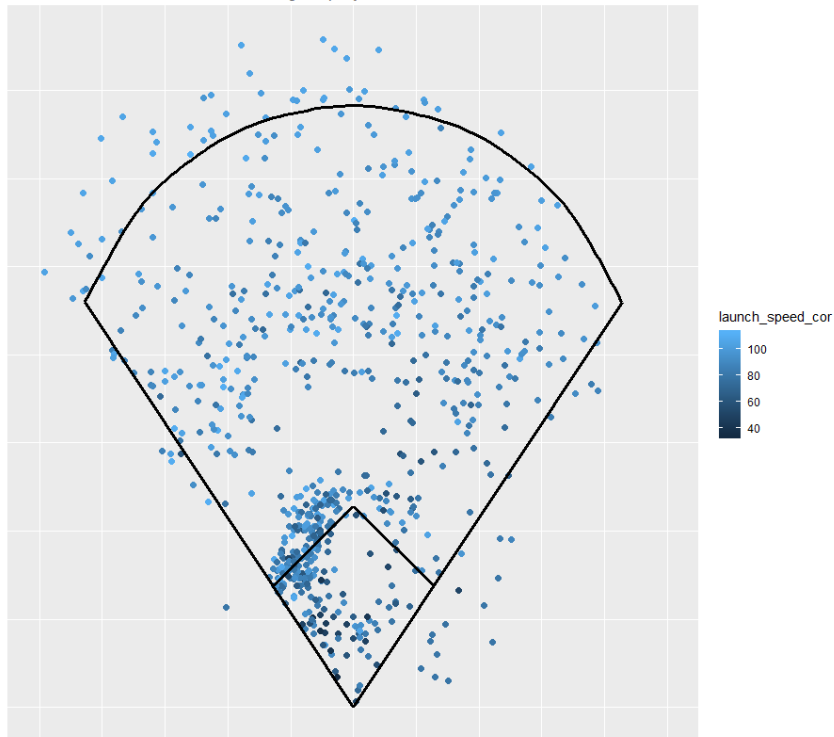


Season	AB	PA	AVG	OBP	OPS	ISO	BABIP	BB%	K%	LD%	GB%	FB%	IFFB%	wOBA	wRC+	Pull%	Cent%	Oppo%	CH%	CU%	FA%	SL%	O-Swing%	Z-Swing%	Swing%	O-Cont%	Z-Cont%	Cont%
2016	109	123	0.229	0.309	0.713	0.174	0.256	9.80%	22.00%	18.1%	38.6%	43.4%	5.6%	0.303	81	41.0%	33.7%	25.3%	5.7%	13.1%	43.5%	13.9%	26.1%	61.2%	43.7%	50.0%	90.0%	78.0%
2017	369	410	0.282	0.352	0.843	0.209	0.338	7.60%	22.70%	19.3%	44.0%	36.7%	7.9%	0.36	130	45.1%	33.6%	21.3%	9.0%	10.4%	32.6%	19.0%	27.1%	58.2%	42.0%	60.0%	89.1%	79.3%
2018	596	683	0.285	0.366	0.859	0.208	0.336	10.20%	21.70%	21.3%	42.4%	36.3%	9.1%	0.367	138	44.8%	36.7%	18.5%	9.7%	12.1%	33.4%	19.1%	25.0%	61.0%	41.9%	55.8%	88.2%	77.9%
2016	Lg	Avg	0.255	0.322	0.739	0.162	0.3	8.20%	21.10%	20.7%	44.7%	34.6%	9.7%	0.318	97	39.7%	34.7%	25.6%	9.8%	10.4%	37.2%	14.8%	31.2%	63.7%	46.5%	62.9%	86.4%	78.1%
2017	Lg	Avg	0.255	0.324	0.75	0.171	0.3	8.50%	21.60%	20.3%	44.2%	35.5%	9.6%	0.321	97	39.8%	34.9%	25.3%	9.9%	10.8%	36.7%	16.3%	30.8%	63.8%	46.5%	61.7%	85.8%	77.4%
2018	Lg	Avg	0.248	0.318	0.728	0.161	0.296	8.50%	22.30%	21.5%	43.2%	35.4%	10.3%	0.315	97	40.3%	34.5%	25.1%	10.5%	10.3%	37.8%	17.1%	30.3%	64.3%	46.6%	60.1%	85.5%	76.9%

