Electronic Warfare (EW)

Electronic Warfare

EW may be divided in three categories:

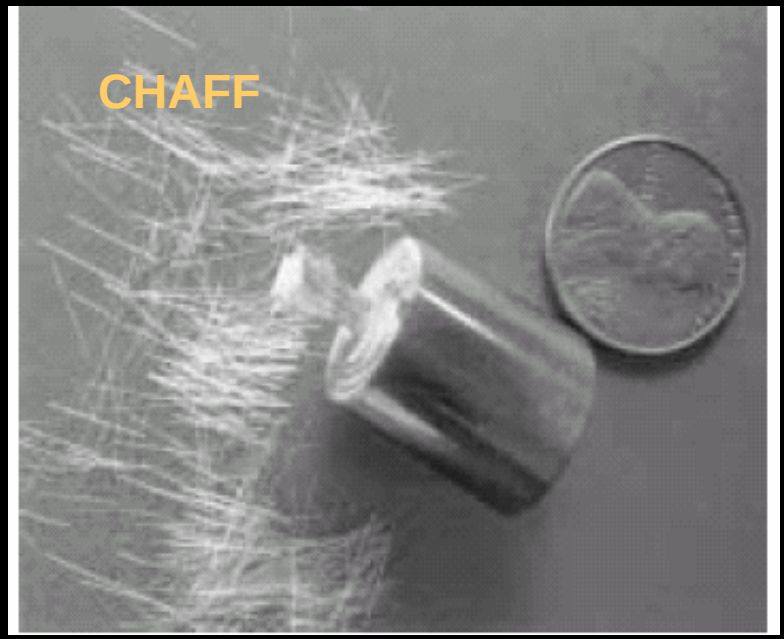
- Electronic Counter measures (ECM)
- Electronic Counter-Countermeasures (ECCM)
- EW Intelligence functions

Electronic Counter Measures (ECM)

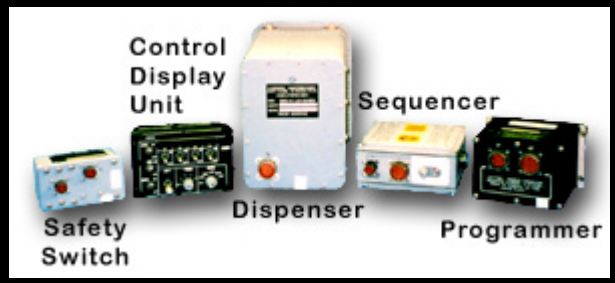
ECM is defined as the actions taken to ***prevent, disturb or reduce*** the enemy effective use of the electronic spectrum. Main methods of ECM are;

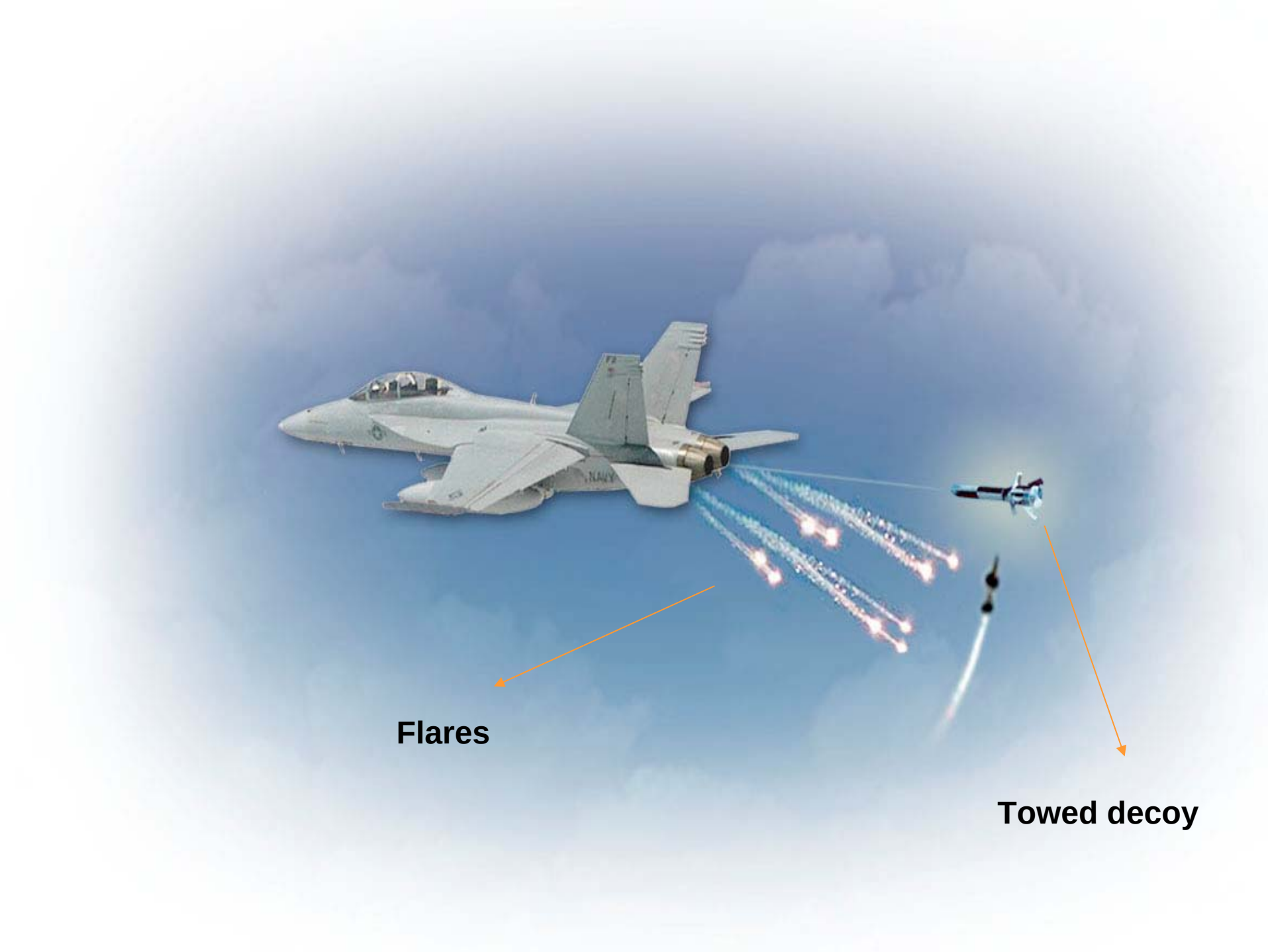
- Chaff
- False targets
- Decoys
- Noise jamming

Chaff and Flares



FLARES




Flares
Towed decoy

Noise jamming

- It raises the level of the background clusters (signals) at the enemy's radar display.
- It prevents enemy radar from measuring target range and assessing the air ride size.


NAVY

Radar warning Receiver (RWR)

- The RWR is one of the most basic fits on all modern aircraft and helicopters
- Intended primarily to warn the air crew of imminent attack
- To have an all round coverage the aircraft must have receiver antennas mounted at different locations around the airframe to supply the RWR with signals.

Radar Warning Receiver (RWR)

- A good example of a modern RWR is the AN/ALR-56M fitted to the F 15 Eagle, which can detect, self-classify and display the threat along with its distance and bearing to the pilot.

RWR antennas

Antennas

Importance of EW

EW is the KEY to military superiority form different sides

- ***EW provides access to the battle space, degrades the enemy's capability to attack, and, most importantly, saves lives.***
- ***It ensures that military operations, be they in the air or on the ground, are conducted on our terms.***
- ***EW greatly enhances the ability to stay hidden and keeps enemy "blind" during military operations.***