

510.00 Star Events

510.01 A star is an exquisitely concentrated coordination of events that your optical tuning facilities are unable to resolve differentially into separately identifiable events. We may call a star a point. Playing Euler's game, "stars," or "points," are "crossings," or "fixes" as navigators would say it. As so considered, a "star-point-crossing" does not have an outsideness and an insideness. It is the point of superimposed crossing of trajectories or of their interferences. A point fix is a potential embryo consideration, a potential thought, a potential system.

510.02 Thinking is the consideration of different experiences and of inherently separate sets of events, and trying to find out what their relatedness is. Each one is a star. How many stars does it take to develop a geometry of outwardness and inwardness? What is the minimum number of stars needed to divide the Universe into outwardness and inwardness? I find it takes a minimum of four; you can't do it with three. Four very clearly has an outsideness and an insideness. This is what we call the tetrahedron, which has these four stars and six sets of interrelatedness. This comes in very interestingly in mathematics with the generalization that you don't have to worry too much about the shape, but the four stars are the minimum we can have for a thought. If I can at first discover only three stars in a thought challenge, there must be at least a fourth star lurking somewhere in the critical neighborhood. In fact, I discover that the total number of stars that could possibly be related is always subdivisible by four. The mathematics shows this up very clearly as complexes of tetrahedra. Tetrahedron becomes the minimum thinkable set, the minimum reconsiderable set, and it turns out to be the fundamental increment out of which all thoughts are constructed.



510.03 The minimum set that may form a system to divide Universe into macro- and micro-cosmos is a set of four items of consideration. Four nonsimultaneously bursting rockets in a unitarily considerable set of overlapping visibility durations.

[Fig. 510.03](#)

