

Bladen Cha, Age: 14

Ht: 5'4", Wt: 127 lbs

Beimel Elite Athletics Biomechanics Assessment

Date of Pitch AI session: 6/9/2023

Date of Assessment: 8/11/2023

Written by Ethan Wang

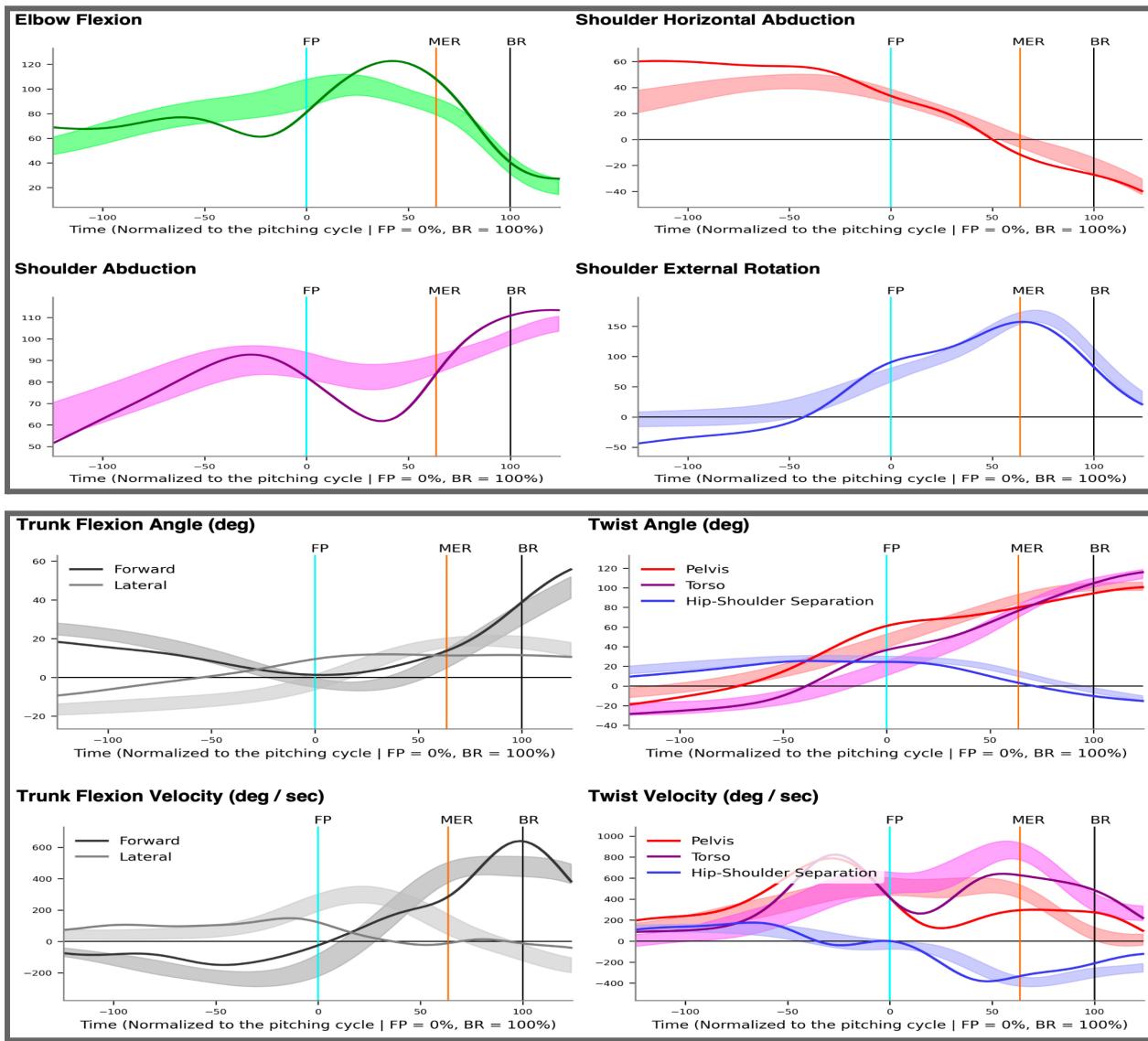
1. Hand Separation/Pre-Stride Phase



Trunk Movement: Great trunk stack positioning with pelvis tilted back, naturally creating that backwards shoulder lean. However, right when he makes his first movement down the mound, he loses a lot of that load-up he created with his trunk stack. As the picture on the right shows, his weight is already centered between both feet and he hasn't even reached foot plant yet. This is likely due to a lack of hip flexibility and strength because he isn't able to keep that torso stacked when he begins driving off the back hip.

- Weak/inflexible hips disallow body to stay stacked and lead to premature forward upper body momentum shift
- Stretches, rollers, strength training is the prescription
- The next section will demonstrate how this issue manifests in the delivery

2. Beginning of Stride and Foot Plant Phase

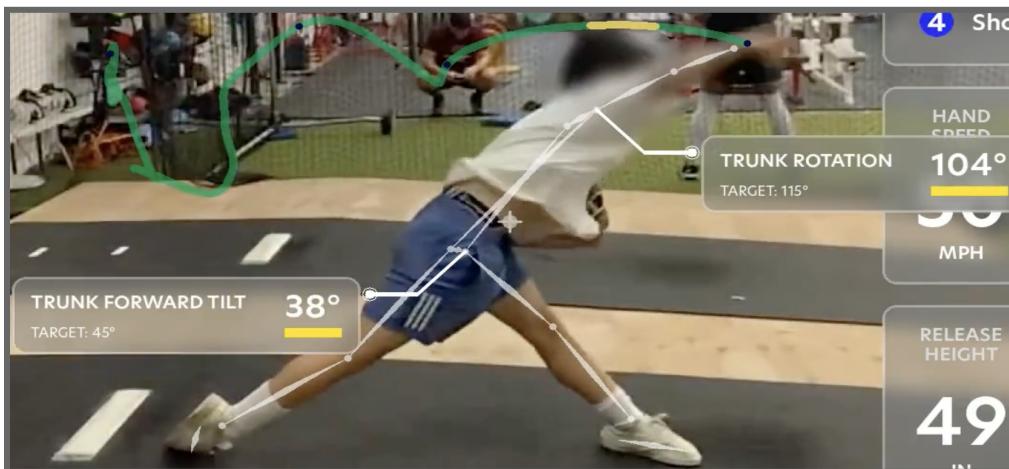


Top Graph: Look at the left 2 graphs of the top figure. Simultaneously right after foot plant, he has excess elbow flexion and drops way below average in shoulder abduction too. His forearm strays from its linear course and away from his body during its path. In combination, his shoulder comes around and stays far below where it should be.

Bottom Graph: Like I said, he leaks out front when striding. Twist velocity (bottom right) shows his pelvis and torso firing before foot plant (FP) and slowing down before MER and BR. He leaks, rotates early, and doesn't get that torque at the proper time. His energy

transfer is essentially being wasted while he is striding down the mound and there is nothing left when he actually throws the ball. The next section will help visualize what is happening

3. Max External Rotation to Ball Release Phase



- Bladen has a great delivery as it stands now and even though I discussed issues with twist velocity earlier, his body is in a great, mechanically sound position
- With forward trunk tilt and rotation he is not very far off the mark
- However, the reason his twist velocity is still so inefficient is because of that forward leak of weight at the beginning of his stride, it throws off the timing
- Not only does it throw off the timing of his upper body rotation but it also causes his arm to take a roundabout and wide path towards home plate
- I explained this in the previous section but his shoulder/arm positioning are simultaneously off the mark due to this early leak