Framing the Questions: the Freshman Approach to Special Relativity

ELAINE TENNANT, Blinn College — Two inertial frames move at relativistic speeds with respect to one another. What does an observer in one of the frames see? This is often times the only question students answer in their freshman physics course. Could a more fundamental understanding of special relativity be instilled if a larger variety of insightful questions were asked? Examples from a question pool designed to expose students to the many different aspects of special relativity during the freshman course will be presented. Anecdotal experiences and preliminary results from the first deployment of the pool will be presented. Comparisons will be made with other prescriptions for early undergraduate special relativity education reported in recent literature.