Hypersonic Transition is Critical to Large Scramjet Accelerator Vehicles

- Multistage Airbreathing to Orbit will still be similar to NASP -- a large hypersonic scramjet-powered vehicle
- National Aerospace Plane Review by Defense Science Board, 1988: *Estimates [of transition] range from 20% to 80% along the body … The estimate made for the point of transition can affect the design vehicle gross take off weight by a factor of two or more.*
- National Aerospace Plane Review by Defense Science Board, 1992: *The two most critical [technology areas] are scramjet engine performance and boundary layer transition… Further design development and increased confidence in these two technical areas must be of paramount importance to the NASP program.*
- The propulsion problems are being worked under various programs. However, transition research is reduced to a shell. Will transition technology be ready when the combustor is?

AD-A201124, Report of the DSB Task Force on the NASP Program, Sept. 1988
AD-A274530, Report of the DSB Task Force on the NASP Program, Nov. 1992