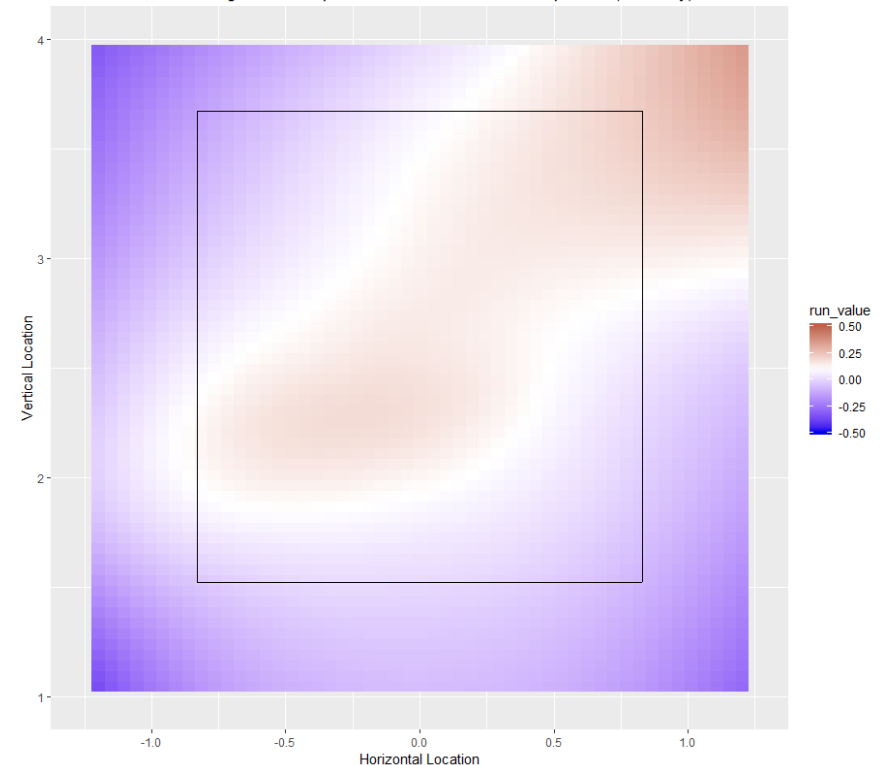
Statcast Metrics: Minimum of 100 BIPs

Season	Team	EV	LA	Spray_Angle	xwOBAcon	Attack Angle	Barrel%	Solid Con%	Poorly Weak%	Flare Burner%	Topped%	Under%
2017	Mariners	87.2	9.3	-5.07	0.389	10.82	6.9%	8.3%	6.5%	24.5%	30.3%	23.5%
2018	Mariners	90.1	12.4	-6.09	0.432	12.33	10.5%	5.9%	2.6%	25.9%	31.6%	23.3%
2017	Lg. Avg	86.9	11.5	-4.15	0.375	11.12	6.9%	5.9%	5.4%	25.6%	32.1%	24.1%
2018	Lg. Avg	87.9	12	-4.06	0.364	11.31	7.4%	6.2%	3.7%	25.4%	33.1%	24.4%

Mitch Haniger Spray Chart: 2017-2018



Mitch Haniger Heat Map: 2017-2018 - Catcher's Perspective (BIP Only)



