

ECN Combined Sensors Array

The Combined Sensors Array, or CSA, is the standard package of sensors used on ships in the Elysian Celestial Navy. Introduced in [YE 30](#), the goal of the CSA was to create a fleet standard - both to update the often-outdated sensors systems on many older ships and to allow for a uniform training regimen in the operation of ECN fleet sensors. The CSA project included phasing out outdated and unused sensors, combining and organizing the often convoluted sensory systems on older vessels, and linking it with software that could be easily built upon as research and development allowed.

Gravimetric and Electromagnetic Sensors

Long Range Gravimetric Sensors

These sensors detect the presence of bodies through the warping effect their mass has on space-time. Though this offers little in the way of specific information about the bodies it observes, it is quite accurate at working out the location and inertia of moving objects. These sensors are excellent for detecting vessels utilizing gravimetric shielding or propulsion, [interdiction fields](#) and their countermeasures, graviton beams, interdiction beams, and emissions. They can also track the location and inertia of natural spatial phenomena.

- Type: Unidirectional, Active Scanning
- Range: 2.5 LY

Magnetic Resonance Sensors

This sensor is used to determine the specific makeup of metallic objects (such as ship hulls and buildings). It is useful for identifying the weaknesses of enemy vessels and installations.

- Type: Unidirectional, Active Scanning
- Range: 1 LY

Electromagnetic Sensors

These sensors monitor variances in electromagnetic bands. They function much like radar, emitting an electromagnetic wave and analyzing the return. Electromagnetic sensors are useful for detecting electromagnetic shielding, electromagnetic pulses and waves from ships, weapons discharges, and various spatial phenomena. These also function as the basic 'visual' sensors of the typical Elysian starship.

- Type: Omnidirectional, Passive or Active Scanning
- Range: Less than 1 LY - typically used in a 5 to 30 light second range

Electrogravitic Sensors

These sensors monitor scalar fields and radiation.

- Type: Omnidirectional, Active Scanning
- Range: 1 LY

Spectrometers

The spectrometers measure the property of light in various sections of the electromagnetic band.

- Type: Unidirectional, Active Scanning
- Range: Less than 1 LY

Infrared Spectrometer

This sensor detects the radiation given off by hot bodies. As space is very cold, the only things that give off significant amounts of heat are stars, planets, and other celestial bodies - and artificial constructs. Though advanced ships are typically undetectable by this method, it is more than capable of picking up less advanced - or damaged - starships.

The infrared spectrometer can be used to identify ships and weapons that emit infrared radiation.

- Type: Unidirectional, Active Scanning
- Range: 2.5 LY

Distortion and Subspace Sensors

Distortion Sensors

A sensor designed to detect the distortions of space and subspace caused by [CDD](#), [CFS](#), and subspace-encased or distortion based weapons used by many factions. As the range is ultimately rather limited, this is more useful for tracking subspace-encased weapons and CFS-cloaked vessels in tactical ranges than anything.

- Type: Omnidirectional, Active Scanning
- Range: 0.7 LY

Subspace Mass Sensors

These sensors detect mass in subspace (or hyperspace) and its passage through these domains. It is

extremely difficult to hide mass from these sensors while traveling through subspace or hyperspace.

- Type: Omnidirectional, Active Scanning
- Range: 20 LY

Aether Sensors

Detects the use of transdimensional quantum potential energy (what Elysians call Generator and everyone else refers to as [Aether](#)). These sensors both monitor the local dimensional membranes for the disruptions inherent to tapping aether, and observe the distortions of space-time created by aether-induced disruptions.

- Type: Omnidirectional, Active Scanning
- Range: 10 LY

Neutrino Sensors

This sensor detects neutrinos emitted from such things as stellar bodies, certain starship systems, and nuclear reactions. In short ranges, this can be used to detect certain cloaked vessels and weapons fire, over long ranges it is useful for observing stellar phenomenon.

- Type: Unidirectional, Passive Scanning
- Range: 5 AU (tactical), 1 LY (observational)

Quark/Gluon Density Sensor

This scanner measures the density of quarks and gluons in space. In short range they are highly useful for tracking bodies and determining their precise material makeup by comparing the density to known materials and alloys (and etc.) in the ship's memory. Useful for discerning potential weak points in enemy vessels and installations, and for research purposes.

- Type: Unidirectional, Passive Scanning
- Range: 0.5 LY

Interferometer

Interferometers scan multiple bands for tiny discrepancies, allowing the discovery and study of very subtle spatial distortions. Useful for detecting cloaked vessels.

- Type: Unidirectional, Passive Scanning
- Range: 1 LY

Other Sensors

The CSA package also includes spin polarimeters (0.5 LY range), wide-band imaging arrays (>1 LY range), and a long range telescope (50 LY range). These are unlikely to affect game mechanics in any major way, existing solely for research and observation purposes.

- Type: Unidirectional, Active or Passive Scanning
- Range: Varies.

OOO Notes

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