'FROZEN-EYE' APQSA sensor system

⚠️ Work in progress. Not yet approved for use in RP. ⚠️

About the Active/Passive Quantalogically Scanned Array

Codenamed 'Frozen Eye', the FE-Type Active/Passive Quantalogically Scanned Array takes the electromagnetic receptor assembly of an aetheric powerplant and uses it as a sensor system. By monitoring unusual shifts and changes, statistically uncommon quantum phenomena (such as the movement of an artificial object) can be detected over great distances and with great accuracy, particularly within fluid systems (such as severe storms and pressure fronts) or while moving at a sufficiently high velocity to distort the shape of space. It is commonly super-cooled, with many components forming a bose-einstein condensate and is shielded by a thin layer of transparent zesuaium in most cases.

The APQSA was originally developed to scan and identify magnetic monopoles inside gas-giants and suns.

Role

The function of the Frozen Eye is to pick out points of interest for other sensors to emphasize their attention toward or for in-depth scans. It works best in concert with other systems. Switching from active to passive mode takes around 15 to 40 seconds, demanding users be careful about which they use and when.

While the device can see everything, it can't see everything all at once and the output requires a trained officer or dedicated AI system to sift through it, with access to high end computing to find useful information. This performed by a Signals Analysis Operator Officer or 'Operator' for short on station or onboard a host starship who assess what they see.

FROZEN-EYE is best used in conjunction with a jamming suite or long-range missile systems - acting as the crosshair to paint it onto; detection, disruption, destruction of enemy detection and response capabilities being the bottom line.

Flaws

While the accuracy of Frozen-Eye has been described as 'instinctive', it does require a phenominal amount of computing power despite its own very portable form-factor. This computing power grows exponentially with the range and aperture of the sensor. This data must be compiled remotely, making the APQSA ideal as a reconnaissance system.

Deployment

As a dedicated combat technology computational power hasn't caught up enough to make Frozen-eye 'viable' in independent roles. For this reason, Frozen-Eye is dependent on LSDF server systems to turn the raw data into usable information over quantum modem, then beaming that information back. To conserve bandwidth, it is recommended users direct their 'queries' carefully, scanning specific targets in ACTIVE mode or leaving it in PASSIVE to alert them to statistically unusual non-specific events.

Assembly & mechanism

The arrangement of aetheric components could be thought of as similar to the rod and cone cells that make up the human retina or seeing part of the human-eye, made ultra-receptive to quantum phenomena to form a lens, each hexagonal 'rod' representing a tiny pixel within a honey-comb trinary layout with more equalling a higher density and thus higher resolution image.

Paired with subspace lensing (which acts as a cornia or focusing lens of the eye), the range of focus, field of view and other factors can be altered to produce a sharper (slower), blurrier (faster), broader or narrower image for better sighting, either peripherally or specifically.

Properly configured, Frozen-Eye can produce point-cloud data for computers to puzzle over. AI then sort and gut through the data to locate objects in the soup - phenomena like aetherics and CFS showing up like shotgun pellets.