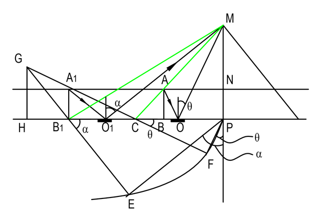
Space - Time - Diagram



Connect M to B_1. The angle $A_1O_1M = 2\alpha$
From point B_1 draw a line with an angle α from the line PB_1
From point P draw a line parallel to O_1M
This line will intersec the antiprojection of PB_1 at E.
B_1E is then the antiprojection of PB1 on MO_1.
Similarly, CF is the antiprojection of CP on MO.
As the A1 is lowered to B1, B1 approaches O1, α becomes zero, and we are looking directly at M from O1. At this time, the angle of projection above and below the plane PB1 is equal to the angle of projection above. In essence, PF and PE can be thought as having rotated when the platform on which P-B1 lies is raised to the level N-A1.
If we look from G, which is the point where FC and EB1 meet, M will have shrunk to P and we will not see anything. Conversely, if we looked from P on the curved surface PFE, PM would now have the height HG increasing as we project out and move along the curve.

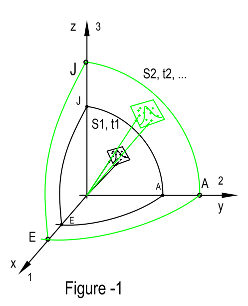
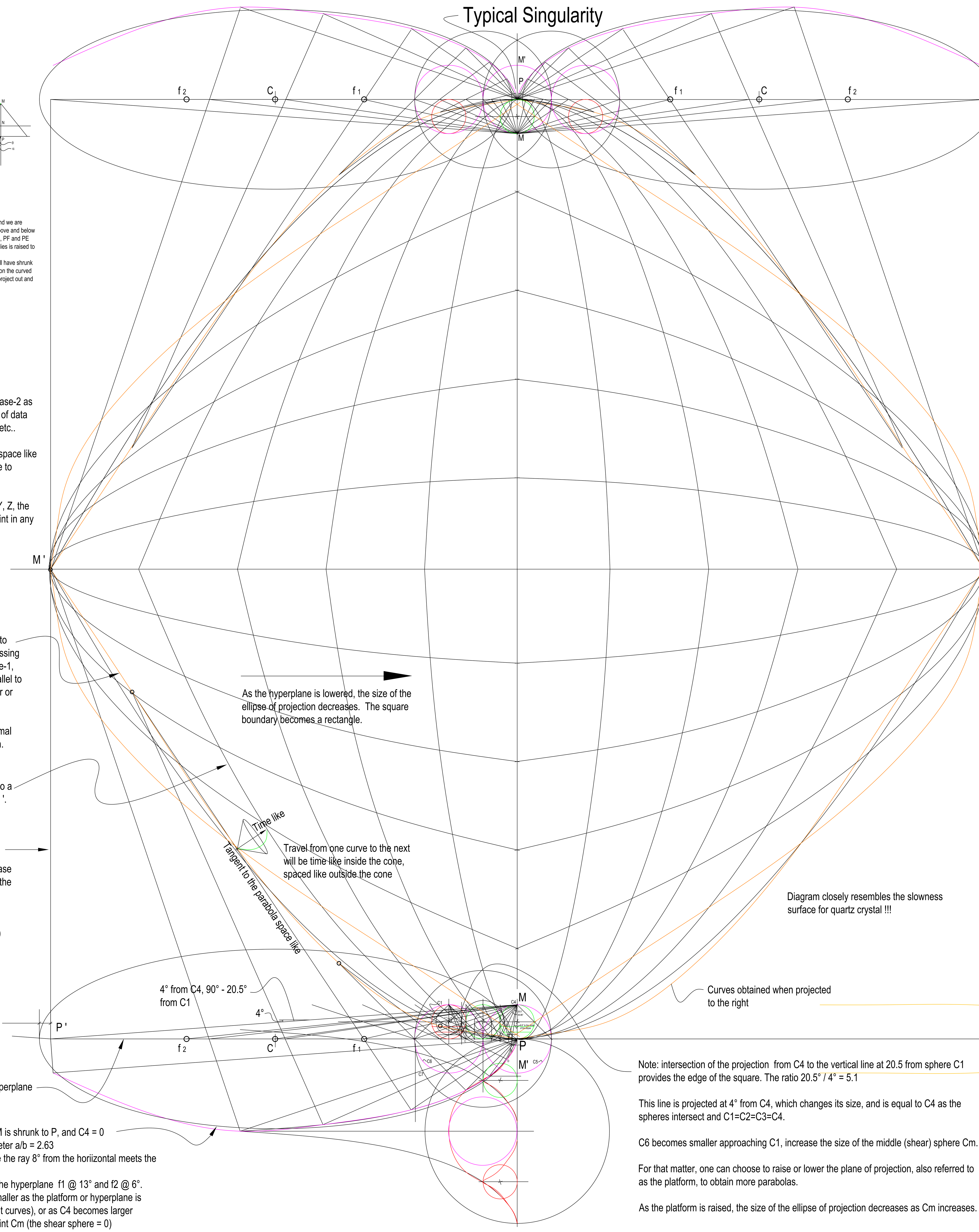