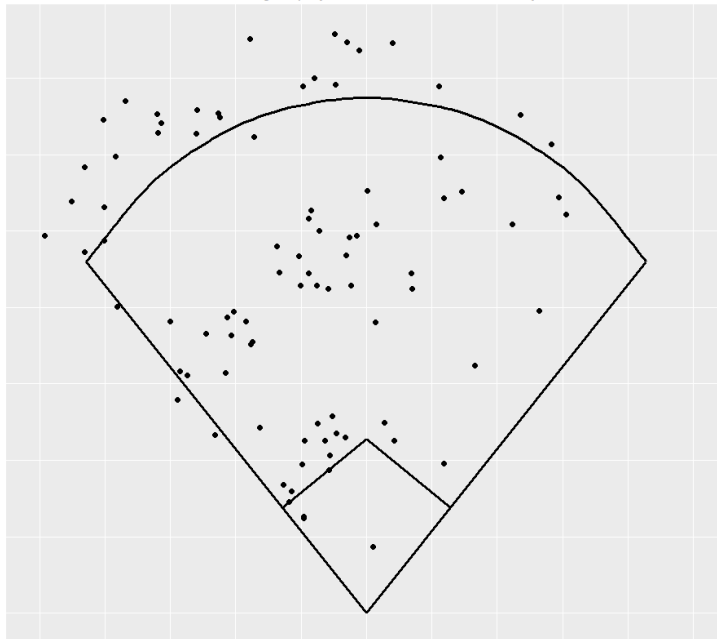


Barrels Only

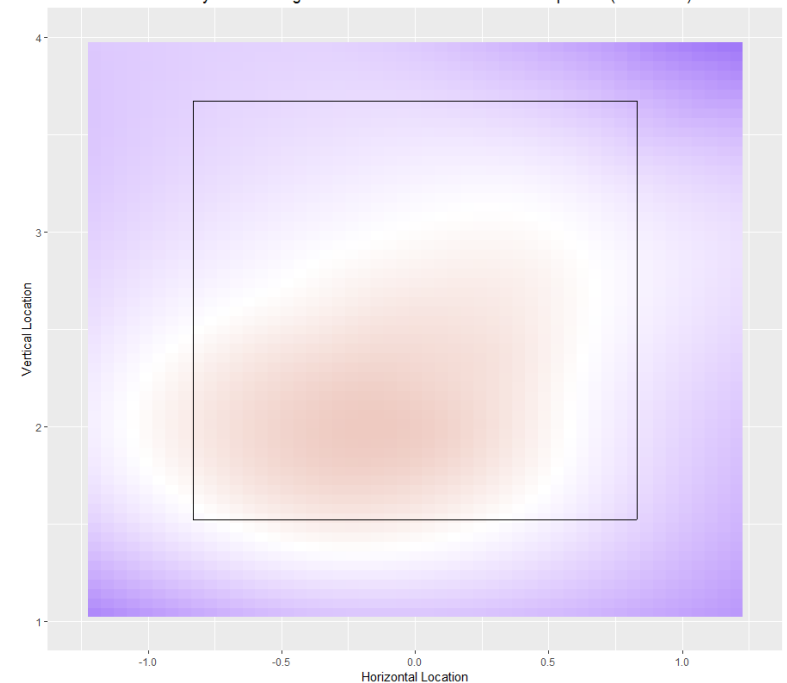
Statcast Metrics: Minimum of 100 BIPs (Barrels Only)								
Season	Team	EV	Max EV	LA	Spray_Angle	xwOBAcon	Std Dev LA	Std Dev Spray
2017	Mariners	106.2	111.0	10.1	-13.22	0.953	12.13	21.74
2018	Mariners	106.9	112.6	12.9	-14.14	1.018	12.75	20.25
2017	Lg. Avg	105.1	109.8	11.1	-12.88	0.87	12.05	19.29
2018	Lg. Avg	105.4	110.1	11.1	-13.37	0.85	12.37	19.16

- In looking at BIPs that were only barrels, we find that Mitch likely has above average bat speed for MLB standards (Barrel EV is ~120th out of 391 MLB regulars)
- Slightly in favor of pulling the ball compared to league average (Spray Angle), but uses more of the field than most (Std Dev of Spray)
- Improvements in EV, Max EV, and LA for hard hit BIPs indicate that both bat speed and Attack Angle likely went up in 2018
- As shown in heat maps both below and on page 1, Mitch is most likely to barrel up pitches low/middle in.

Mitch Haniger Spray Chart: 2017-2018 - Barrels Only



Probability of Producing a Barrel: 2017-2018 - Catcher's Perspective (All Pitches)

