

Can the ADI and/or the VMI determine Win and Loss, Game by Game?

by Clifton Neeley www.baseballvmi.com

So, since we are making a big deal of the ADI and the VMI, how do you, as a user include it into your analysis to help you win in the game of daily fantasy and/or add it to your decision making process? You may have noticed that on our website, we have stated that our strength is not in the win-loss arena, but indicating a high probability of above average number of hits vs below average number of hits in today's games. Although we are working on identifying individual performance, we are not there yet. The tendencies that are identified pretty distinctly by the amount of comfort with today's movement on each pitch are significant, but all of the best historical metrics are still in play. Your challenge, as well as ours, is to mix the ADI and the VMI into your individual decision making process to come out with the world's best formula for predicting individual and team performance. So the answer to the above question is obviously--'No, not by itself.'

Since we can divide MLB data into performance categories that show how much ball movement the pitcher had purely from the makeup of the air, we can see the pitcher's performance against the ADI. We can also see the hitter's performance when the ball is moving more and when the hitter is not used to the movement vs when he is comfortable in the climate. It gets very intriguing when we include different types of pitches within that same grid. You can do a similar study on the pitcher and hitter stats on our website, but you may glean some good information from our study on the "Pitch-Mix." The aspect of this study which most intrigued me when I first began was that we are entering the realm of an industry which is over 100 years old. We are sandwiching a concept of gauging the air (which is older than Methuselah) into modern cyber metrics to see if there are identifiable trends that parallel baseball common sense. Since the trends are evident, we are combining the physics to the mental and physical makeup of the most talented professionals in the world and what we are beginning to see is that performance against the type of pitch is substantially related to the ranges identified by the ADI and particularly the VMI.

Visual Memory by Clifton Neeley, creator of the Visual Memory Index© and author of the web-site www.baseballvmi.com. Clifton pitched and played baseball and fast-pitch softball in the mountainous southwest Colorado area from 4,000 feet in Grand Junction to 6,000 feet in Durango to 9,000 feet in Telluride prior to his college experience in baseball.

| Air Density | Heavyweights | Welterweights | Lightweights | Featherweights | Bantamweights |
|-----------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Neeley Scale | 70's ADI | 60's ADI | 50's ADI | 40's ADI | 30's ADI |
| 95mph 4-Seam | 7 inches Lift | 6 Inches Lift | 5 Inches Lift | 4 Inches Lift | 3 Inches Lift |
| | 9 Inches Tail Off | 8 Inches Tail Off | 7 Inches Tail Off | 5 Inches Tail Off | 4 Inches Tail Off |
| 95mph 2-Seam | 4 inches Lift | 3 Inches Lift | 2 Inches Lift | 2 Inches Lift | 1 Inches Lift |
| | 11 Inches Side-to-Side | 10 Inches Side-to-Side | 9 Inches Side-to-Side | 7 Inches Side-to-Side | 6 Inches Side-to-Side |
| 85mph Curve | 14 inches Downward | 14 inches Downward | 13 inches Downward | 11 inches Downward | 11 Inches Downward |
| | 7 Inches Side-to-Side | 6 Inches Side-to-Side | 5 Inches Side-to-Side | 3 Inches Side-to-Side | 2 Inches Side-to-Side |
| 90mph Slider | 8 inches Downward | 8 inches Downward | 7 inches Downward | 6 inches Downward | 6 Inches Downward |
| | 6 Inches Side-to-Side | 5 Inches Side-to-Side | 5 Inches Side-to-Side | 3 Inches Side-to-Side | 2 Inches Side-to-Side |
| 95mph Cutter | 6 inches Downward | 6 inches Downward | 5 inches Downward | 4 inches Downward | 4 Inches Downward |
| | 9 Inches Side-to-Side | 8 Inches Side-to-Side | 7 Inches Side-to-Side | 5 Inches Side-to-Side | 4 Inches Side-to-Side |
| 90mph Sinker | 9 inches Downward | 8 inches Downward | 7 inches Downward | 6 inches Downward | 5 Inches Downward |
| | 0 Inches Side-to-Side | 0 Inches Side-to-Side | 0 Inches Side-to-Side | 0 Inches Side-to-Side | 0 Inches Side-to-Side |

Putting a Microscope on Pitches Using the ADI and VMI

The 2016 League-Wide Average Hit/Strike Rate for All Pitch Types Combined Was...9.36%

The ADI provides a microscope on the pitcher. The VMI provides at least a telescope on the hitter.

