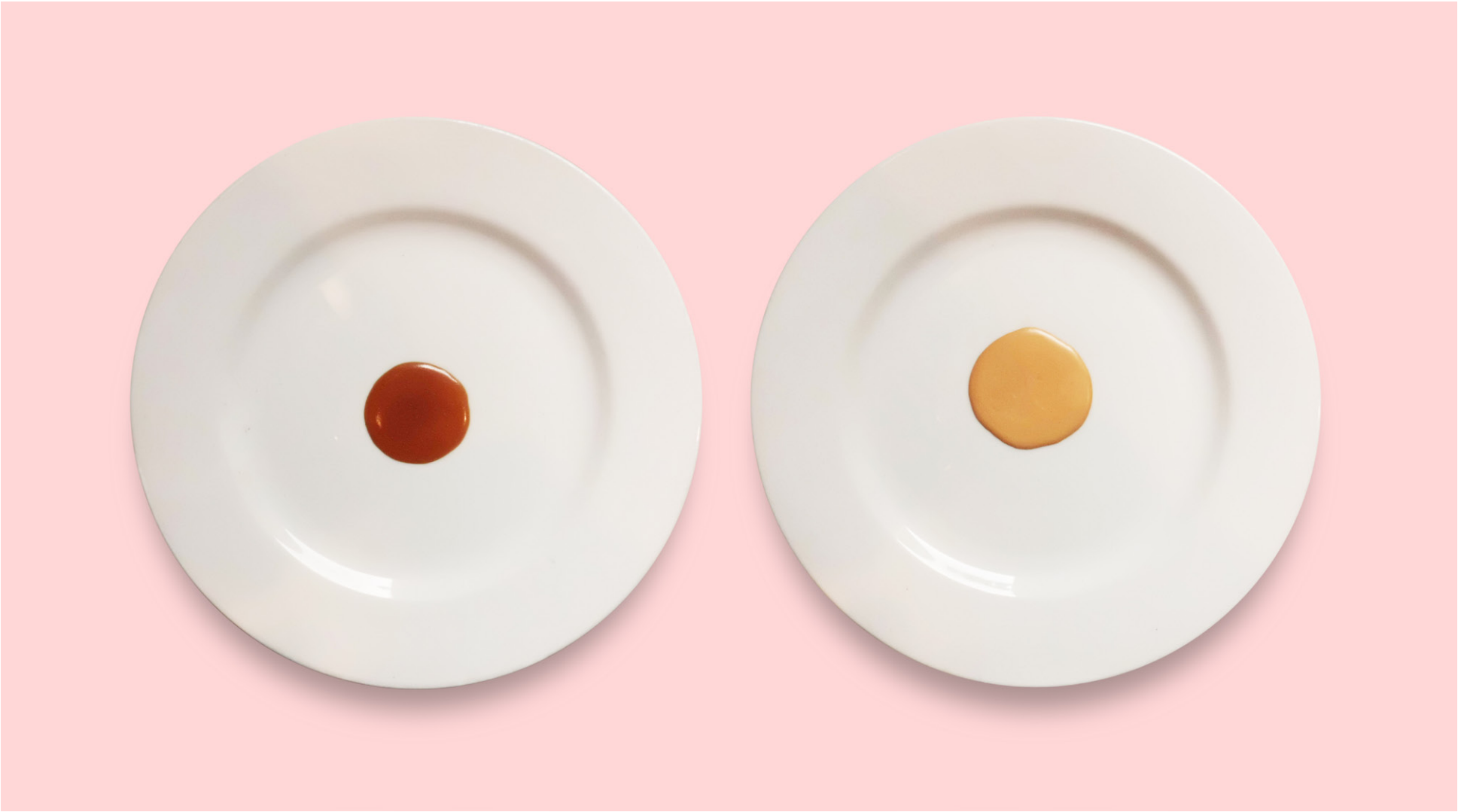
MISC. LOW ENERGY