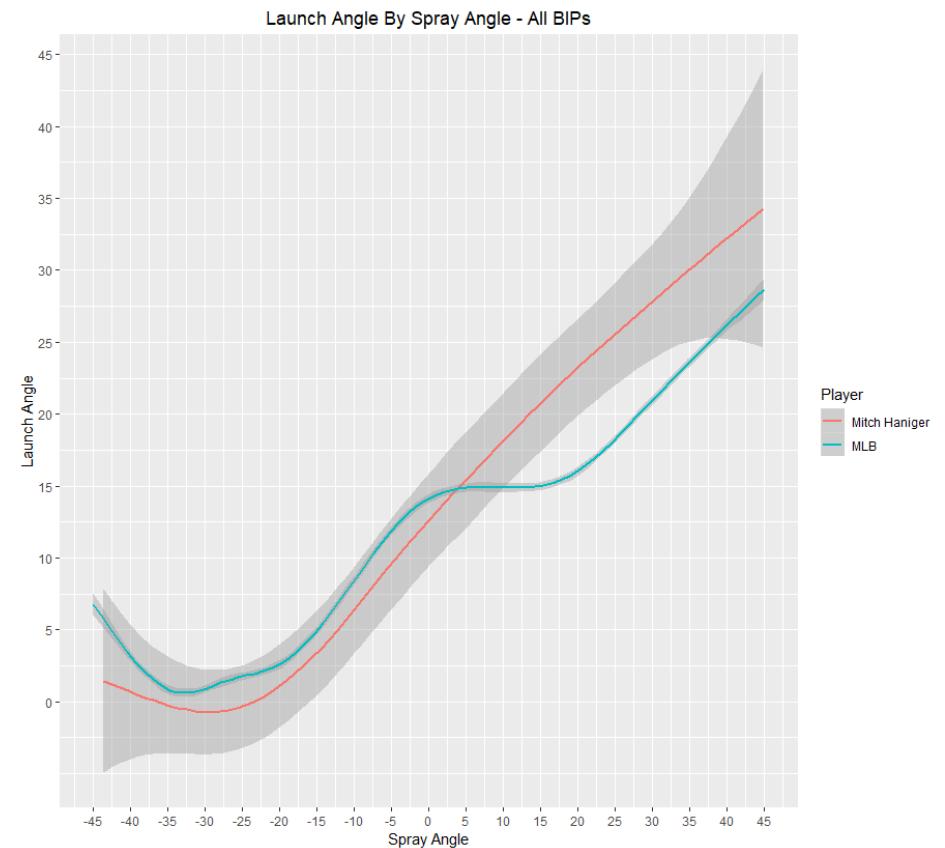
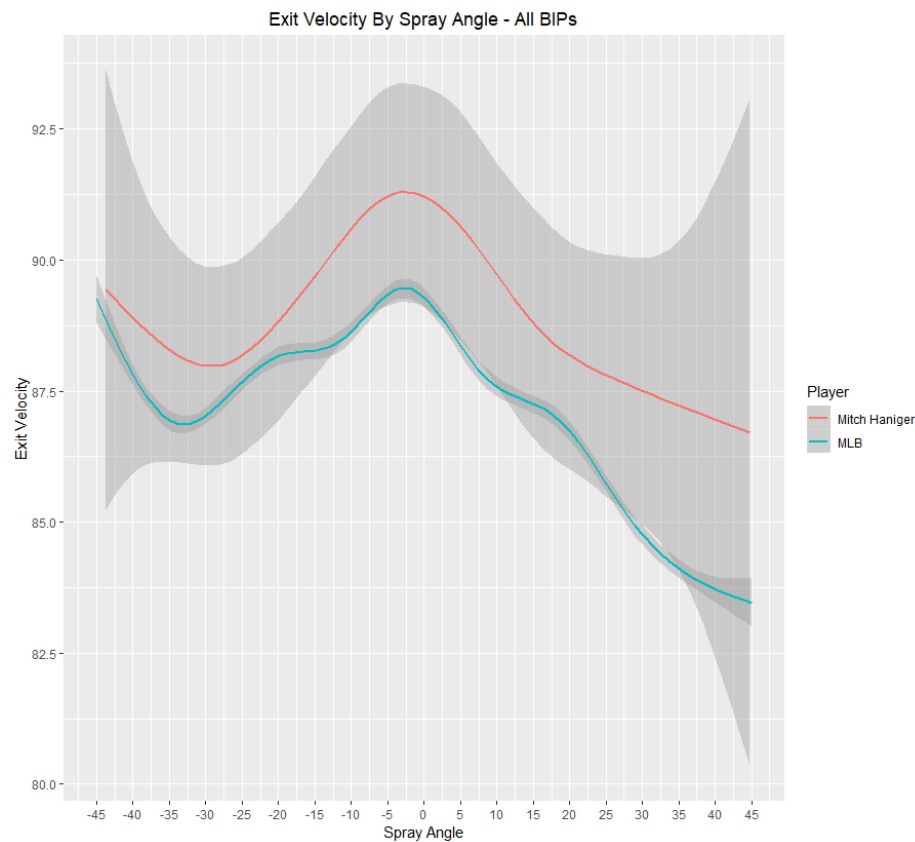




By Field

	Pull		Up the Middle		Oppo	
	Haniger	MLB	Haniger	MLB	Haniger	MLB
Ground Ball	63%	60%	38%	41%	20%	30%
Line Drive	22%	22%	32%	27%	33%	28%
Fly Ball	14%	14%	26%	27%	46%	32%
Popup	1%	4%	4%	5%	1%	10%

