

## **Sprint Analysis:Noah Lyles**

Session:7/19/2019-On-Track Sesssion Summary-Model View – Final

This is a summary of the On-Track or Competitive Session listed above. Performance Variables that are flagged as errors are identified in four Groups: Result, General, Special, and Specific. The challenge for the Elite Coach is to improve the Specific Performance Descriptors which will, in turn, improve the results in the remaining Groups.

### **Result:**

The Variable that is the end product of all of the athlete's efforts is put in the Result category. In the Sprint, this Variable is the Horizontal Velocity down the Track. Since this result is compared to the velocity required to produce a World Record effort, it is extremely rare for this variable not to be flagged as one to be improved.

**Sprint Velocity is Too Low (Compared to World Record Performance)**

### **General Performance Descriptors:**

Those variables in this Group identify how well the athlete is doing, but they do not identify how the performer is mechanically producing the results. They are critical, however, in determining what area needs to be addressed for improvement to occur

#### **Ground Phase:**

#### **Air Phase:**

**Air Time Right to Left is Too Short**

### **Special Performance Descriptors:**

Stride Length is placed in its own Special group because it is evaluated differently than other Variables. Because the actual Length result is directly affected by Air Time, to determine if the Length is actually a problem the result is adjusted for the athlete's actual Air Time. This error can be mechanically based, but in most cases it is due to the athlete's inability to generate sufficient Dynamic Strength during Ground contact.

Not Producing Sufficient Stride Length During Ground Contact

## **Specific Performance Descriptors:**

These Variables identify how the performer is mechanically producing the results in the Result, General, and Special groups. These are the areas where changes must be made to improve performance. In the unlikely case where all Specific Variables fall in the acceptable range, the only remaining way to improve performance would be to improve Strength levels (Static, Dynamic, or Elastic).

### **Ground Phase:**

Upper Leg Full Extension Angle Left is Too Small (Over-Extending into Back Side)

Lower Leg Angle at Takeoff Left is Too Large (Over-Extending into Back Side)

### **Air Phase:**

Trunk Angle at Touchdown is Too Flexed