

September 29, 2017

Notice: Midwest High Power Rocket Competition Simulation Tools

RE: OpenRocket & Rocksim

To: All Teams

Both OpenRocket and Rocksim use the Barrowman equations for the determination of the Center of Pressure in their rocket simulations. In addition, Rocksim uses a modified version of the Barrowman equations to account for certain rocket designs that violate some of Barrowman's assumptions.

This notice is to make the teams aware that **none** of these simulation methods simulate fins with ailerons properly if the ailerons are modeled as separate but adjacent fins. In such cases, the tools model them as separate fins (as one would expect) but does not take into account the physical adjacency. Therefore, the Center of Pressure is modeled much further aft than its actual location. If you are designing a rocket with fin ailerons, flaps, etc. they should be modeled in these tools as a single fin which will accurately predict the Center of Pressure.

Please contact me with any questions.

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