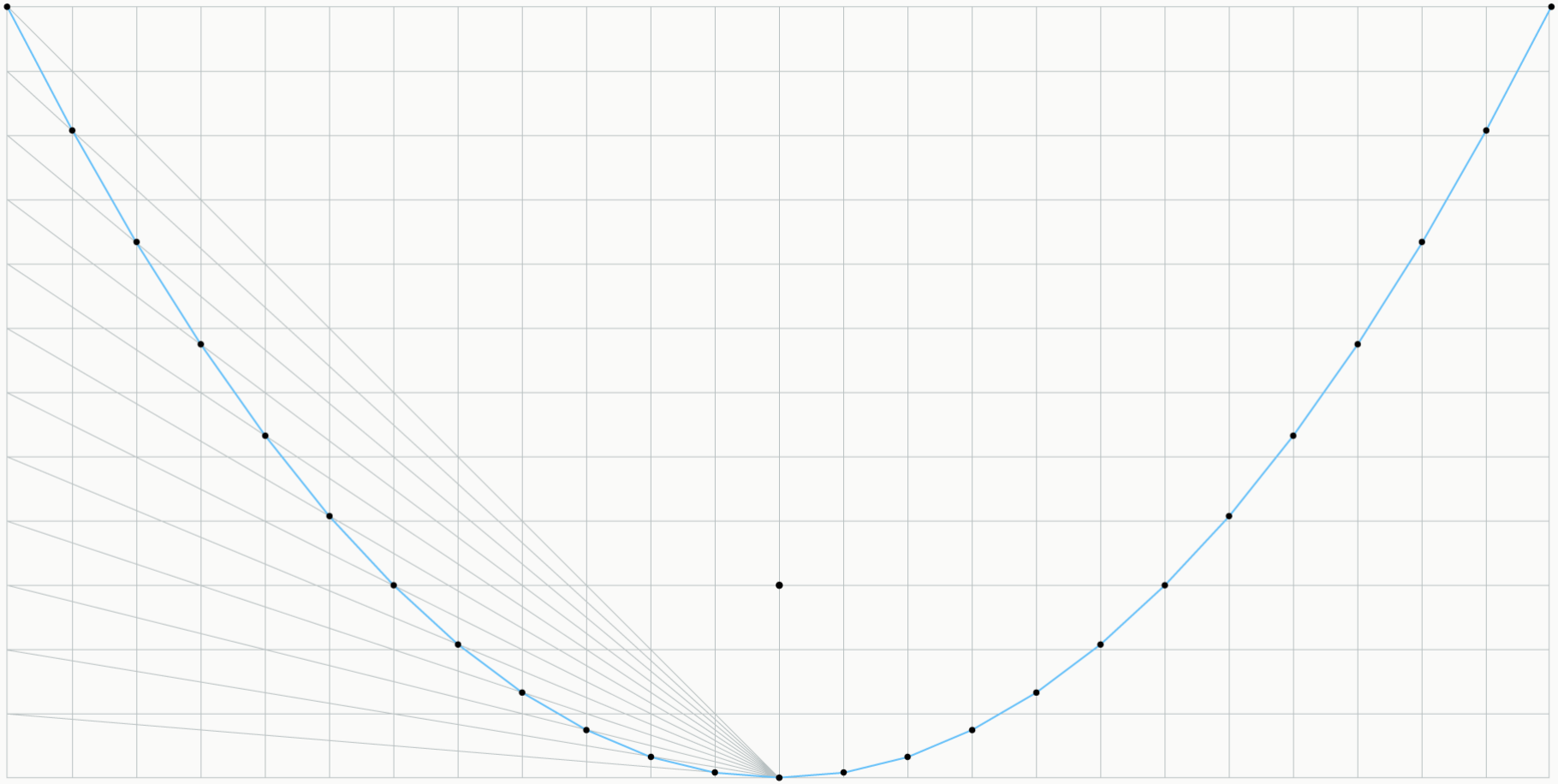
(replaces football, sixpacks, gasoline)