Figure -1

In figure-1, each vector from Case-1 and Case-2 as the spheres change sizes represents a set of data points on a flat plane on a sphere, S1, S2, etc..

If we travel on the flat plane that is termed space like and if we travel from plane to plane (sphere to sphere) that is termed time like.

For Case-1 the vectors will line up with X, Y, Z, the principal axis and for Case-2 they could point in any direction.



Each point on the curves could correspond to both Case-1 and Case-2, on hyperplane passing through P. If the point corresponds to Case-1, then we obtain the vectors, and planes parallel to the principal axis. Where there is zero shear or friction there can be no objects.

If Case-2, then each point represents a normal vector to the plane, pointing at any direction.

Hyperplane (platform) lowered to a point below P and so on up to M '.

Vertical ray of the inverse projection at 4° Approaching the speed of light. Observing from P down on the ellipse, MP would increase to M'P'. 13.7 fold increase (almost equal to the diameter of the ellipse of projection).

At 2° the curvature of the parabola is 201007' if C6 is taken as 192', and it is 1000 times more if C6 is taken as 1'.
At 3°, the curvature is 330 times the unit radius.

Extension passed the vertical limit is twice as large as the offset of the ellipse from the origin! When we project at 90°-8.82° degrees from C4

Platform / hyperplane at P

Ellipse of projection, where M is shrunk to P, and C4 = 0
Ratio of major to minor diameter a/b = 2.63
Center of the ellipse is where the ray 8° from the horiizontal meets the hyperplane.
Its foci where rays intersect the hyperplane f1 @ 13° and f2 @ 6°.
Also, the ellipse becomes smaller as the platform or hyperplane is raised, (giving us the different curves), or as C4 becomes larger approaching C6, at which point Cm (the shear sphere = 0)

Note: intersection of the projection from C4 to the vertical line at 20.5 from sphere C1 provides the edge of the square. The ratio 20.5° / 4° = 5.1

This line is projected at 4° from C4, which changes its size, and is equal to C4 as the spheres intersect and C1=C2=C3=C4.

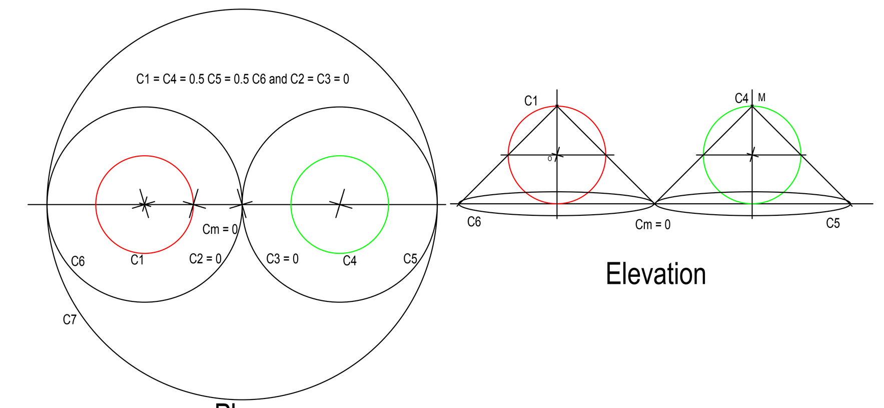
C6 becomes smaller approaching C1, increase the size of the middle (shear) sphere Cm.

For that matter, one can choose to raise or lower the plane of projection, also referred to as the platform, to obtain more parabolas.

