Please let us know if you have any discussion points you would like to highlight in your article and we may feature your article on our social media sites. Possible discussion points could highlight novel aspects of your paper that will be of interest to the engineering community, or perhaps raise questions regarding how other engineers view the matters discussed in your manuscript. Please note, discussion points should be no longer than a few sentences as they will be posted on the journal Facebook page when your paper is published.

It is well know that tuning of multivariable adaptive control systems is a very time consuming task. It is often hard to decide whether the current set of control system parameters will guarantee the best performance of a newly designed system in real operational conditions. Thus, the paper presents an engineering approach to tuning of an L1 adaptive controller that is based on a highly uniform and very economical sampling of a multiple variable design space of the desired control system parameters that enables construction of the Pareto front in the multidimensional control metrics space. The approach provided significant insight in the design and flight testing of an AirStar jet airplane implementing L1 adaptive autopilot.

The use of the Parameter Space Investigation method together with the MOVI software provided significant insights into the design and optimization of the L1 flight control system for the AirSTAR GTM aircraft, which was successfully flight tested by NASA.