Which speed graph

Graph 2. Both charts plot the same speeds and the same ±. Graph 1 starts at 0 m/s, so the whiskers shrink to specks and every ball looks the same. Graph 2 runs from 5.50 to 6.60 m/s. That is the one that shows who is actually faster.

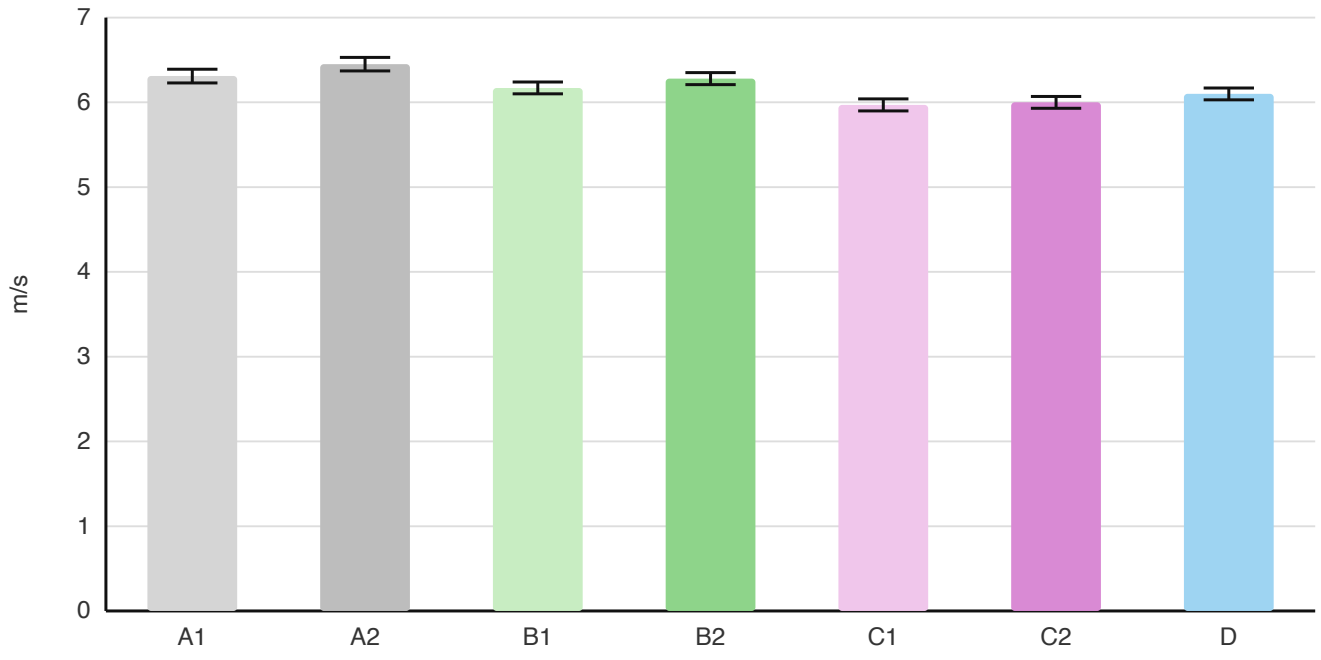
The numbers on both graphs

A is pickleball, B is wiffle, C is small wiffle, D is the golf ball. The whisker is v ± uncertainty.

Drop	v (m/s)	±	Range
A1	6.31	0.08	6.23 to 6.39
A2	6.45	0.08	6.37 to 6.53
B1	6.17	0.07	6.10 to 6.24
B2	6.28	0.07	6.21 to 6.35
C1	5.97	0.07	5.90 to 6.04
C2	6.00	0.07	5.93 to 6.07
D	6.10	0.07	6.03 to 6.17