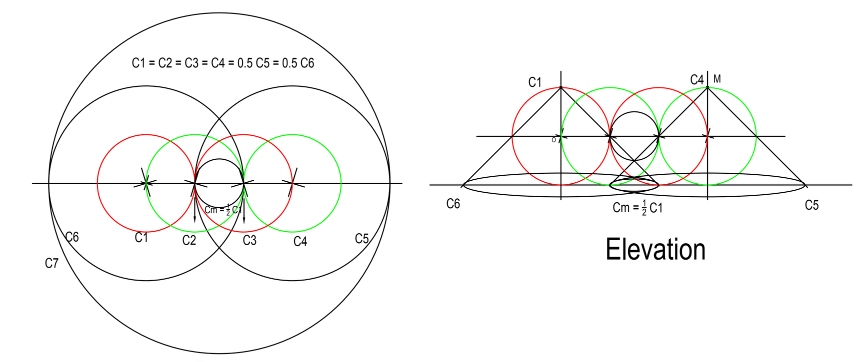
As the platform is raised, the size of the ellipse of projection decreases as Cm increases.

There are two interpretations to this diagram.
1. Circles C5 and C6 Remain Tangent in which case Cm, the shear sphere, is always zero and the curve is a curve of the principal plane.
2. Circles C5 and C6 intersect, in which case Cm keeps increasing.

Case 1: C5 and C6 keep increasing as we project out to 4°, Cm=0



Case 2: C5, C6 and Cm keeps increasing as we project out to 4°



How do we distinguish between Case-1 and 2?

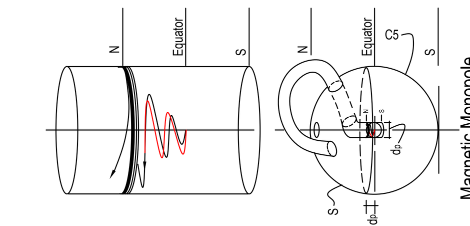
If we were driving a car there is always a blind spot where the vehicle behind us could or could not exist. If we turned the mirror we could potentially see the vehicle in what was the blind spot. Finding cars in blind spots with rotating mirrors could be a nice option on an automobile !!! A similar test could be performed to determine if we have empty space or a black hole.

Say in a region of space:

Case-3: We observe an object where there was none. This could be a new star. in this scenario, we go from Case-1 to Case-2.

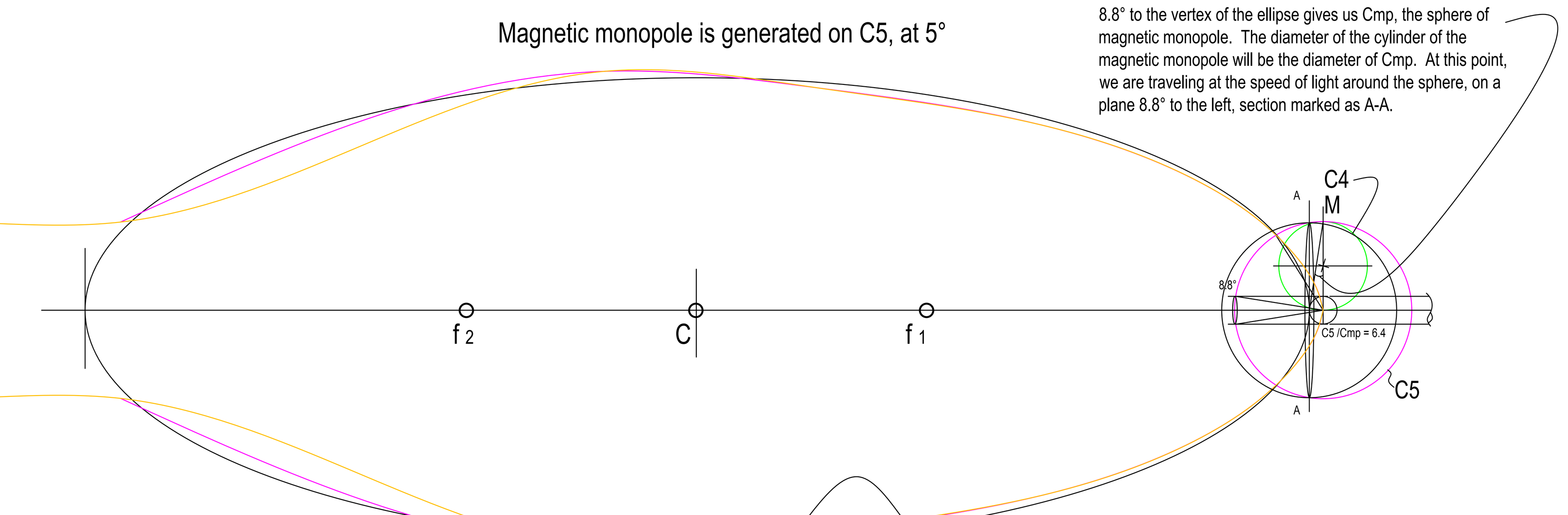
Case-4: We have observed an object which has disappeared. This could potentially be a black hole. In this scenario, we go from Case 2 to Case 1.

