

Kathrin Zettel

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At the Aspen World Cup races earlier this season I asked Patrick Riml and Trevor Wagner, coaches of the U.S. Women's Ski Team, which racers I should be watching. They both told me to look at Kathrin Zettel to see what's going on in modern women's slalom. I remembered her mostly as the young Austrian skier who fell directly in front of me in the same races the previous year.



Nineteen-year-old Kathrin Zettel has certainly improved between then and now. So much so that Janica Kostelic has called her the future of women's slalom racing. She's finished all but one of the World Cup slaloms this year in the top five, and has been on the podium three times. Her current ranking on the World Cup slalom list is 3rd.

Zettel builds and releases pressure progressively through the turn, seldom hitting her edges abruptly or losing contact with the snow. How is it that she achieves this softness? She does it with precisely executed flexing and extending movements made in perfect accord with the undulations of the terrain and the dynamics of the turn.

Modern slalom skis hold so well and carve such tight arcs that, even on smooth terrain, the dynamics of the turns present the skier with forces similar to those she would encounter skiing through moguls. Just as a mogul skier extends in the trough and flexes at the end of the turn, Zettel extends into the fall line (frames 4-5 and 6-8 in the first photomontage) and flexes into the transition (frames 1-3, 5-6, and 8-10).

As she flexes, Kathrin's feet come forward, taking the pressure off the forebodies of her skis. At the same time, her upper body flexes forward from the waist, keeping her from getting too far back on her skis. As she goes through the transition and into the new turn, her shoulders and hips move moving diagonally across her feet, and she presses her shins into the fronts of her boots. The diagonal movement takes her toward the inside of the new turn, helping her establish the inclination she will need to balance against the upcoming centrifugal force. That movement also gets her center of mass over the fronts of her skis which, along with the pressure on the fronts of her boots, makes the skis bite and bend into the turn early.



In the second photomontage, Zettel begins her flexion in the third frame by relaxing her thigh, butt and lower back muscles. This releases her upper body from the turn so that it moves across her feet in a straight line toward the inside of the next turn until she reaches frame 5 where she has extended and her skis have begun to engage the snow. In short, her upper body has started the transition into the new turn in frame 3 while her feet continue to finish shaping the old turn up to the edge change in frame 4.

These techniques are not new or unique to Zettel, but as equipment has become more refined, their importance has grown and their use become more widespread. Zettel executes them with great accuracy and clarity, which has helped boost her to the top level of World Cup racing and makes her a great example for those who want to study the best in modern ski technique.