Graph 1

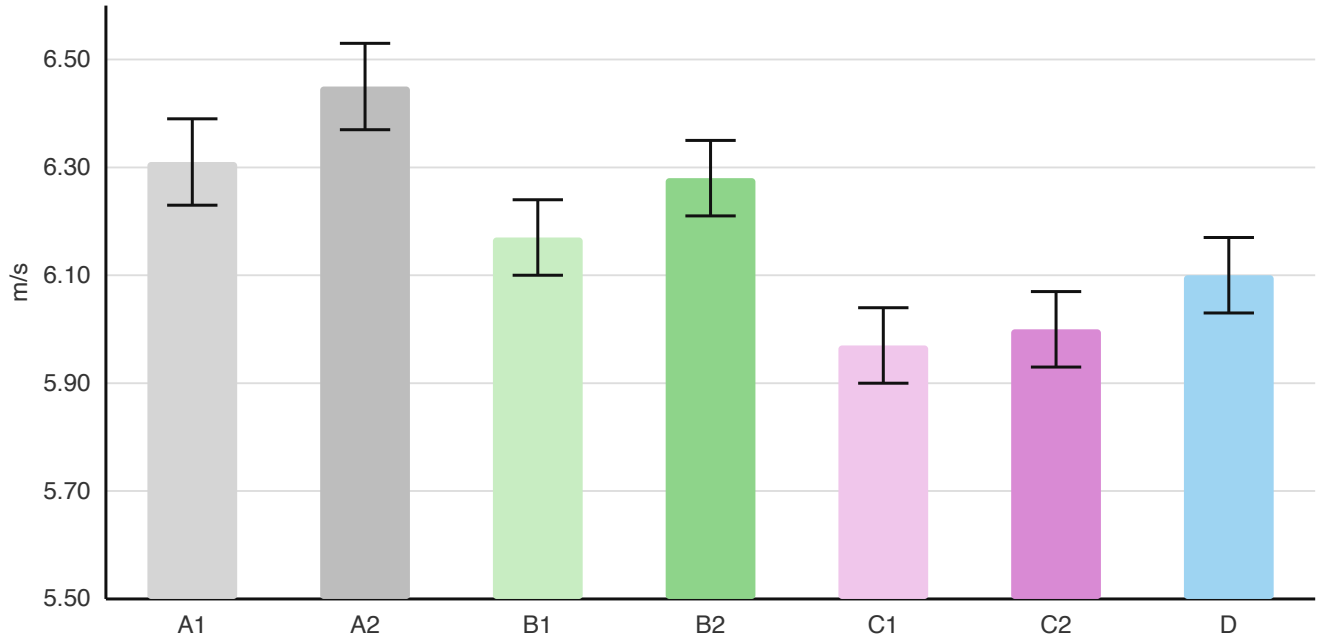
Axis from 0 to 7 m/s. The error bars are about 0.07 m/s on a 7 m/s scale, so they look like ticks.



Same data as graph 2. The scale hides the comparison.

Graph 2

Axis from 5.50 to 6.60 m/s. Same ± as graph 1. You can see whether the ranges overlap.



This is the graph to read.

What the errors mean

The vertical line with caps is the uncertainty on that one drop. It comes from the measurement spread. That is statistical error. A short whisker means the drop was precise.

If two ranges overlap, the gap is inside that statistical error. You cannot call a winner. If they do not overlap, the faster bar sits entirely above the slower one's range.

A2 (6.37 to 6.53) sits above both wiffle drops. A1 (6.23 to 6.39) overlaps B2 (6.21 to 6.35). One pickleball drop beats the wiffles. The other one does not. Do not bet a million that ball A beats ball B.

Both small wiffles top out at 6.07. Both pickleballs start at 6.23. A is faster than C. Those ranges do not overlap.

A kinked tape or a late frame shifts every speed the same way. The whiskers stay short. The bars can look tight and still sit off the true speed. That is systematic error, and it is an accuracy problem. More trials shrink the whisker. They do not slide a biased average back onto the truth.

Tight cluster means precise. Average on the real value means accurate. Close together is precision. Close to the true speed is accuracy.