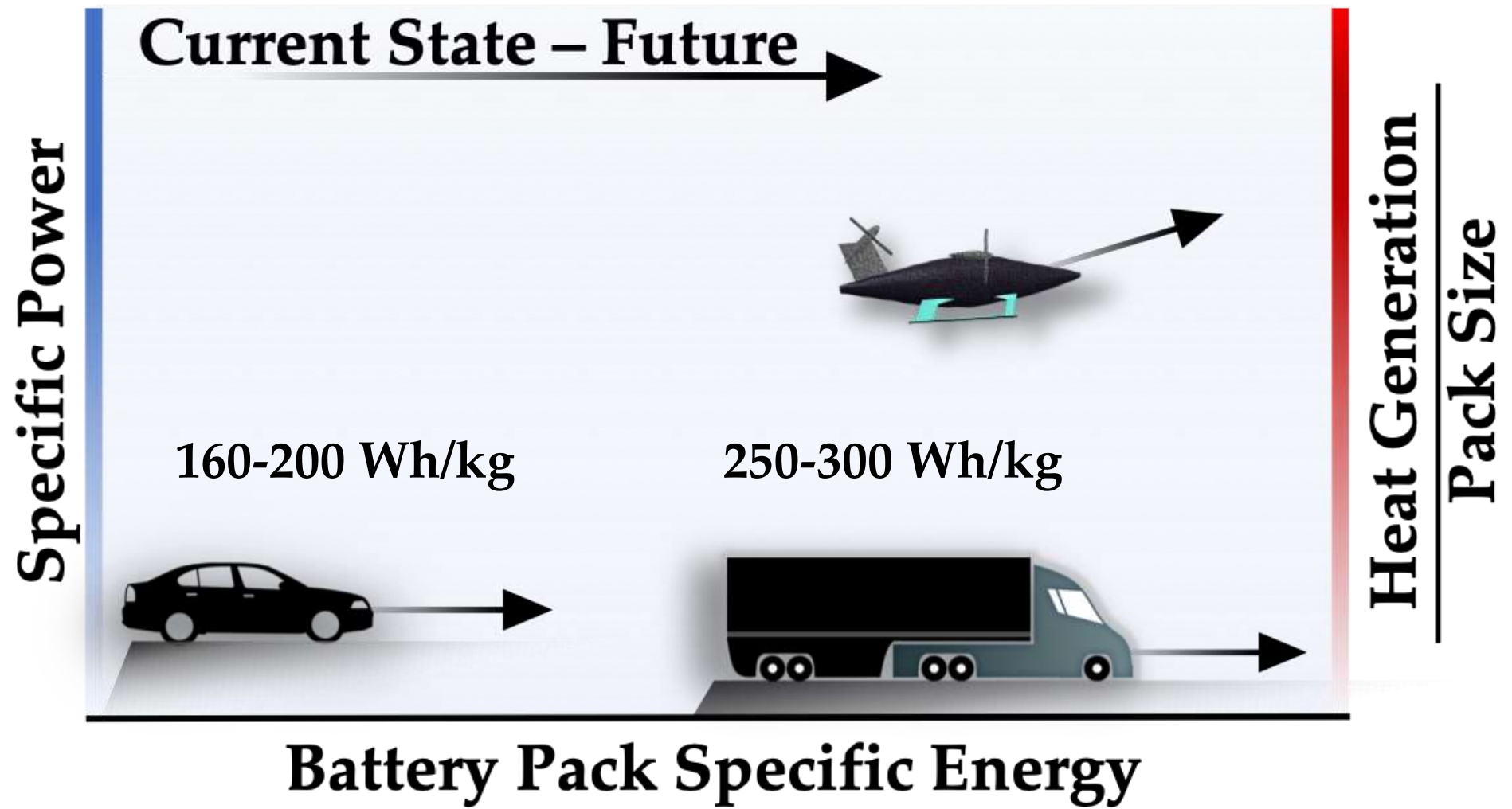


Carnegie Mellon University