R S Wilson

light gravity parabola other



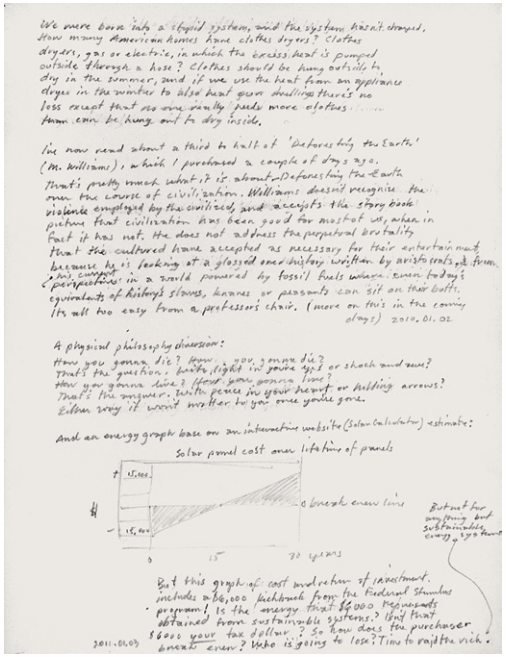
test rubbers, 2009



from *parabolas,*(classic geometric construction), 2011

tool, 2011

parabolic component for a functional model of a system, 2011



We were born into a stupid system, and the system hasn't changed. How many American homes have clothes dryers? Clothes dryers, gas or electric, in which the excess heat is pumped outside through a hose? Clothes should be hung outside to dry in the summer, and if we use the heat from an appliance dryer in the winter to also heat our dwellings there's no loss except that we unnecessarily pump more clothes than can be hung out to dry inside.

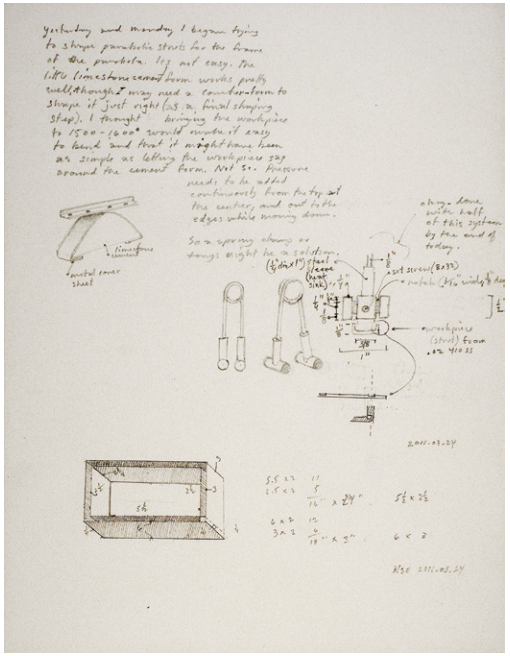
I've now read about a third to half of 'Before the Earth' (M. Williams), which I purchased a couple of days ago. That's pretty much what it is about - Before the Earth over the course of civilization. Williams doesn't recognize the violence employed by the civilized, and accepts the story book picture that civilization has been good for most of us, when in fact it has not. He does not address the perpetual brutality that the cultured have accepted as necessary for their entertainment because he is looking at a glossed over history written by aristocrats & their lackeys, & viewpoints in a world powered by fossil fuels where even today's equivalents of bishops slaves, knaves or peasants can sit on their butts, its all too easy from a professor's chair. (more on this in the coming days) 2010.01.02

A physical philosophy discussion:
How you gonna die? How you gonna die?
That's the question, baby, right in your eye or shock and awe?
How you gonna live? How you gonna love?
That's the answer. With peace in your heart or holding arrows?
Either way it won't matter to you once you're gone.

And an energy graph I made on an interactive website (Solar Calculator) estimate:

But this graph of cost and return of investment includes a $6,000 kickback from the Federal Stimulus program! Is the energy that $6000 represents obtained from sustainable systems? I bet that $6000 your tax dollar? So how does the purchaser benefit ever? Who is going to lose? Time to raid the rich.

2011.01.03



Yesterday and monday I began trying to shape parabolic struts for the frame of the parabola. Its not easy. The little limestone cement form works pretty well, although I may need a counter-form to shape it just right (as a final shaping step). I thought bringing the workpiece to 1500 - 1600° would maybe it easy to bend and that it might have been as simple as letting the workpiece sag around the cement form. Not so. Pressure needs to be added continuously from the top at the century, and out to the edges while moving down.