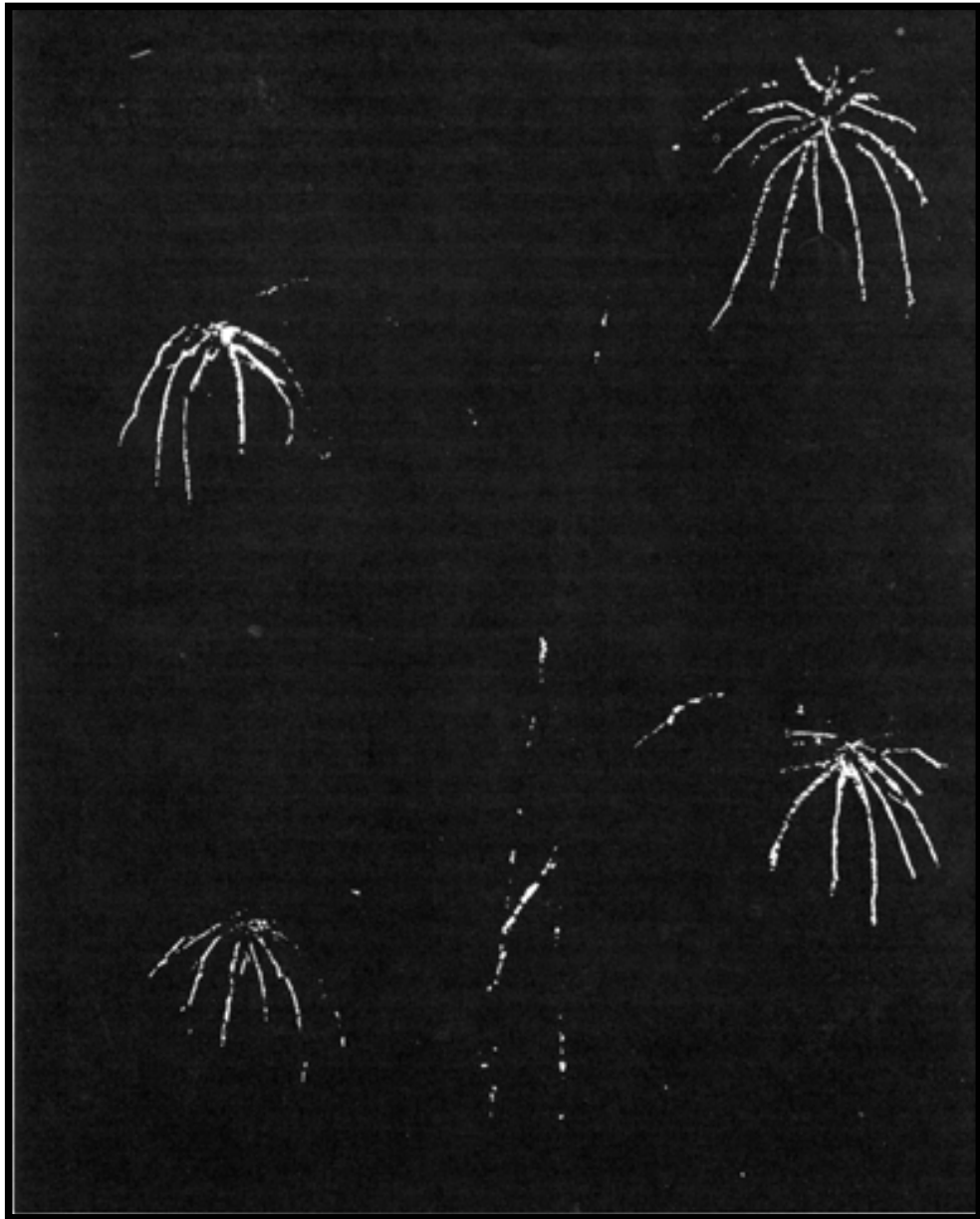


Fig. 510.03 Four Rocket Bursts.

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510.04 The stars of the four rocket bursts constitute the four vertexes of a tetrahedron—the fundamental quantum of Universe's structuring. There is a tetrahedral structuring *interrelationship* between (a) *the day before yesterday*, (b) *yesterday*, (c) *today*, and (d) *tomorrow*. Though we speak of them as "the four balls in the air" —maintained there successively by a juggler using five balls to do his trick—they are not the same balls, and the four are never in the same positions; nonetheless, there are always and only six fundamental interrelationships between "the four balls in the air" —i.e., ab, ac, ad, bc, bd, and cd, although a, b, c, and d are nonsimultaneous events. Universe structures most frequently consist of the physical interrelationship of nonsimultaneous events.

510.05 A star is the focal point of an as yet undifferentiated concentration of events, ergo, considerable or constellar patterning: an exploratory grouping of stars or complex-idea entities that seem to man's limited tunability to stand out together. The word *consideration* comes from *con*, together, and *sidus*, the Latin "star." When we have found all the relationships between the number of items of our consideration, we have what we speak of as "understanding." When we understand, we have all the fundamental connections between the *star events* of our consideration. They then become a constellation. They *stand clearly together*.

510.06 When n stands for the number of stars or items of consideration, the number of connections necessary to understanding is always

$$\frac{n^2 - n}{2}$$

510.07 Four is the minimum number of stars having an inherent arrangement of withoutness and withinness. The minimum conceptually considerable, generalized-experiences-set affording macro-micro separation of Universe is a set of four local-event foci. Between the four stars that form the vertexes of the tetrahedron, there are six edges that constitute all the possible relationships between those four stars. The four stars have an inherent sixness of interrelationship. The four-foci, six-relationship set is definable as the tetrahedron. This minimum fourness of relevant frequency—ergo, thinkable—"stars" coincides with quantum mechanics' requirement of four unique quanta numbers per each uniquely considerable "particle."

510.08 The regenerative patterns of structural events may be described as constellar because their component events interinterfere tensively in high-frequency, dynamic, self-regenerative patternings which only superficially seem to stand together as "static" structures. Star groupings "fly" in celestial formation, though seeming to hang motionless in the celestial theater. Any event patternings that become locally regenerative are constellar patterns. They are momentarily conceptual.

510.09 Until the present age, people thought that all of their faculties were simultaneously and instantly coordinate and operating at equal velocities. Einstein showed that neither *simultaneous* nor *instant* are valid, i.e., experimentally demonstrable. Observe that when we send up four rockets one-half second apart, their afterimages are approximately simultaneous. So we say that we see four rockets "at the same time." The illusion of simultaneity is one of the most important illusions for us to consider. Musicians may be able to comprehend nonsimultaneity better than do others. Einstein emphasized the importance of attempted spontaneous comprehension of the nonsimultaneity of all the events of Universe—a concept akin to our discovery that in our Universe, none of the lines can ever go simultaneously through the same points (See Sec. [517](#) et seq.). What Einstein is telling us is that there is no conceptual validity to the notion that everything in Universe is actually in simultaneous static array.