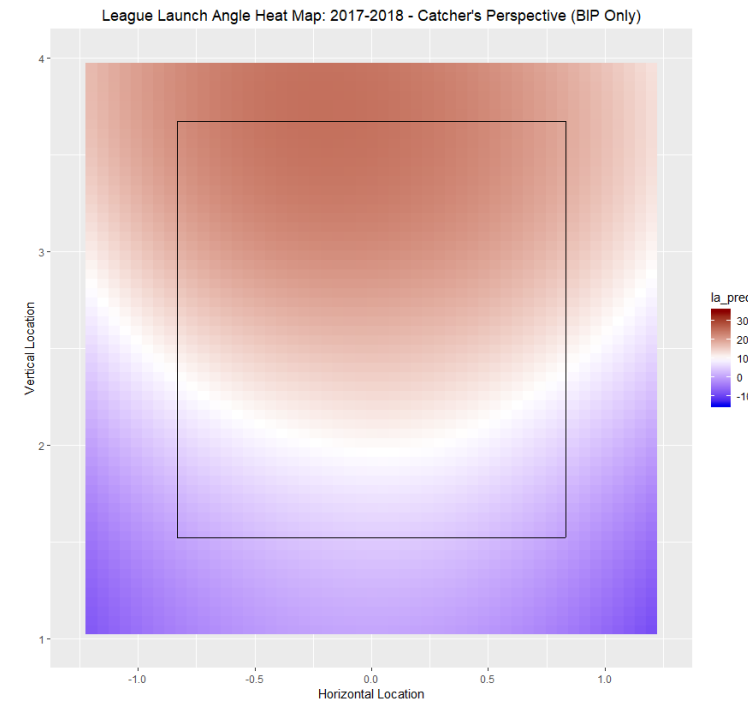
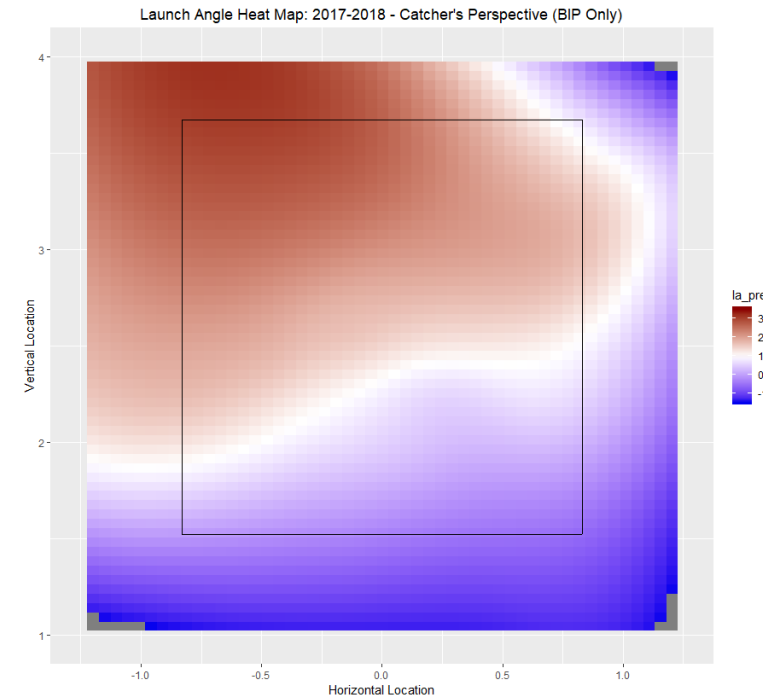
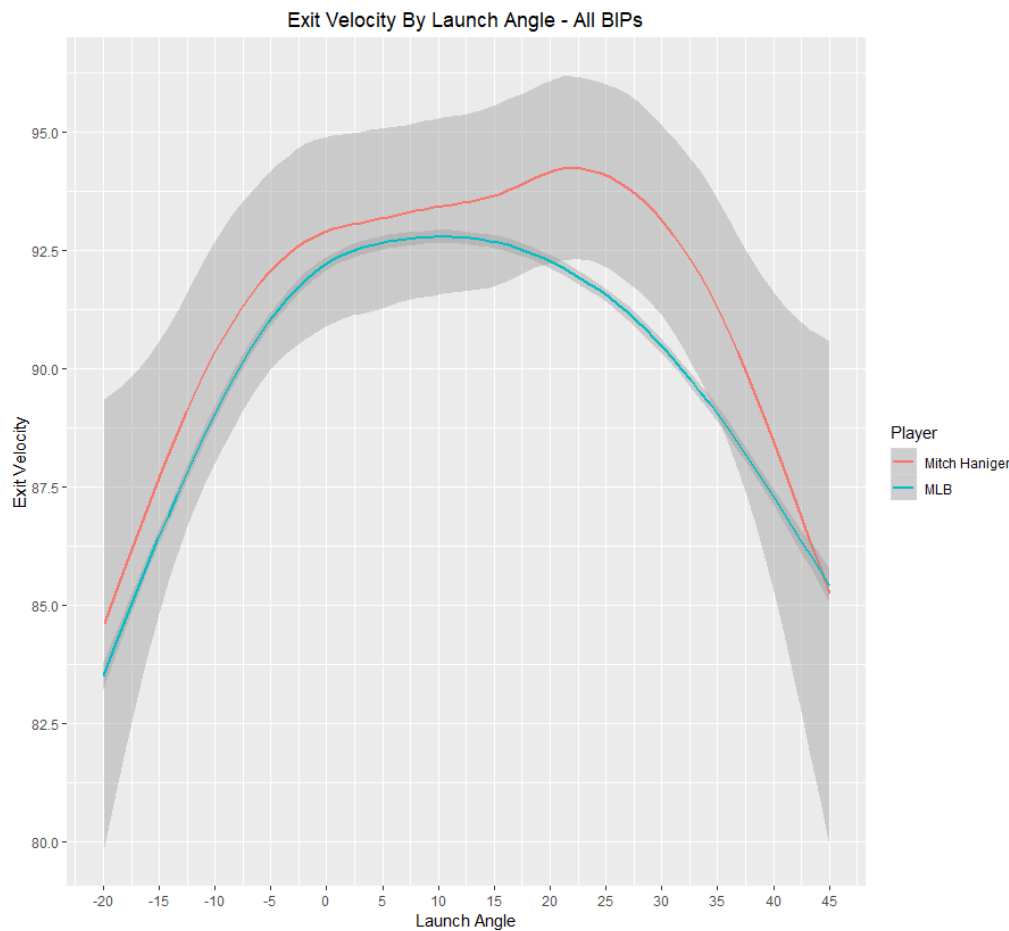
- As mentioned above, Mitch does an excellent job of working the entire field, staying above league avg by EV at all spray values
- Mitch rolls over at an above average rate, hitting about 3% more GBs than league average to the pull side despite having an above average LA