So a spring clamp or thongs might be a solution.

limestone cement

metal cover sheet

steel (bent sink)

rod

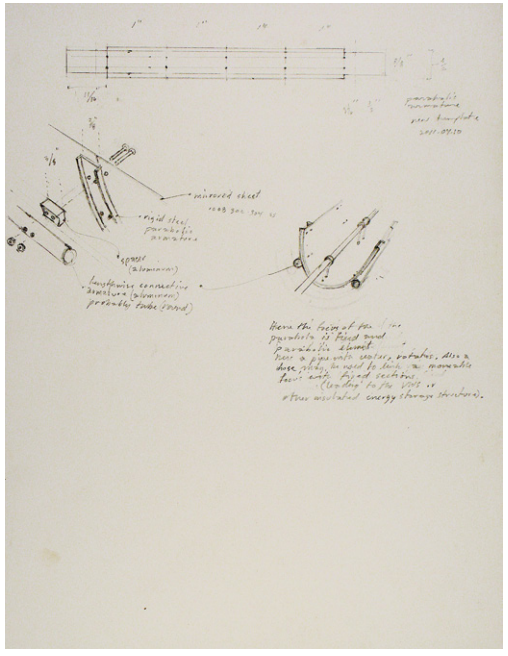
workpiece (steel) from old 4x4 ss

clamp done with half of this system by the end of today.

5.5 x 3 — 1/16 x 24" — 5/8 x 3/4
6 x 2 — 3/16 x 3" — 6 x 2

2011.03.24

N36 2011.03.24



mirrored sheet

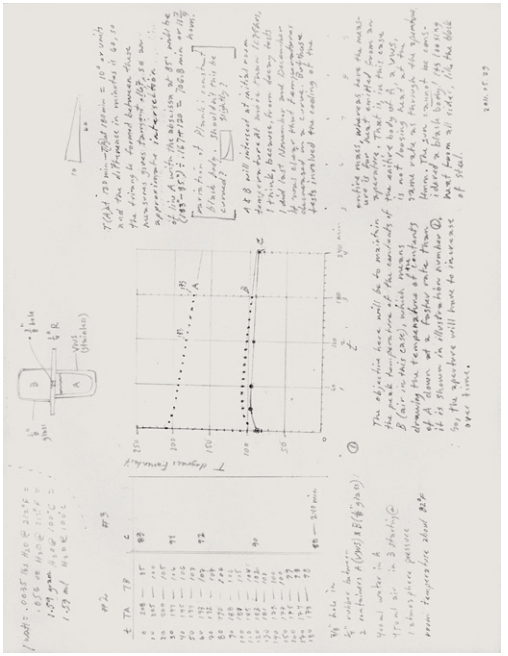
rigid steel parabolic armature

aperture (aluminum)

lanyard/wire connecting aperture (aluminum) preferably Kevlar (round)

Here the focus of the parabola is fixed and parallel beams from a pivoting reflector, motorized, directs the beams to be used for heating, electricity generation (heating) by the PVC or other insulated energy storage thermos).

parabolic generator post template 2011.07.10



Aperture mass, whatever form the mass takes, must be such that the sum of the mass of the aperture and the mass of the reflector body of the parabola is not moving back and forth. The mass must not through the system faster than 2 cm. (about 1") in any direction during the operation of the system. Otherwise the aperture will have to increase in size.

The objective here will be to maintain the peak temperature of the reflector & the aperture at the same temperature as the reflector, thereby drawing the temperature of the aperture down to a point where the temperature of the aperture will have to increase in size.

2011.07.09

And back to the Williams book:

Williams does not seem to recognize the transport limit of energy coming into a city. There is a mention of transportation costs of wood for houses for the midwest during American expansion in the 19th century, but I have yet to read an extrapolation of deforestation for heat into a complete energy equation for civilization, as an organism of cells growing throughout history, which must include the energy transport limit - a physical limit (also a value) to the imaginary monetary, paper, minted or otherwise represented value.

Williams mentions competing ideas for the collapse of Central American civilizations but none recognize that it may be due to breaching the energy transport limit (which incidentally would be reached sooner by civilizations without domesticated animal power), or coming close enough to it that a disturbance of crop failure due to bad weather walked the representational authority enough to break the whole structure.

There is a perfect example of the energy transport limit being breached today in the news. Many cities in India have recently expanded their peripheries, inundating large high-rise apartment complexes, paved increases demand from within the city nucleus while encroaching what was once farm land. Recently this year bad weather has driven food costs up dramatically and importing from greater distances means more fuel for transportation to the surrounding city. This will effect all the city dwellers when jobs are lost in another sector of the economy because people can't spend money on other things. Then people who have their jobs can't pay rent or mortgage & fuel values occur. Do the banks and lenders have enough reserves? No. Then the imaginary losses synthetically because of physical limits.