Which Pitches favor the pitcher in *Heavy Air* and which in *Light Air*?

The pitch-mix is defined by the combination of the varied types of pitches thrown versus what the team of hitters should be set up and prepared to hit best. Obviously, a good pitch-mix ends in success for the pitcher; a bad pitch-mix winds up with a man on base or worse for the pitcher's team. As you know, pitchers in MLB, college, and even high school utilize several pitches to keep the hitter off-balance. In MLB, the typical starting pitcher needs to utilize three pitches at a very high level of movement, angle and accuracy to be successful. Some pitchers are able to effectively throw six pitches, but that is rare.

The Visual Memory Index is built around the primary pitch in baseball; i.e. the Four-Seam Fastball. This is the most frequently used pitch in the league and most likely the same in any baseball or even fast-pitch league. It is identified by backward spin with the four longest seams of the ball traversing horizontally through the air. A similar pitch in fast-pitch is called a Rise-Ball, as both achieve upward lifting movement, although thrown underhand instead of overhand. This pitch is used to set up the hitter for other pitches, which can keep the hitter off-balance. The second most used pitch in MLB is the Slider. The third most frequently used pitch is the Two-seamer, the fourth is the Change-up, and the fifth is the Curveball. Another very effective pitch is the Sinker, which we will discuss later in this segment, along with the Splitter, the Cutter, the Knuckle Curve and the Knuckle Ball.

Of course, each pitcher has unique arm action, speed and release aspects that make the game more exciting and less predictable however, the trajectory itself is caused by the extremely variable air pushing against the cover and the seams on the ball within the more consistent gravitational pull. We will look at the data on each pitch as it relates to the atmosphere identified by the ADI and the performance within it as tracked by the VMI. We will discuss how you as a player, fantasy participant, manager, or wager participant may benefit from this information.

The objective of this discussion is to help you gain insight into **"when"** a certain pitch will be more effective. If you know the VMI, then you know the hitter's set-up tendency for today, and you will have a clearer picture of the hitter's capability to adjust to a particular pitch. For example, if the Four-Seamer is lifting 6 inches from a straight line today at a 65 ADI as shown on the chart, but the hitter is used to that amount of movement and sports a +4.00 VMI today, then the following should be a tip for you, or the pitcher, or catcher: This hitter may be more susceptible to being induced into a groundball with the two-seamer. This is because his set-up is above the four-seamer instead of below it and the two-seamer lifts less than the hitter is expecting. I will present a discussion about the two-seamer in ensuing articles.

Four-Seam Fastball - Used (36%) League Wide

Average Hit/Strike Rate For 2016 = 8.97%

Bottom Line: Pitchers will be more successful against a team with a high minus VMI (greater than -5.00) than when the team sports a "Plus VMI of 5.00 or greater."

This most frequently used pitch, about 36% of all pitches thrown, is designed to lift over the hitter's bat. It is accomplished in three ways: 1) by speed' which, (of course) flattens the trajectory and provides the hitter little time to adjust; and 2) by backward spin rotation, which causes the ball to lift as it travels and 3) the backward spin being canted due to the arm-slot (or angle) so that upon release, the trajectory includes an additional action called tail-off, which adds a sideward movement. [***If you are a player or manager; then, I am aware you know this.***]

TIP: When utilizing our database, you will notice that we provide you with VMI increments to choose from. For example, if you wish to check out how a team has performed against the four-seam fastball *when* the pitcher has more movement than your team is used to seeing, you may want to select an increment of 4.00 on the VMI range. Since the 4-seamer was used to create the index, then 4.00 (plus or minus) represents approximately 1/2 inch of movement different from the hitter's recent experience against a typical 95 mph

pitch. An increment of 2.00 would then represent approximately 1/4 inch differential and 8.00 represents as close to one full inch of movement differential as possible. Keep in mind that the additional pitches that a pitcher may utilize will not necessarily fall into such an equally divided increment system. However, once you have utilized the chart that you will find below, you will soon be able to associate the VMI range with the amount of movement on each of the pitches a starter may typically throw. Of course, the speed of the pitch is important, but we use the actual production against each individual pitcher's data, so this naturally includes his typical speed and his accuracy within the environment defined by the game-day ADI. In each of the following articles, we will go through the balance of the pitches used by most pitchers. To be continued.....