510.10 All words in the dictionary do not make one sentence; all the words cannot be simultaneously *considered*, yet each of the words is valid as a tool of communication; and some words combine in a structure of meaning. All the words are memoranda of all of humanity's attempts to communicate to self or to others their understanding of the unique evolvement of their separately viewed experiences. The dictionary is the inventory of unique aspects of the totally composited experiences known as Universe.

511.00 **Energy Event**

511.01 A single event is integrally complex. As angles are conceptual, independent of size, events are conceptual, independent of frequency of occurrence. An "original" or "prime" energy event is conceptual. An energy event is inherently complex. It is a nuclear component, but it is not the nucleus. Nuclei—complexedly composed of prime or original energy events—are themselves "prime" and "original," originality being inherently complex integrals. Energy transactions occur between nuclei as an extramural complex of events—as a "chemical compound."

511.02 All energy-event experimentation discloses omnioptimally economic, behavioral patterning of physical events. Every physical event in nonsimultaneous scenario Universe is characterized by three multidimensionally interlinked vectors that interact precessionally, i.e., at angles other than 180 degrees to one another, as in the multidimensional, helically zig-zagging pattern of lightning.

511.03 There are six positive and six negative degrees of fundamental transformation freedoms, which provide 12 alternate ways in which nature can behave most economically upon each and every energy-event occurrence. You have six vectors or none for every energy event.

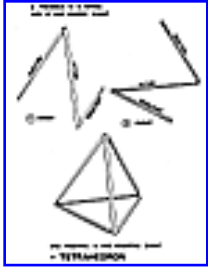
511.04 One set of three-vector groups corresponds to the proton (with its electron and anti-neutrino), and the other set of three-vector groups corresponds to the neutron (with its positron and neutrino). Each of these three vector teams is identified by nuclear physics as

one-half Planck's constant; or

one-half spin; or

one-half quantum.

When we bring together these two sets of three vectors each, they integrate as six vectors and coincidentally also make one tetrahedron (of six vector edges). The tetrahedron is the veritably conceptualizable unit of one energy quantum.



[Fig. 511.10](#)