Up to now we are at speeds lower than but approaching the speed of light where Cm = 0. If we are to used these concepts at light speed, we have to assume that there is a magnetic monopole generated at the center of C5 (or C6), the singularity, giving us the ellipse of projection. This is how we go about applying the concept.



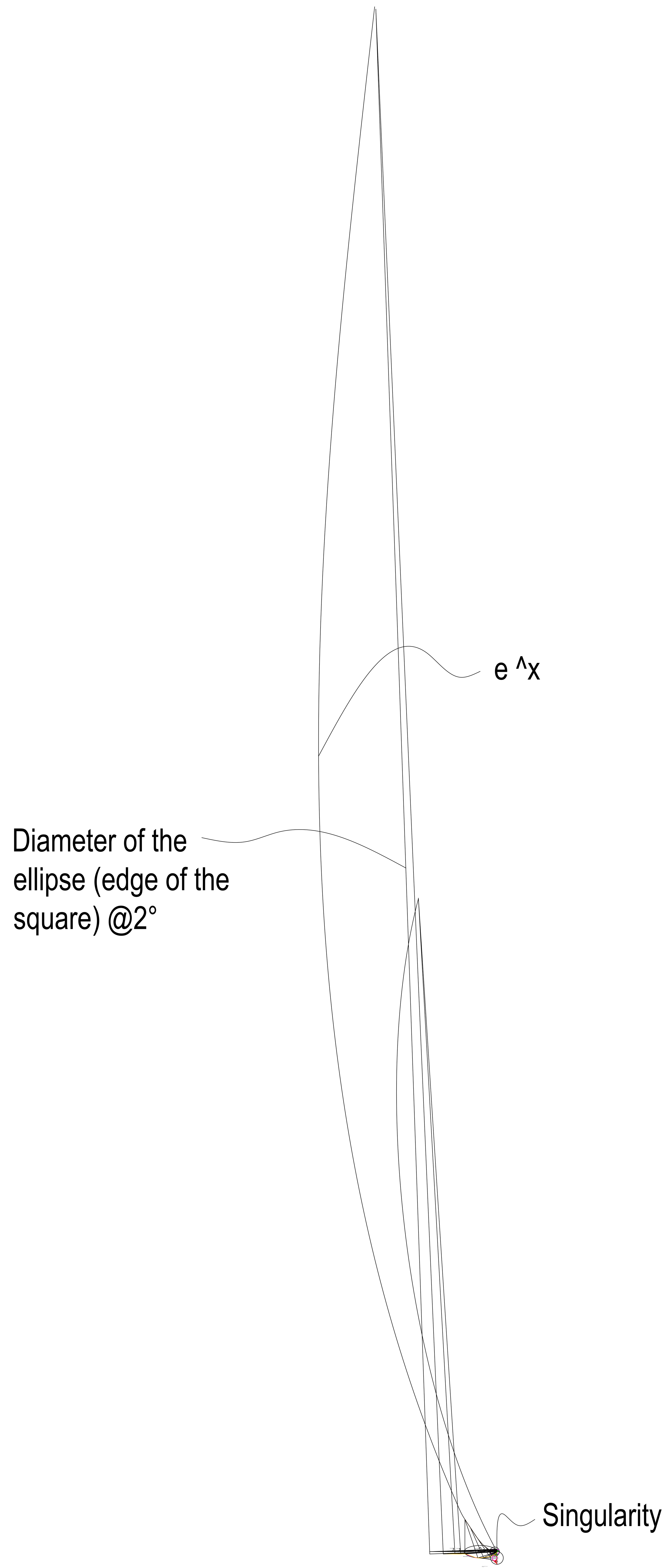
Magnetic monopole is generated on C5, at 5°

8.8° to the vertex of the ellipse gives us Cmp, the sphere of magnetic monopole. The diameter of the cylinder of the magnetic monopole will be the diameter of Cmp. At this point, we are traveling at the speed of light around the sphere, on a plane 8.8° to the left, section marked as A-A.



Ellipse of projection and its corresponding spline (shown in magenta and orange, passed the 4° mark)

Major axis of ellipse / Diameter of clinder Cmp = 22
Mach 22 at 4° !!!
At 3° - Mach 900
At 2° - Mach 2000


e ^x
Diameter of the
ellipse (edge of the
square) @2°
Singularity