

**Hawk-Eye:
A ball mark is not definitive**

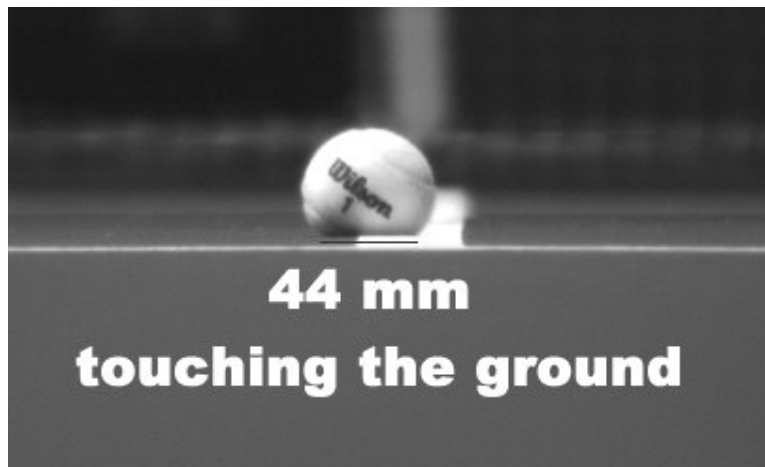
Over the past few years, the ITF has been able to compare the mark left on the court with an accurate measurement from a high speed camera.

There is no doubt that the high speed camera provides the more accurate reading for whether a ball is IN or OUT.

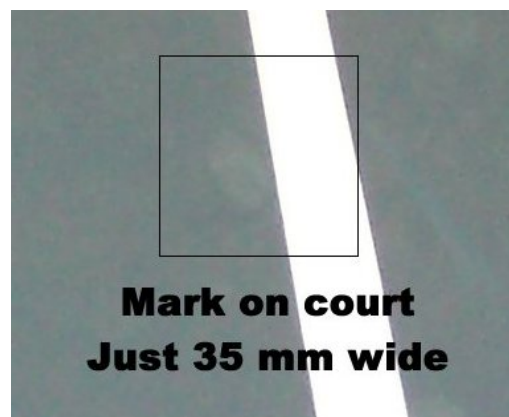
Comparing a ball mark on the court with a high speed camera measurement, differences can be up to 2cm, so whilst the ball mark will give a guide, it is not definitive or particularly accurate.

The reason for this can be explained by dropping a ball on the court: no mark will be left. In the same way, part of the ball that touches the ground from a normal shot does not hit the ground with enough force to leave a mark.

Using a high speed camera we see for an average paced shot, the ball will compress so approx 44 mm will be in contact with the ground.



The mark left on the court from a similar trajectory is much thinner.



How much of the ball that touches the ground actually leaves a mark depends on many factors:

- 1) The age of the ball
- 2) The surface
- 3) If the ball hits the line, marks can be hard to see against the paint

These finds apply to hard courts and rebound ace surfaces. Clay is very different.