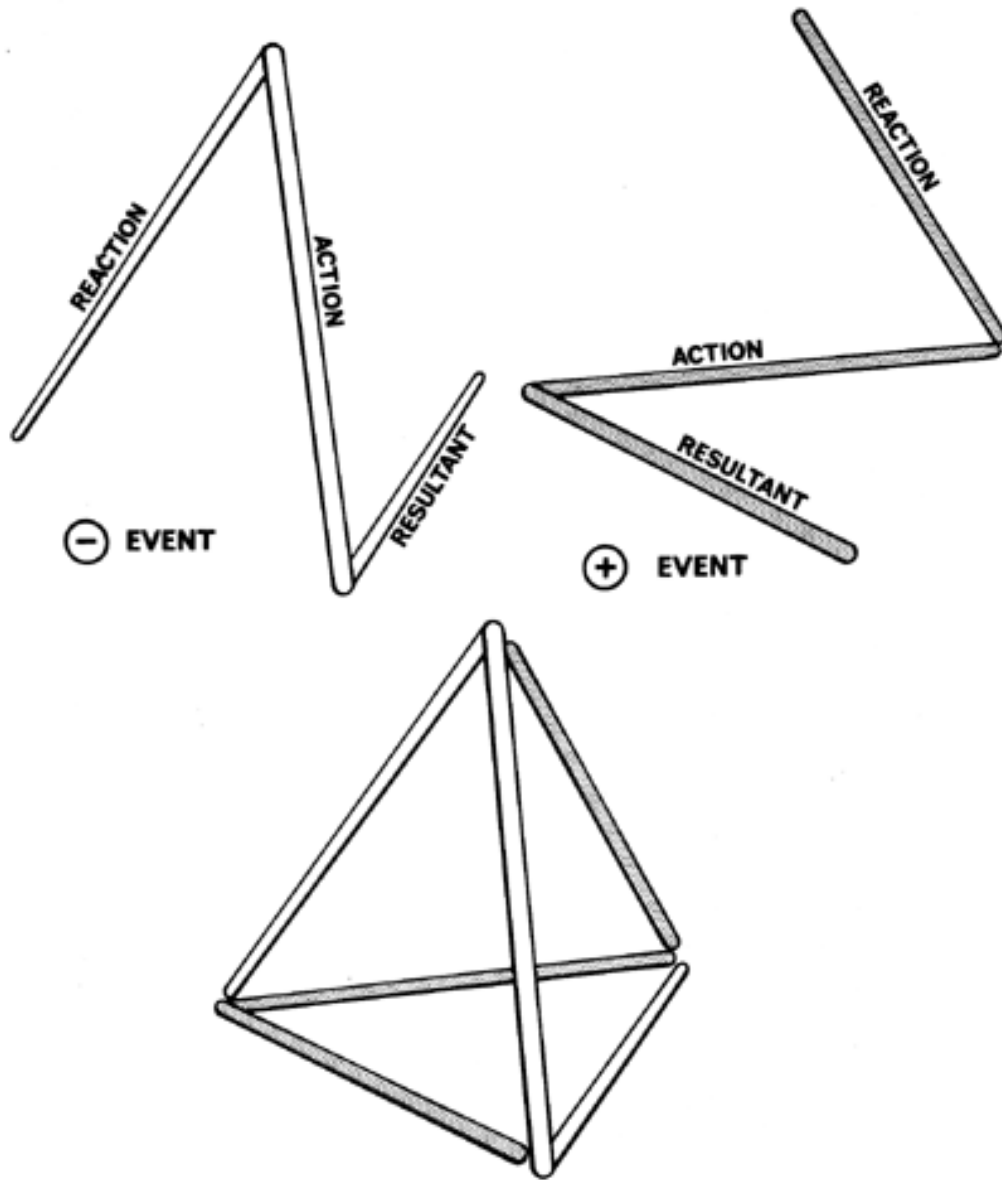
511.10 The open-ended tripartite spiral can be considered as one energy event consisting of an action, reaction, and resultant. Two such tripartite-vectored "spirals," one negative and one positive, combine to form the tetrahedron. (See illustration [108.01](#).) The tripartite vector set looks like an "erected cobra" Z, that is, with two of its interlinked vector lines on the ground and one erected. One erected Z cobra erects its third vector member clockwise, and the other Z cobra erects its third vector in a counter-clockwise direction in respect to its base. (See [Sec.620](#).)

511.11 We find that the triangular Z cobra, is not operating in a plane because there is no such thing as a plane. Therefore, one of the legs sticks up a bit. We have a positive Z cobra and a negative Z cobra, and one cannot nest in the other. They will never be congruent with one another, but they can complement one another to become the tetrahedron. An event is a triangle. A triangle is an event. Two of them together make the tetrahedron.

511.12 Each of the three-vector, action, reaction, and resultant, minimum event Z cobras has two open ends and two internal angles. The two Z cobras have together four ends and four internal angles. We will call the open ends *male* and the internal angles *female*. We can marry the two Z cobra, half quantum events in an always consistent, orderly manner, by always having a male end interconnected with an internal female angle. When all four such marriage ceremonies have been consummated, we have produced one tetrahedron, i.e., one quantum, i.e., one prime minimum structural system of Universe. When the end of one energy action comes over the middle of another energy vector, there is a precessional effect, a tensional effect. One energy event gets angularly precessed, the next energy event goes by the center of another mass, and each one of them interaffects the other. It is a basketry interweaving, where each one precesses the other angularly so that they hold together very much as a cotton ball.

511.13 The energy event of an action, a reaction, and a resultant is inherently precessional.

**A TRIANGLE IS A SPIRAL
AND IS ONE ENERGY EVENT**



**ONE POSITIVE + ONE NEGATIVE EVENT
= TETRAHEDRON**

Fig. 511.10 Two Triangular Energy Events Make Tetrahedron: The open-ended triangular spiral can be considered one "energy event" consisting of an action, reaction and resultant. Two such events (one positive and one negative) combine to form the tetrahedron.



[Fig. 511.20](#)

511.20 An energy event is illustrated by a diagram of a man jumping from one boat to another. At the top of the picture, a man standing in one boat jumps. He does not glide horizontally: he jumps.¹ That is, he goes outwardly from the center of Earth, and that is a vector. That is an energy action in itself. He jumps. He is the action. The action was not just horizontal, it was also vertical. It was mildly vertical in that he went outwardly. As he jumps, the boat goes into reaction and shoots off the other way. A moment later, he lands, and the second boat moves in a complex that is both horizontal and vertical. There is a reaction and a result, so there really is a four-foldedness going on. It may appear as threefolded because the man does not jump very high. We should consider it as a tetrahedron of very low altitude.