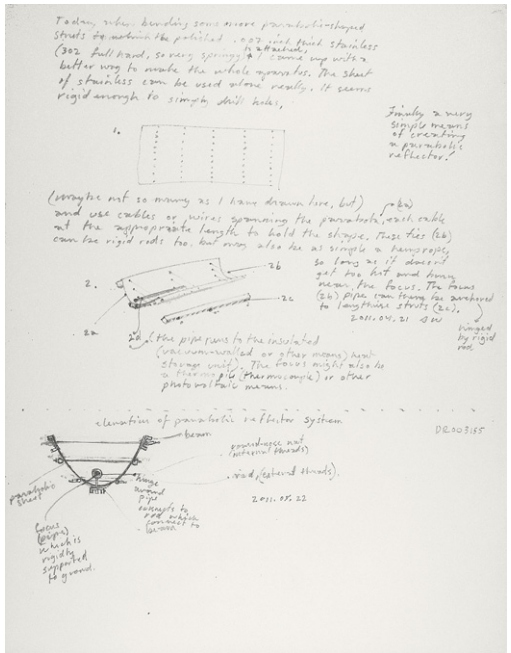
2011.01.03

Why doesn't the U.S. admit this recession was and is caused by a 400% increase in fuel costs (Control of oil wasn't combined with an outrageously stupid Federal Reserve interest rate system.

oh. And the other thing Williams doesn't describe is the relationship between demands made by the cell nucleus and an increasing birth rate as the primary means for the periphery of the cell to meet those demands. Otherwise known as growth, the birthrate can only increase within the limits of a spherical world. 2011.01.03

The birthrate cannot increase beyond the limits of a spherical world.

2011.06.01



Today, while bending some more parabolic-shaped struts to maintain the pitch of .007 inch thick stainless (302 full hard, so very springy) I came up with a better way to make the whole apparatus. The sheet of stainless can be used where really, it seems rigid enough to simply hold tube,

Finally a very simple means of creating a parabolic reflector.

(aluminum not so strong as I have drawn here, but) and use cables or wires spanning the parabola, each cable at the appropriate length to hold the shape. Then this (bk) can be rigid rods too, but even also be as simple a property so long as it doesn't get too hot and burn near the focus. The beams (bk) pipe can form to be anchored to (anything strong (ex).

2011.04.21 SW

hinged by rigid rod

(The pipe runs to the insulated (cast iron-walled or other means) heat storage unit. The fluid might also be a thermal oil (thermocouple) or other photovoltaic means.

elevation of parabolic reflector system

DR203155

beam

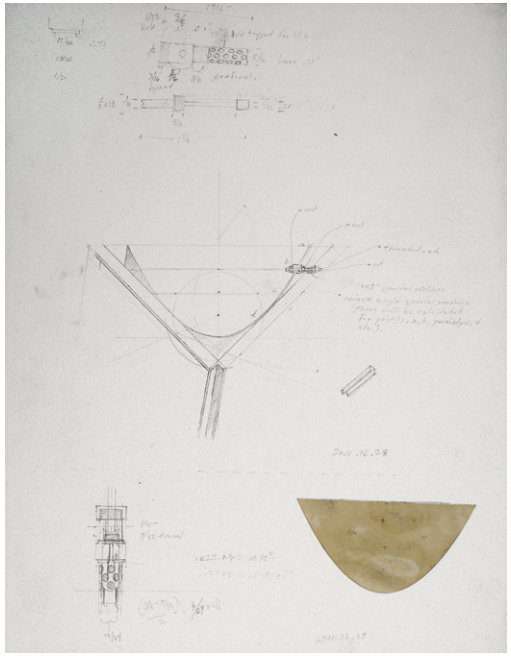
groundscrew not (internal threads)

rod (external threads)

