

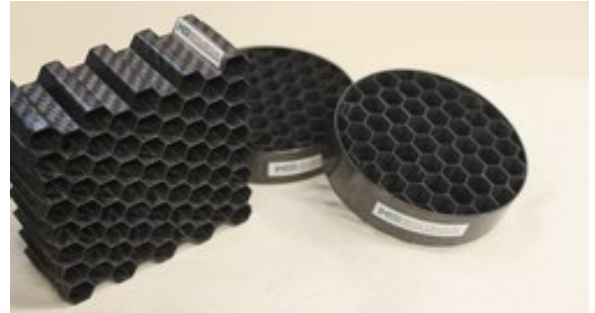
MANUFACTURING

GR/BMI IR TELESCOPE BAFFLE

COMPOSITE TELESCOPE BAFFLE

Mentis Sciences developed a novel fabrication approach to produce thin-walled, lightweight baffle designed to minimize radiation on SM-3 Kill Vehicle (KV) IR seeker applications. Mentis' composite baffle was designed to:

- Replace conventional sunshade structures with lightweight, physically robust structure to withstand high stress environments of launch and flight maneuvering.
- Reduce KV weight
- Eliminate conventional tripod structure in the KV
- Substantially reduce off axis-radiation contributing to seeker detector noise with a goal on-axis blockage no greater than 7%



This six-month research effort was designed to produce a novel fabrication method of fabricating and assembling hexagonal channels. Ultimately, Mentis went beyond the statement of work and developed a fabrication technique capable of producing multiple full-sized baffles with on-axis blockages of approximately 5%, minimal weight, and with a predicted CTE near zero.