Batteries for Electric Aircraft

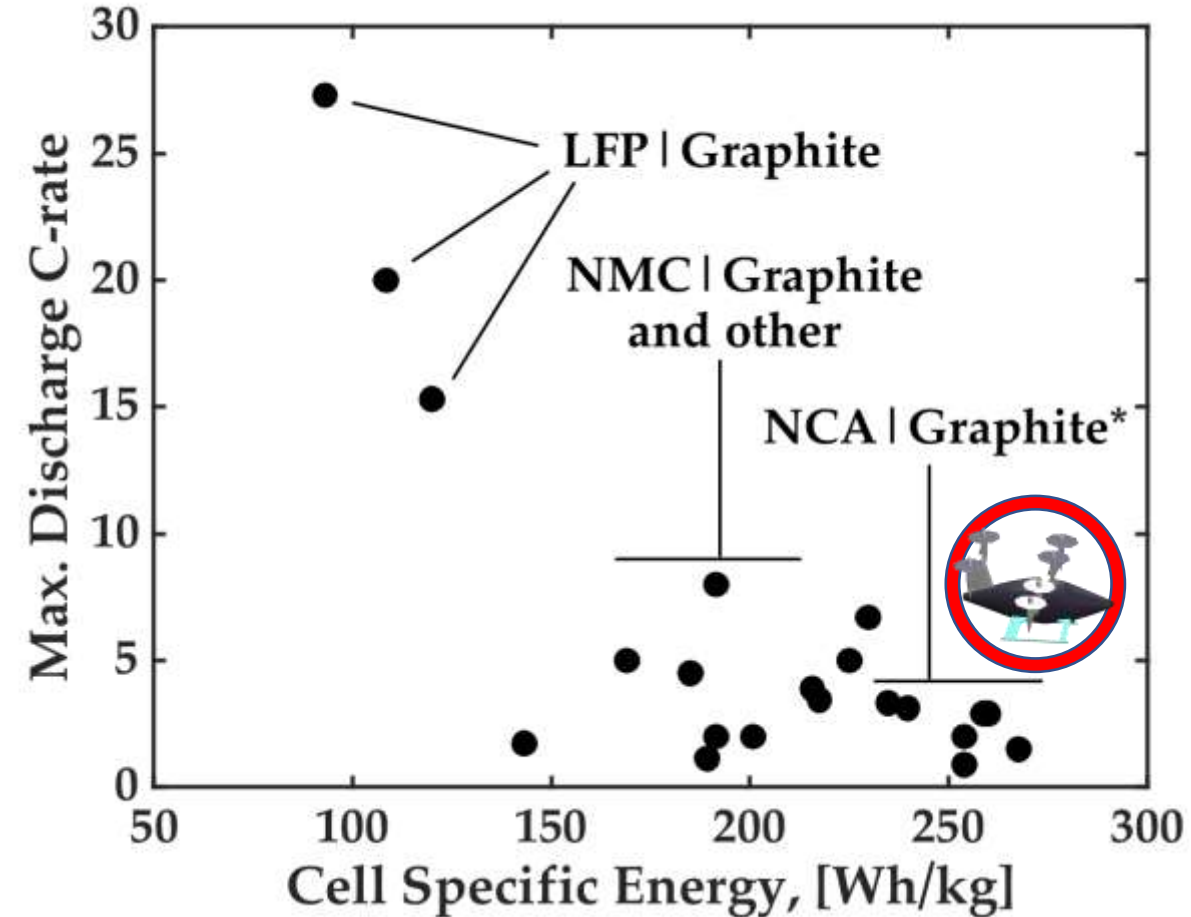