(Footnote 1: In this way, we begin to discover that force diagrams in engineering result from over-simplification.

511.21 At the outset, the boats are more or less parallel to one another. As the man jumps from the stern of the boat, it turns and whirls around, so that the reaction is following the resultant. They are not going in opposite directions. The reaction and resultant run into each other. Notice that it begins to look like a triangle, but with a vertical component, so it ends up as our friend, tetrahedron.

511.22 Engineers have been proud of pointing out that the difference between engineers and lay society is that engineers know that every action has its reaction and that lay society thinks only of the actions. Before the speed of light was measured, light seemed, to all humanity, to be instantaneous. Since we now know experientially that neither light nor any other phenomenon is instantaneous, we may conclude that an action and the vectors that it creates are neither simultaneously occurring nor instantaneous. Because vectors have discrete length, whose dimension represents the energy mass multiplied by its velocity, every action vector has two terminals—a "beginning" and an "ending" at the end of its noninstantaneous action. The beginnings and the endings are nonsimultaneously occurrent. Therefore, the "ending" terminal of an action's vector occurs later than its "beginning." Therefore, every action must have a reaction vector at its "beginning" terminal and a resultant vector at its "ending" terminal. The reaction vectors and the resultant vectors are never angled at 180 degrees to the action vectors. They are always angled precessionally at other than 180 degrees.

