



AEROSYSTEMS COURSE ROYAL INSTITUTE OF NAVIGATION TROPHY

The Trophy is awarded annually to the top student in guidance subjects on the RAF Aerosystems Course, held at the Air Warfare School, RAF College, Cranwell.

The Trophy itself is an astro-compass beautifully mounted on a turned wood base and covered by a glass dome. It is on permanent display at the RAF College.

The astro-compass was used in aircraft fitted with astrodomes. A hand-held bubble sextant would be suspended from the top of the astrodome to measure the angular height of a body (star, planet, Sun, Moon) for the navigator to obtain an astro position-line. But there was no facility to obtain the horizontal bearing of the body.

Hence the astro-compass was introduced, fixed to a removable bar attached across the base of the astrodome. By entering the aircraft's latitude and the astro body's local hour angle and altitude, it was possible to align the body - either by direct sighting or adjusting a Sun-generated shadow - to determine the aircraft heading to around one degree. This was vital for checking aircraft heading, especially in high latitude and polar flying.



The astro-compass was discarded on the introduction of periscopic sextants, which were solidly mounted to airframes and could display aircraft heading direct. But the astro-compass was still used into the mid-1970s in unpressurised aircraft.



The Trophy was constructed by a friend of a handful of members, Neil Grant, who made beautiful woodwork pieces as a hobby; he also made the attractive frame that houses the Institute's Royal Charter, displayed in Kensington Gore. Very Sadly, Neil died in February 2017; these pieces are a fitting lasting tribute to his wonderful craftsmanship.