By Launch Angle

- Haniger maintains a fairly normal EV by LA distribution, excelling in driving pitches in the “ideal” band of LAs, likely why he is so productive when barreling the baseball
- Relative to league average, Haniger elevates pitches up & in + middle-in
- As shown by many visualizations in profile, pitch low and away generally gets rolled over to left side of IF for GB

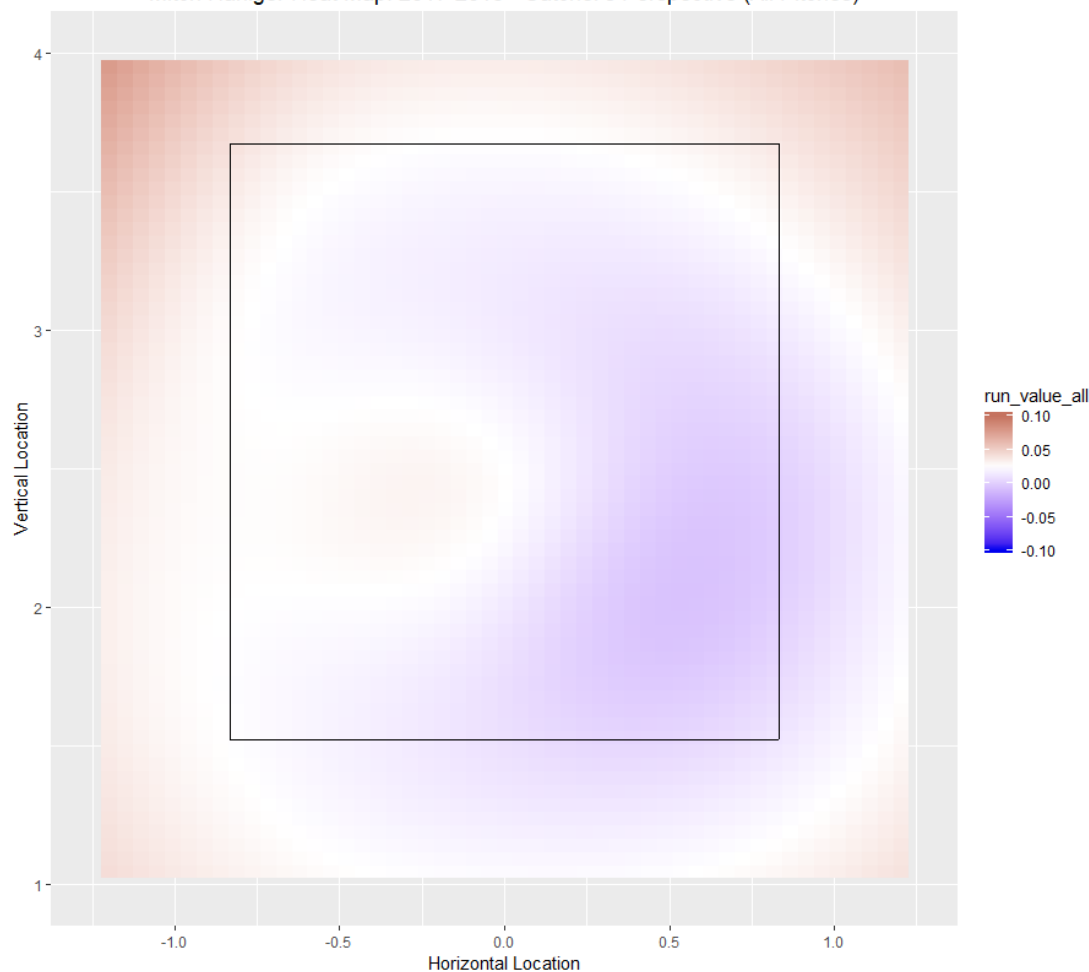




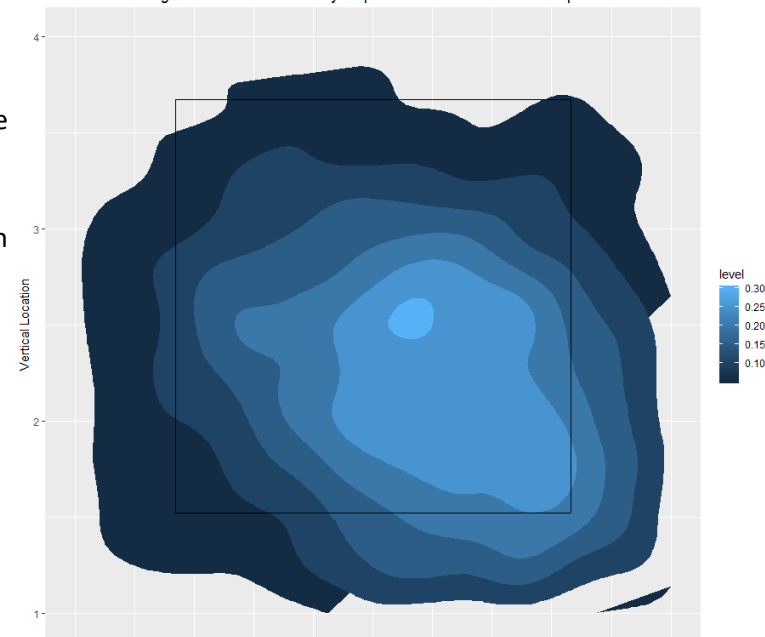
