Research on geomagnetic signal and its anti-interference for fuze of trajectory correction projectile

Gao F., Zhang H., Cheng X., Chen L.
Ministerial Key Laboratory of ZNDY, NUST, Nanjing 210094, China

Abstract: In order to get flight attitude angles of trajectory correction projectile by geomagnetic sensors, geomagnetic field altitude and its abnormal distribution, the interference of magnetic field of the projectile body and the system noise were analyzed as well as the effect of them on geomagnetic signal. The anti-interference measures were presented. The principle of roll angle determination for projectile based on geomagnetism detection was introduced, the static and dynamic experiments for roll angle determination system were carried out. The results indicate that the geomagnetic signal processed by the determination system on projectile is stable and reliable, and it can be utilized for attitude angles detection of projectile, and the precision of roll angle can be controlled in the range of 5° in laboratory.
Author Keywords: Air defense and antimissile; Anti-interference; Fuzes; Geomagnetic signal; Roll angle; Trajectory correction projectile

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Authors with affiliations:

1. Gao, F., Ministerial Key Laboratory of ZNDY, NUST, Nanjing 210094, China
2. Zhang, H., Ministerial Key Laboratory of ZNDY, NUST, Nanjing 210094, China
3. Cheng, X., Ministerial Key Laboratory of ZNDY, NUST, Nanjing 210094, China
4. Chen, L., Ministerial Key Laboratory of ZNDY, NUST, Nanjing 210094, China