

120 mm Pulsed Induction EM Mortar

Radar precisely tracks projectile to energize coils sequentially.

Gun Mount absorbs recoil and routes cables to capacitor banks.

SAND2016-2679C

Hardstand capable of elevation for future testing at gun range.

120 mm XM934 mortar round

Steel catchbox fragments projectile

26 Tesla Coil

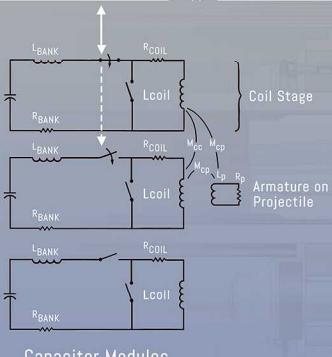
Coils Forming Barrel

ELECTROMAGNETIC LAUNCH

ADDRESSING DIFFICULT CHALLENGES FOR EM GUNS AND PROJECTILES

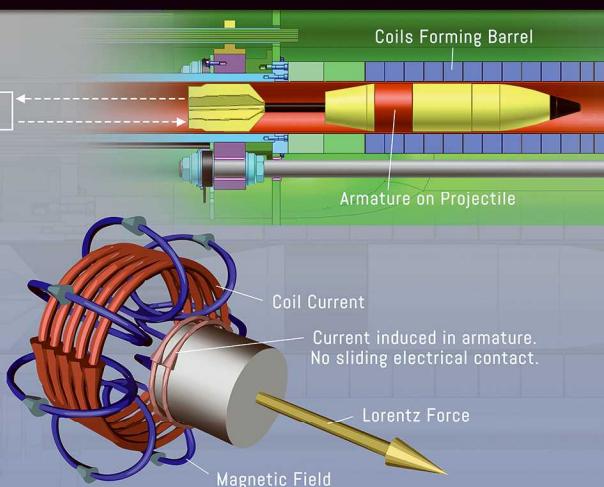
Projectile monitored with probes between coils and with radar

Gun Firing Control $z(t)$
 $v(t)$ 94 GHz Radar



Coils Forming Barrel

Armature on Projectile



MILITARY SYSTEMS & TECHNOLOGIES
WWW.SANDIA.GOV/IMS



Sandia
 National
 Laboratories