512.00 **Locality**

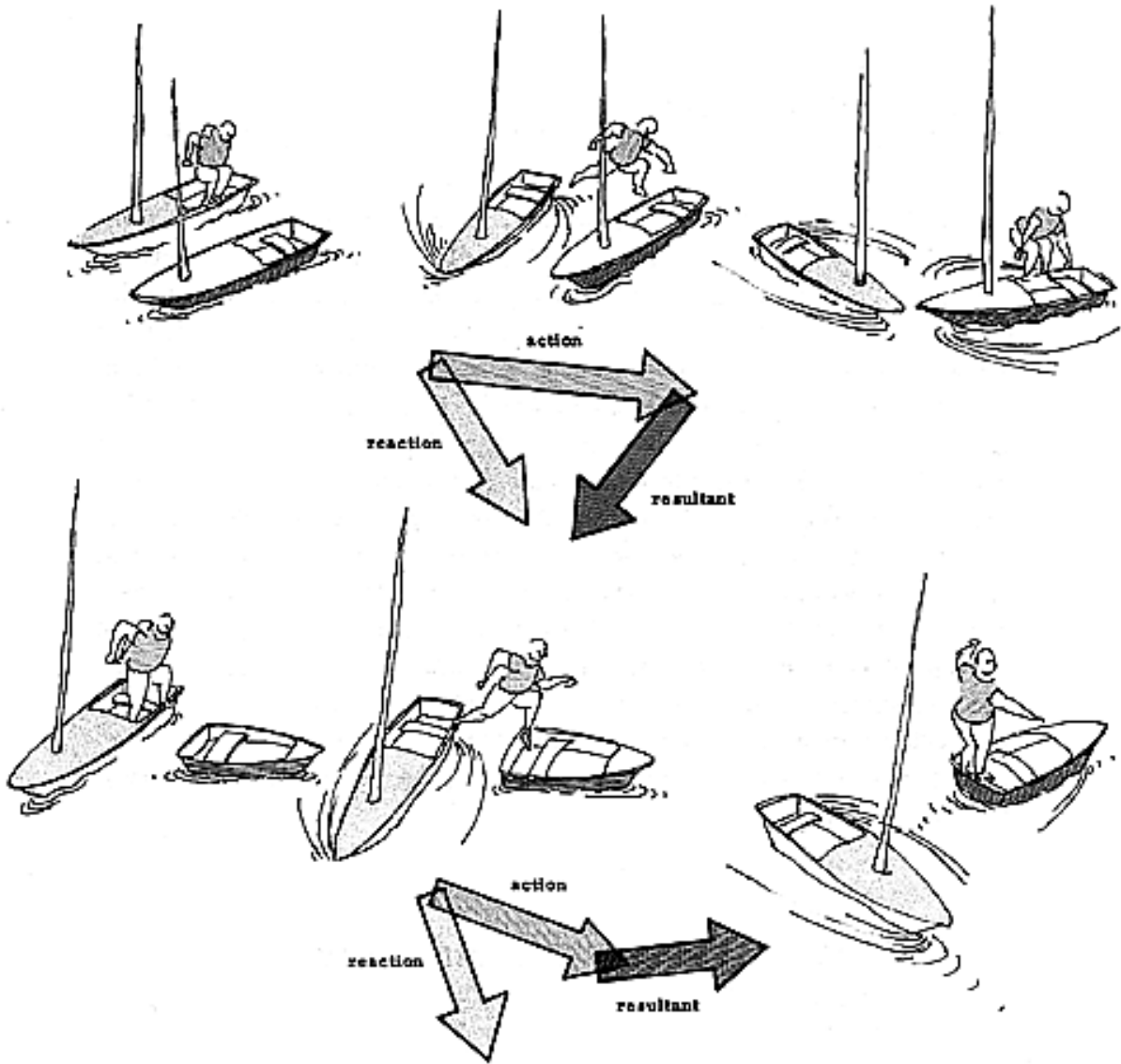


Fig. 511.20 One Energy Event: Action, Reaction, and Resultant: One energy as demonstrated by the man jumping from the boat. His action demonstrates the action, reaction, and resultant of the open-ended triangular spiral.

512.01 Mechanically and chemically, a steerable rocket embraces a complex of internal and external events. Both airplanes and steerable rockets are complexes of internal and external energy-event transactions and omni-interacting, resultant "motions" in Universe transcendental to Earth motions, where the observer-articulator is extraterrestrially positioned. Since the Earth is moving as a dependent motion-complex in respect to the Sun's and other planets' motions, and since the Sun is engaged in a plurality of internal and external motions in respect to the galactic system, and since the galactic system is a complex of motions in respect to other galaxies and supergalaxies, and so on, and since the whole set of motion events are nonsimultaneous and of uniquely variant durations, and since the intereffects of the events vary vastly in respect to eons of time, it is obvious that any thinkably meaningful conceptual coordination of event interrelationships in the meager lifetime limits of humans is inherently limited to a relatively local set within Universe and within a time sense, and the relationships may be measured only in respect to the angle and frequency magnitude characteristics of any one subsystem of the totality.

513.00 **Vectorial Orientation and Observation**

513.01 The angles of orientation and the dimensional fixes of vectorial energy-event manifestations are always conceptually oriented and positioned in respect to the optionally selected axis of conceptual observation.

513.02 Fixes consist of both angular and dimensional observations.

513.03 To be *experiential*, we must have an observer and the observed.

513.04 To be *experimental*, we must have the *articulator*, the *articulated*, and the *observer*.

513.05 The vectorial angulation of both the experientially observed and the experimentally articulated is always referential to the axis of conceptual observation of the observer or the articulator, respectively. These always and only coexisting functions of experience and experiments embrace the fundamental parameters of operational science.

513.06 "My life" is the progressive harvestings of the information unpredictably accruing in the attempt to be both adequate and accurate. The harvest is stored in the brain bank. Life consists of alternate observing and articulating interspersed with variable- recall rates of "retrieved observations" and variable rates of their reconsideration to the degrees of "understandability."

513.07 Resonantly propagated evolution oscillatingly induces tetrahedral quanta—both metaphysical and physical—formulated vectorially between four "star- event" phases

1. observation,
2. consideration,
3. understanding, and
4. articulation,

or

1. recall;
2. reconsideration;
3. understanding;
4. articulation.

513.08 **Articulation:** The articulations are ever reenacted, each time hoping to reduce the tolerance magnitude of residual inaccuracy of either observation or articulation.

514.00 **Axis of Reference**

514.01 The axis of reference is the axis of conceptual observation. The axis of observer reference frequently occurs spontaneously: as the line between the nose and the navel.

514.02 The direction of a vector is an angular one in respect to an omnidirectional coordinate system having a specific central point and a specific set of external points at specific angles and distances from one another and from the central point.

514.03 Our definition of an opening is that it is framed by trajectories. Every trajectory in a system has at least two crossings, but these crossings are as viewed, because the lines could be at different levels from other points of observation.

[Next Section: 515.00](#)

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