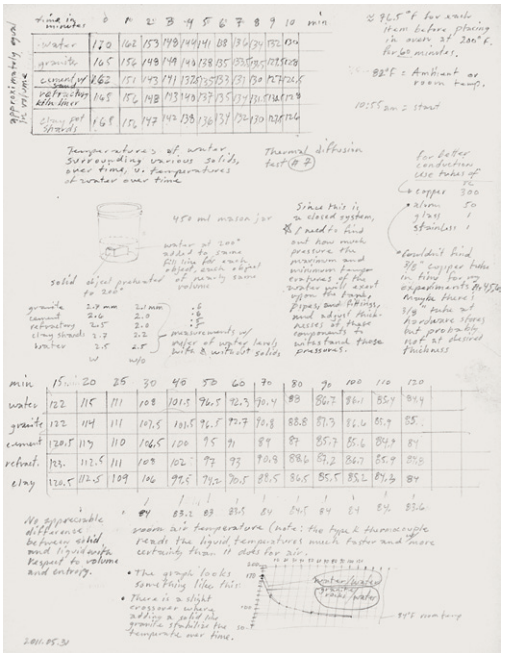
hinge around pipe connects to rod which connects to beam

focus (target) so much is angled supported to ground

2011.05.22



2011.04.29



approximately g/ml

time in minutes	0	1	2	3	4	5	6	7	8	9	10	min
water	170	162	153	148	144	141	138	136	134	132	130	
granite	165	156	148	144	140	138	135	133	131	129	128	
cement/w	162	151	143	141	137	135	133	131	130	128	126	
refractory kiln liner	145	136	128	123	119	117	115	113	111	110	108	
clay pot shards	168	156	147	142	138	136	134	132	130	128	126	

Temperatures of water, surrounding various solids, over time, vs temperatures of water over time

Thermal diffusion test (#7)

for better conduction use tubes of
- copper 300
- brass 50
- steel 15
- aluminum 50
- stainless 1

Should find the time for my experiments to 95% maybe there's 1/8" tube of brass/steel/aluminum but probably not at thicker thickness

≥ 95.5°F for work item before placing in water at 200°F, for 60 minutes.

82°F = Ambient or room temp.

10:55 am = start

450 ml mason jar

water at 200° added to same fill line for each object, each object of similar volume

solid — object submerged to 200°

granite 2.9 mm 2.6
cement/w 2.5 2.5
clay shards 2.7 2.2
kiln liner 2.5 2.2

measurements of water family with & without solids

Since this is a closed system, I need to find out how much pressure the maximum and minimum temperatures of the water will exert upon the jar, & the lid and fittings, and adjust thickness accordingly. At these temperatures & pressures, to withstand these pressures.

min	15	20	25	30	40	50	60	70	80	90	100	110	120
water	122	115	111	108	101.5	96.5	92.3	90.4	89	86.7	86.1	85.4	84.4
granite	132	114	111	107.5	103.5	98.5	92.7	90.8	88.8	87.3	86.6	86.9	85
cement	120.5	117	110	106.5	100	95	91	89	87	85.7	85.6	84.9	84
refract.	113	112.5	111	109	102	97	93	90.9	88.6	87.2	86.3	85.4	83.8
clay	120.5	112.5	109	106	99.5	93.2	90.5	88.5	86.5	85.5	85.2	84.5	84

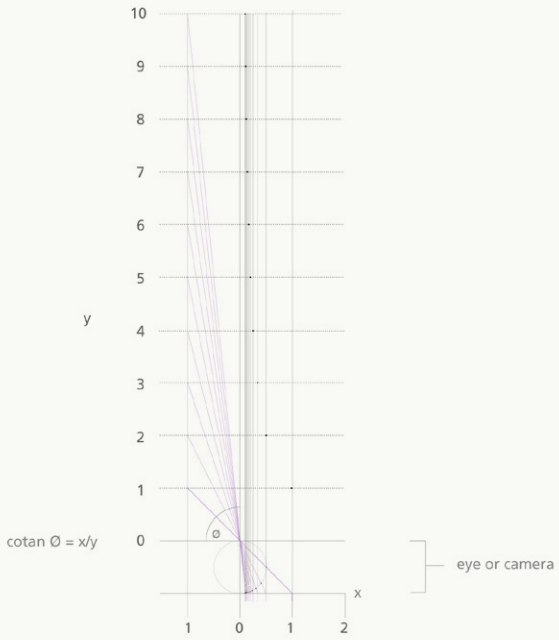
No appreciable difference between solid and liquid with respect to volume and entropy.

