

Anthony Gill, Age: 14

Ht: 5'8", Wt: 143 lbs

Beimel Elite Athletics Biomechanics Assessment

Date of Pitch AI session: 5/17/2023

Date of Assessment: 8/9/2023

Written by Ethan Wang

## 1. Hand Separation/Pre-Stride Phase

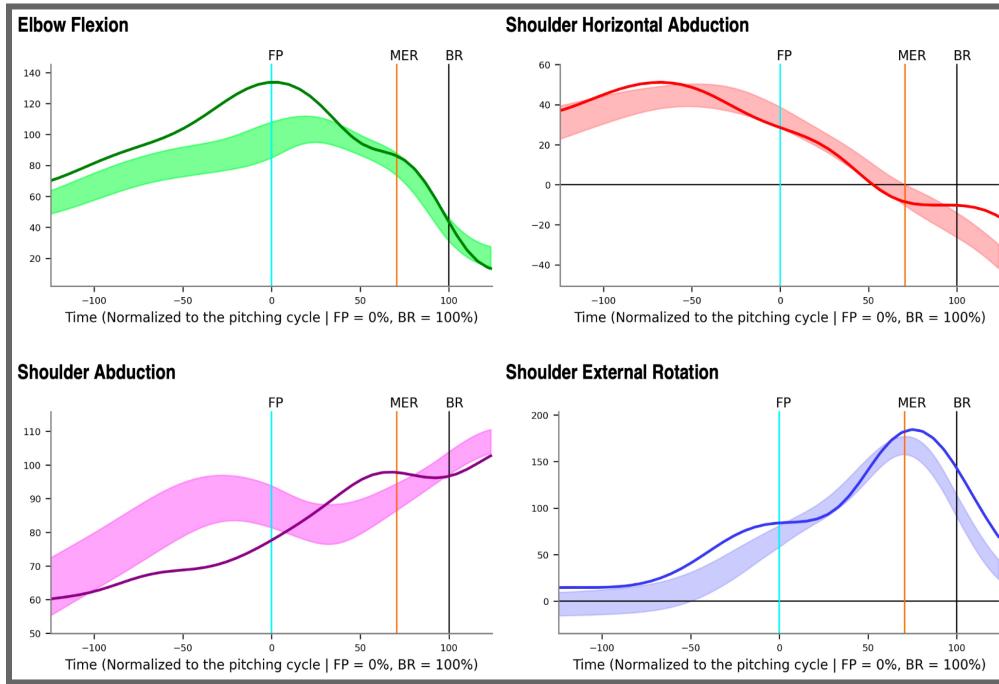


### Trunk Stack:

On the left we have Anthony's leg lift. He gets into a great stacked position with his torso, notice the nicely left tilted rectangle around his chest area. However, go take a look at the video of his load and it will show you that he is over doing it. In order to trunk stack he is tilting his shoulders back as far as possible. He tilts his pelvis well enough for the lumbar spine to be strong and stable, but the extra tilt with the shoulders negates the benefit of his proper initial tilt.

- Easily fixed by just showing him that he doesn't need to overcompensate with shoulder lean

## 2. Beginning of Stride and Foot Plant Phase



### Arm/Shoulder

#### Movement:

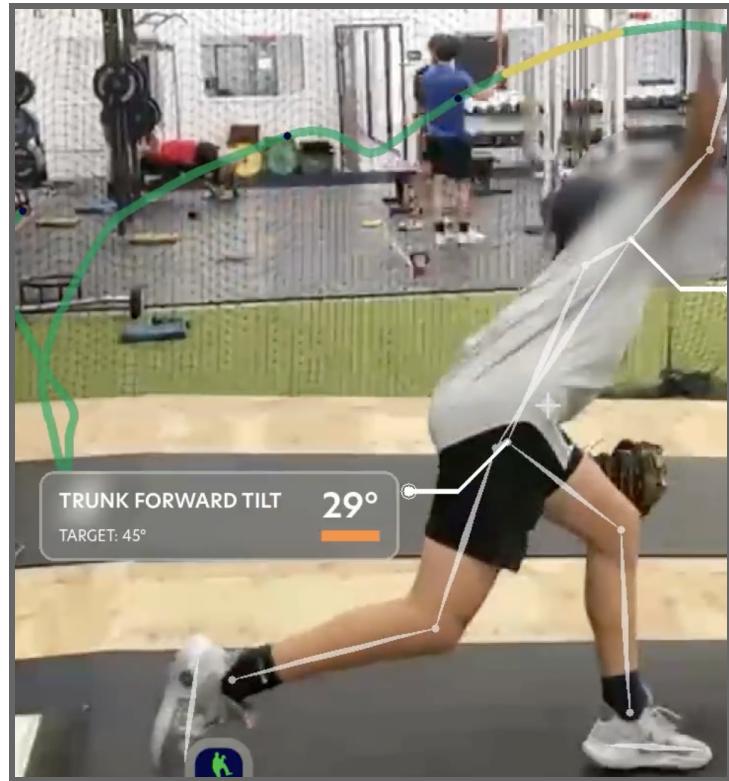
Massive case of forearm flyout here. Take a look at the graph on the left and notice that his elbow flexion is way higher than it should be, combined with his shoulder abduction being way too low throughout his stride. This means both that his forearm strays laterally (elbow flexion) way too far away from his body

and his arm is simply way too low (shoulder abduction) throughout the delivery.

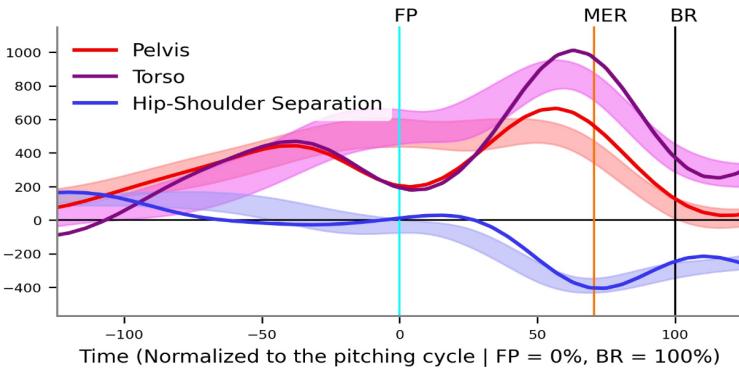
Continuing this delivery means both lower velocity and a higher risk of elbow injury.

- Many ways to go about fixing this, one being during the separation phase
- Instead of dropping his arm and maintaining neutral hand position he could try reaching back further when separating while pronating his hand
- This would increase shoulder abduction and likely fix his arm path

### 3. Max External Rotation to Ball Release Phase



**Twist Velocity (deg / sec)**



#### Hip and Trunk Rotation:

The issues that I discussed in the previous phases all manifest here after foot plant. As you can see on the graph and if you watch his video, he is getting almost no torque when his upper body

releases and turns towards the plate (Pelvis and Torso). He gets decent hip shoulder separation, but it doesn't mean much because of how little force his trunk is rotating with. This is a product of forearm flyout because since his arm is in that overly-extended position, his arm applies the main force during the throwing motion. Instead of keeping his arm in a strong position and allowing his entire upper body to unwind and whip his arm around, he is just turning and chucking the ball as hard as his arm will let him. For obvious reasons this is not ideal and while it may also be an issue in his hip/lower half strength and mobility, it can be fixed to a great degree by zoning in on that forearm flyout and lack of shoulder abduction.