

# **Application of periscope-polarizer combination for window shopping around sun**

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## **Abstract**

The author attempts to design a space structure using the evident fact about gamma rays and mirrors and thus combines periscope and polarizers in a certain configuration to be used by future visitors of sun, around sun and possibly stars.

## **Keywords**

Periscope, Polarizer, Space structure, Star-gazing, Gamma Ray.

## **Introduction**

Johannes Hevelius described plemoscope in 1647 in his work Selenographia. Periscopes have been used in world wars to the extent that US National Defence research committee ran field comparison tests two centuries later in November-December of 1947 on stereoscopic and coincidence rangefinders. [1] Erasmus Bartholin around 1669 noticed double image generation from crystals (splitting). In 1808, Etienne Louis Malus, a french mathematician observed that images made from reflected light would sometimes disappear and concluded that this property is not dependent on crystals but light itself. And in 1812, Sir David Brewster described the features of polarized light. [2]

Combining these two technologies, the author has dreamed like others about an evident design that could allow observers to “see” the Sun, up-close, with naked eyes.

## Design

The design have been illustrated in Figure 1.

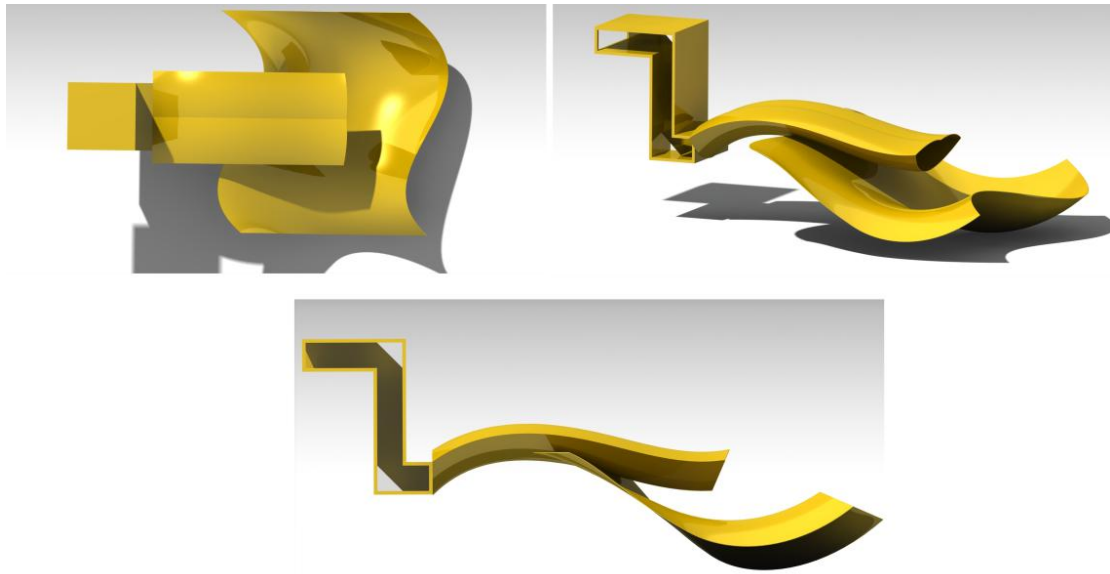


Figure 1

From the left top, the top view have been depicted, top right has a 3d view and bottom panel has the right side view. In the last view it can be seen that due to the phenomenon of gamma, X-ray and UV wavelengths passing through the atoms of mirror the periscope design would allow these to never reach the observer in dense/magnetic protection. In order to produce mirrors that would reflect these electromagnetic wavelengths, specific innovations have been made [3] and/or grazing incidence have been used. [4] Furthermore, the intensity of Sun rays can be lowered by using two polarizers on the window joining the structure. It should be noted that no other polarizers should be allowed near the polarizers as even a tiny percentage of a star's rays can destroy and/or endanger observers, as in simplest terms, after being polarized once the rays would be oriented one way and then the other which blocks "ALL" rays, while a third polarizers would allow half the rays after first polarization to be polarized again in certain direction and thus resulting in less blockage than only two.

Note: The wings are necessity to reduce thermal expansion and are artistic in these illustrations.

## References

- [1] "Field Comparison of Instrument Types", in: Rangefinders and Tracking, Summary Technical report of NDRC, Division 7 (Fire Control), volume 2, p17-18. This volume is a US Government report dating from 1947 and is in the Public Domain.
- [2] <https://urth.co/magazine/polarisation-history>
- [3] G. Pareschi, P. Attinà, V. Cotroneo, R. Millul, G. Sironi, D. Spiga, L. Lessio, G. Valsecchi, Robert Banham, M. Redaelli, and Giancarlo Parodi  
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