By Zone & Pitch Type

- Even when considering takes, Mitch does most damage on middle-inner portion of plate
- Given more data on him, it looks like teams are starting to attack down and away
 - Also throwing him higher proportion of breaking stuff
 - Despite being able to shoot pitch up & away to oppo field, he usually takes pitch

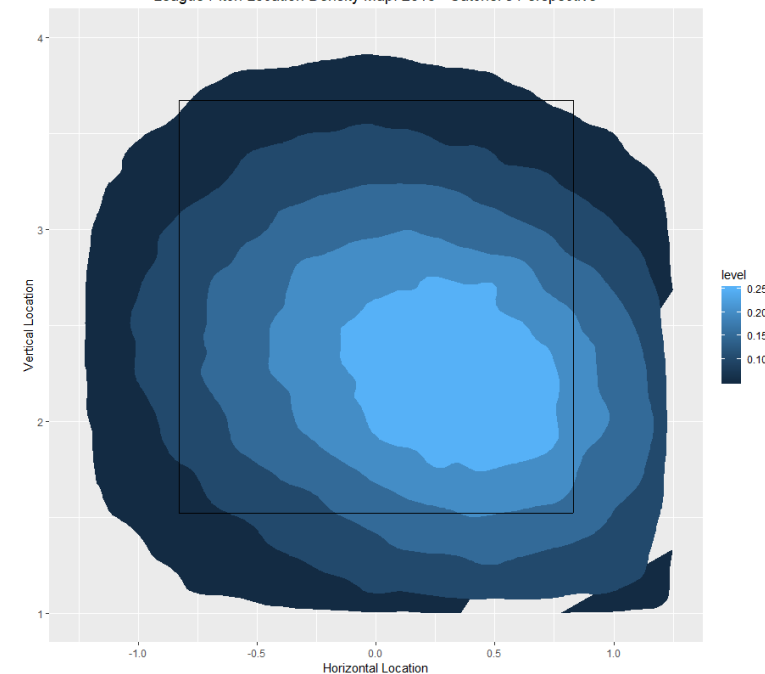
Mitch Haniger Heat Map: 2017-2018 - Catcher's Perspective (All Pitches)