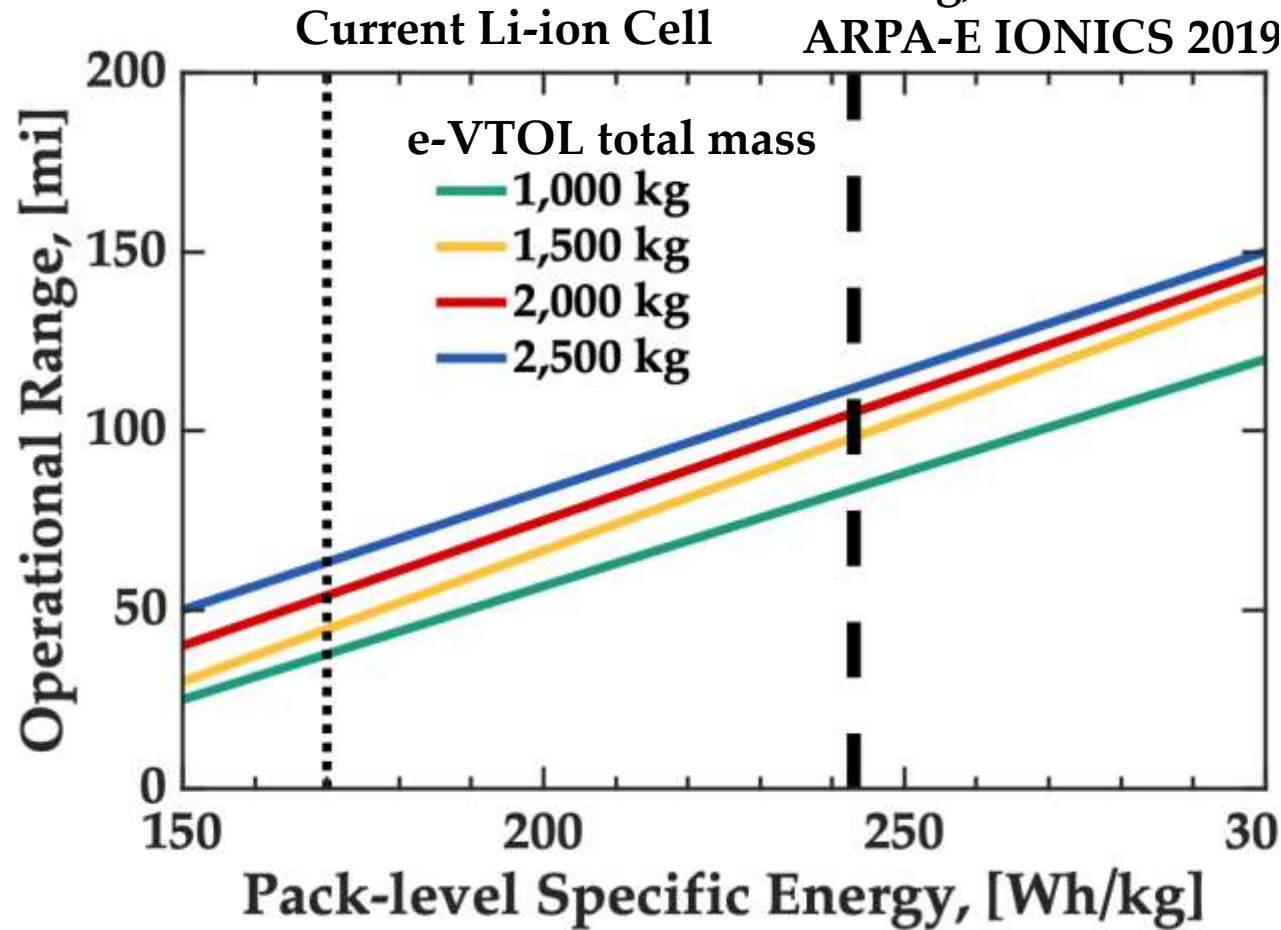
Venkat Viswanathan

