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S-MODULE OVERVIEW

Kirby Urner was first to point out the S Module in the embedded matrix of this study some months ago.

The S Module simply identifies and gives form to that space between an icosahedron fitted inside an octahedron and the vertex of the octahedron. Two S Modules and two mirrored S Modules are needed for each vertex of the octahedron.

There is a need to look at these four modules as a packet; an S Module packet. This S Module packet penetrates the pentagonal dodecahedron edge when two pentagonal dodecahedrons merge together. These overlapped “tents” form a “pillow” between the two dodecahedrons. The S Module packets penetrate this pillow with their vertices “kissing” in the exact center of the pillow.

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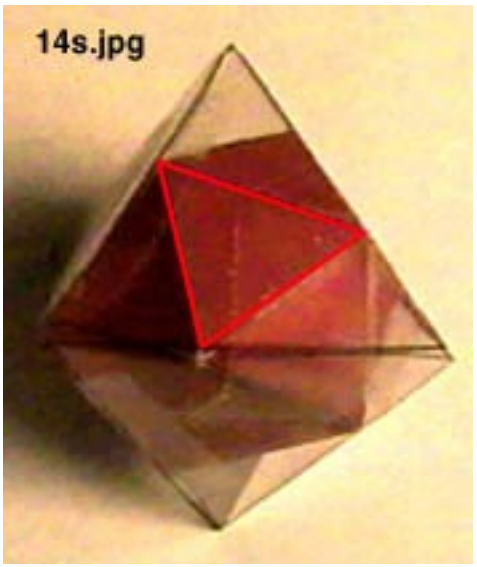
RE: Synergetics, 988.00 Icosahedron and Octahedron S Quanta Module.

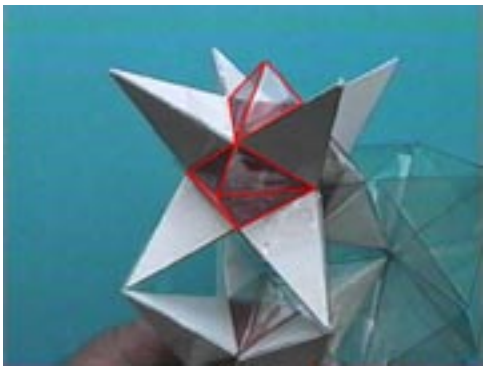
988.100 “The icosahedron positioned in the octahedron describes the S Quanta Modules”.

Fig. 988.12 shows the icosahedron inscribed within an octahedron. Note that Fuller’s example uses an icosahedron inscribed inside an octahedron that is in the center of a 4-frequency tetrahedron. This paper requires that the octahedron be in the scale of a 2-frequency tetrahedron. This is the same size octahedron that is in the core of the stella octangula (duotet cube). It’s important to emphasize the importance of keeping a basic scale in this study so the embedding of different symmetry can occur.



The S Module is formed as a portion of each of the vertices of an octahedron. When an icosahedron is placed inside an octahedron, eight of the icosahedron faces fit against each face of the octahedron at a skewed angle. This angle is the result of both the edge of the internal icosahedron and where the external face plane of an interpenetrating pentagonal dodecahedron (not shown) meets the face of the octahedron. The triangles outside the equilateral central triangle of the icosahedron are not right angles.

At each vertex of this octahedron, emerging between the spires of the concave dodecahedron, is an S Module packet, looking somewhat like a canopy used over the cockpit of an aircraft. This packet has a base consisting of two faces of the icosahedron and the sides of four Slice Module bases. The S Module packet has six sides and if seen removed would look something like a thorn removed from a plant. The underside is concave and the outer “canopy” is convex.



The S Module packet is at the base of four spires of the concave dodecahedron and the red outlines show two canopies . Each one contacts another at right angles. Four canopies are positioned in one direction and four in the other, creating a horizontal and vertical arrangement.

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The Journey

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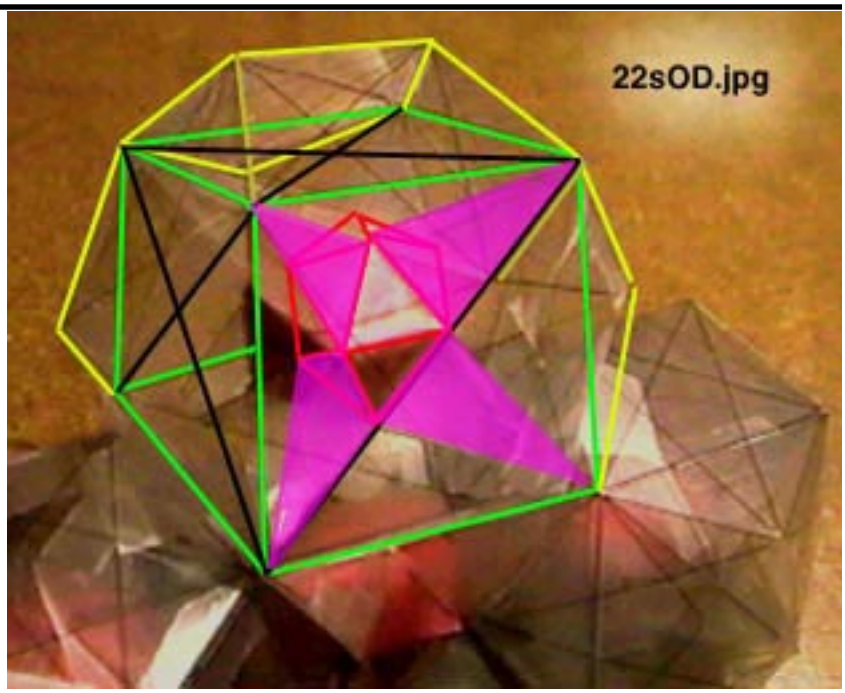
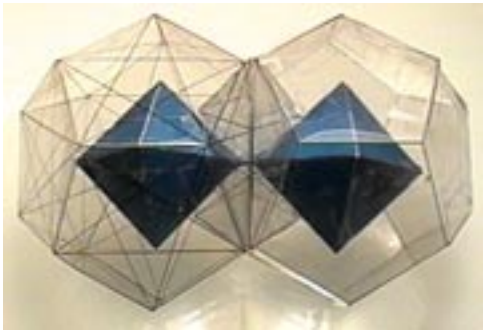


The overdrawing shows the relative size of the red icosahedron in this hierarchy of forms. The two red triangles (icosahedron faces) at the base of the magenta triangles form the base for the S Module packet that contains four S Modules.

The red S Module packet, is shown in its horizontal position. Each quadrant of the red shape contains one S Module. The base of the S Module is 1/2 of a triangular face of the icosahedron and another face is formed by the base of a “Slice Module”. The other two faces are formed by sending vertical and horizontal planes from the vertex of the octahedron towards its center.

The S Module packets from two octahedrons extend into an area of overlap between two interpenetrated pentagonal dodecahedrons. The “pillow” that is formed between these merged dodecahedra fits perfectly on the bottom edges of the S Module packet and seals it to the icosahedron. If air was blown into the pillow the S Module packet would seal the air from flowing into the octahedron and the icosahedron.



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Summary

New terms were added in this paper to better describe the role of the S Module in the embedding process. The “pillow” formed by the merging of two pentagonal dodecahedrons is a key feature as well as grouping S Modules into “packets”. Fuller understood how the icosahedron embedded in the octahedron. This study brings to light the role of the pentagonal dodecahedron as an interpenetrating form reinforcing the relationships seen between the S Module, octahedron, and the icosahedron.

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