Haniger Pitch Location Density Map: 2017-2018 - Catcher's Perspective



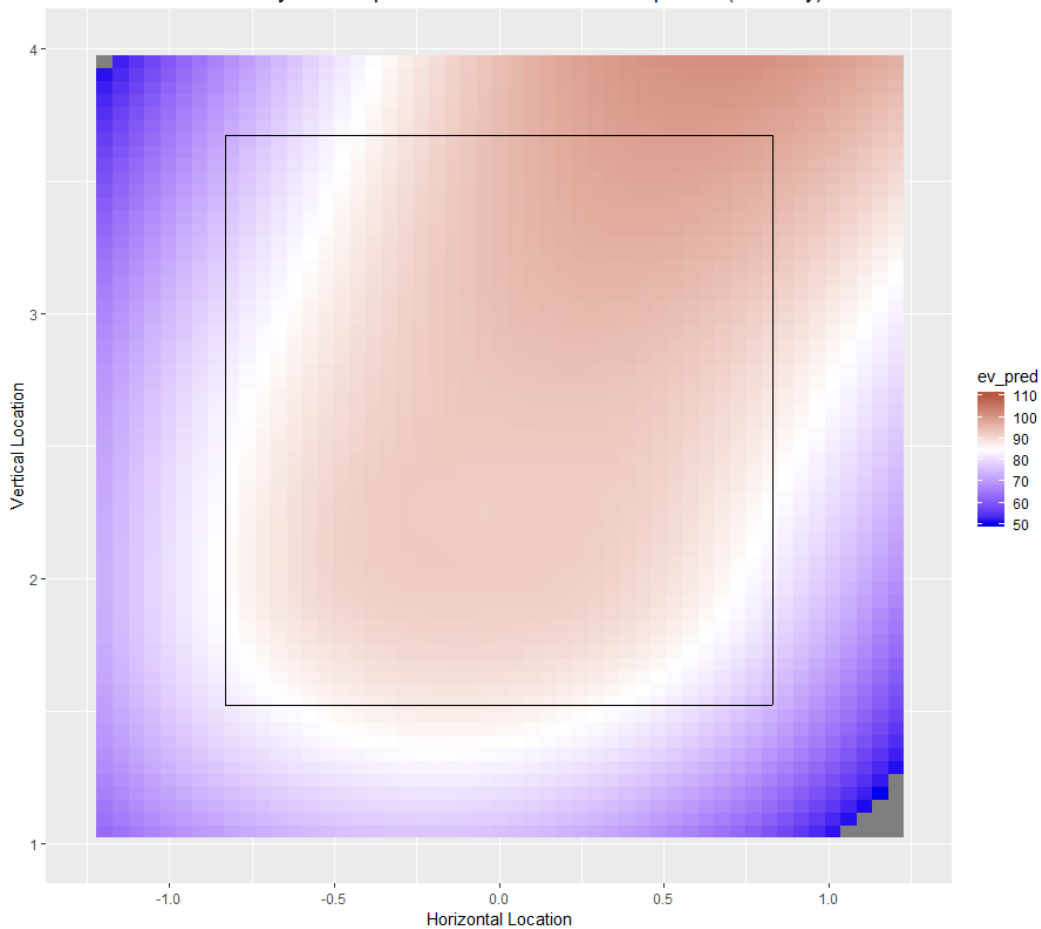
League Pitch Location Density Map: 2018 - Catcher's Perspective





EV Heat Maps

Exit Velocity Heat Map: 2017-2018 - Catcher's Perspective (BIP Only)



League Exit Velocity Heat Map (RHH) - Catcher's Perspective

