

Abstract Submitted  
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**Eliminating Major Tornadoes in Tornado Alley**<sup>1</sup> R. TAO<sup>2</sup>, Temple Univ — In my recent paper, I propose that major tornadoes in Tornado Alley can be eliminated by building east-west ranged walls, 300 meter high and 50 meter wide. The work has received much attention, but some meteorologists are against the idea, claiming that the major tornadoes in Tornado Alley are not related to the collisions between northbound warm air flow and southbound cold air flow because supercells are not at the collision front. In this talk, we will show that wind tunnel experiments and airplane wing tip vortices clearly demonstrate that vortices produced by air mass collisions are usually not at the collision front because of the extremely volatile condition over there; they are either near the ends or at side of the collision fronts. When the warm and moist wind collides with the cold wind violently in Tornado Alley, similarly, the supercell storms cannot be right at the collision fronts, but are near the ends or at sides of the collision fronts. While only a small portion of vortices in the warm air side may have a chance to develop into tornadoes, the major tornadoes in Tornado Alley indeed start from the air mass clashes. If we can weaken such violent air mass collisions, we will eliminate the major tornadoes in Tornado Alley.

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