Department of Mechanical Engineering

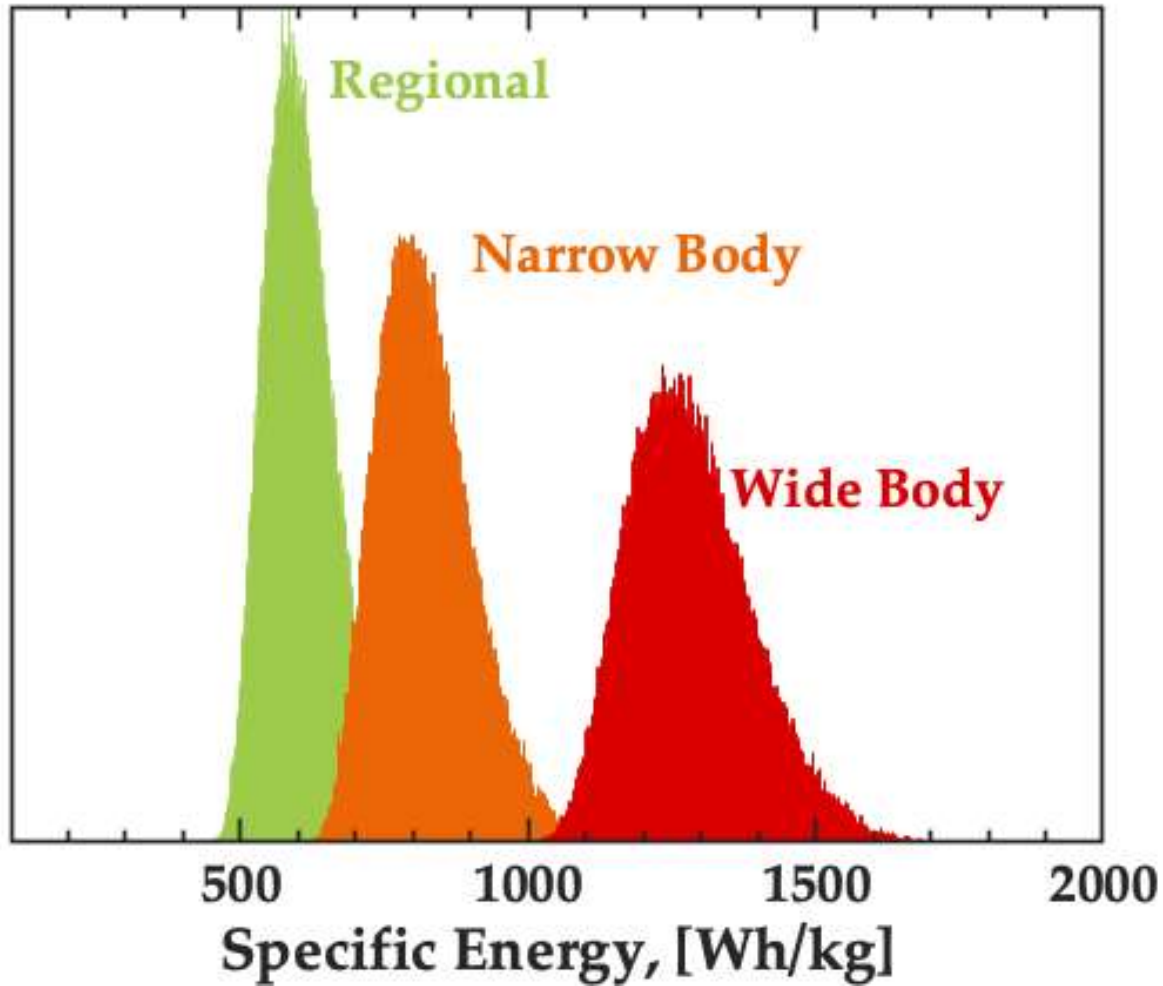


eVTOL Range and Specific Energy

Chiang, Viswanathan
ARPA-E IONICS 2019



Specific Energy Required for Commercial Aircraft



Regional:
 $\mu=600$ Wh/kg
 $\sigma=61$



Narrow Body:
 $\mu=820$ Wh/kg
 $\sigma=81$



Wide Body:
 $\mu=1280$ Wh/kg
 $\sigma=105$

Comparison of Electric and Conventional Aircraft

