Play of the Week #8

With one out, R1 on second base and R2 on first base, B4 hits a high fly ball. R1 is on second base waiting to tag and R2 is almost to second base when F9 catches the ball.

As R2 is returning to first base, F9 throws the ball over F3's head and it enters dead ball territory.

The umpire awards R1 home and R2 third base. R2 misses second base as they are advancing to third base.

After R1 has touched home and R2 is standing on third base, F4 appeals that R2 missed second base.

What's your call and any subsequent actions due to your call?