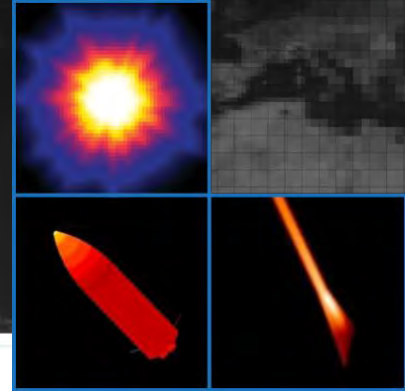




EO/IR Hardbody Modeling

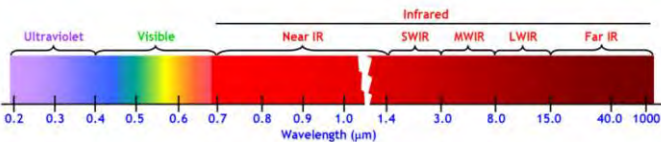


The MDA Electro-Optical/Infrared (EO/IR) Hardbody Modeling provides simulation tools used for systems engineering studies, tracking and discrimination algorithm testing, digital simulations, and hardware-in-the-loop experiments. Physics-based simulations allow Missile Defense Systems to study the signature observables of threats and targets under a wide variety of conditions, including conditions that go beyond those experienced in flight tests.

EO/IR Hardbody Modeling tools simulate all phases of flight, and enhancements are developed to respond to changing Missile Defense System requirements and evolving threat characteristics.

MDA-standard EO/IR Hardbody Modeling software is available to Government and Industry analysts:

- Tools are installed at more than 125 organizations
- More than 530 engineers and scientists use the tools
- Standalone tools with graphical user interfaces make results accessible to analysts in various disciplines
- Fast-running models integrate directly with system simulations and Monte Carlo tools



Software computes spectral and in-band signatures and imagery in user-specified wavebands ranging from near UV (0.3 μm) through visible and Far Infrared (40 μm)

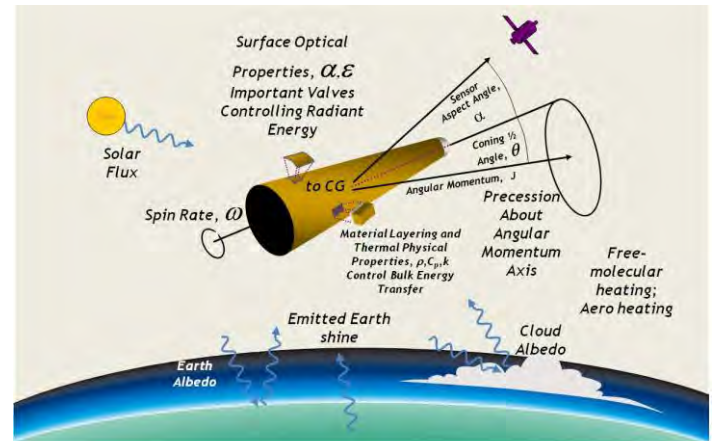
EO/IR Hardbody Modeling Supports Integrated Phenomenology Modeling (IPM)

Model data used in scene rendering



- Target Geometry Mesh
- Target Material Properties
- Trajectories & Dynamics
- Target Temperatures
- Target Ablation
- Articulation
- Radiance, Radiant Intensity

Hardbody-related effects, such as reentry wakes and debris are also treated by components of the EO/IR modeling suite.



Graphic illustrating effects modeled using notional RV