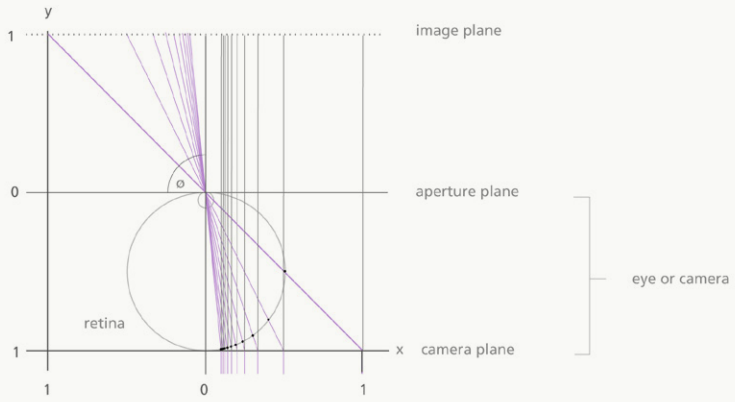
84 / 83.2 / 83 / 83.5 / 84 / 84.5 / 84 / 84 / 84 / 83.6

room air temperature (note: the type K thermocouple reads the liquid temperatures much faster and more certainly than it does for air.

- The graph looks something like this:
- There is a slight crossover where adding a solid like granite to the water changes the temperature over time.

2011.05.31





perspective study, 2007 and 2012

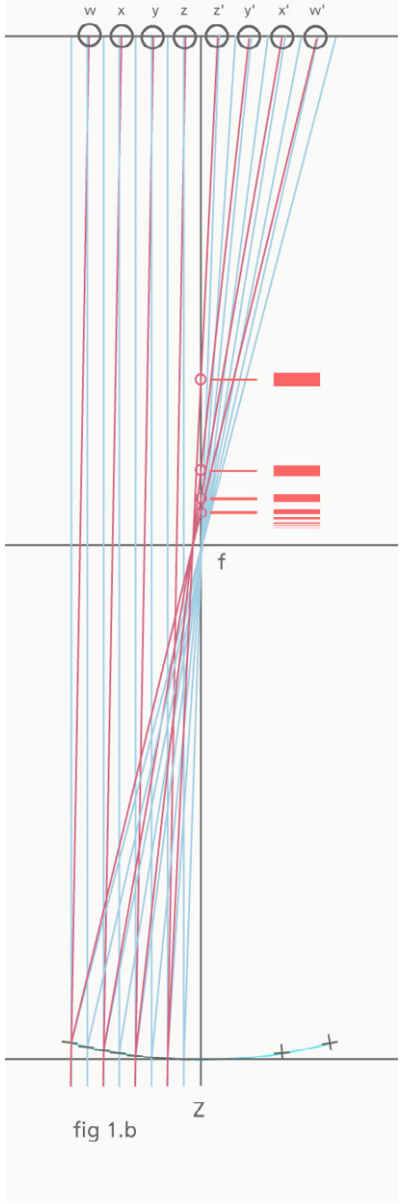
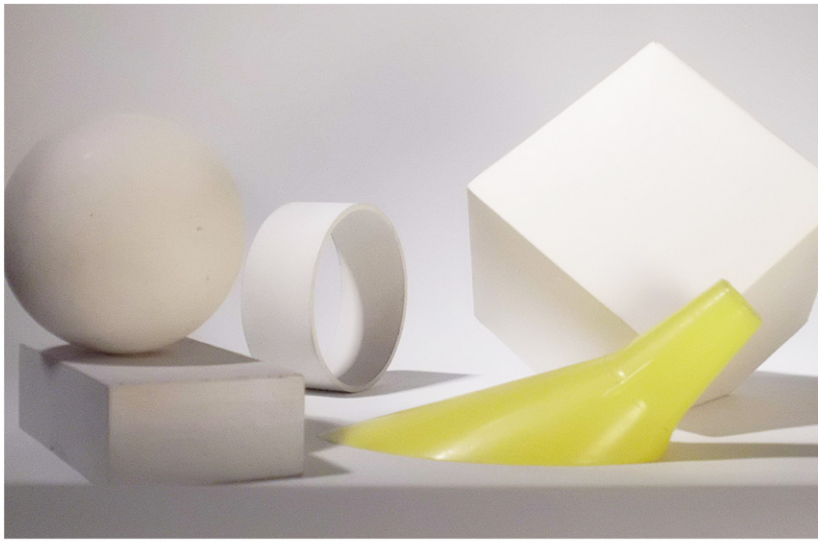
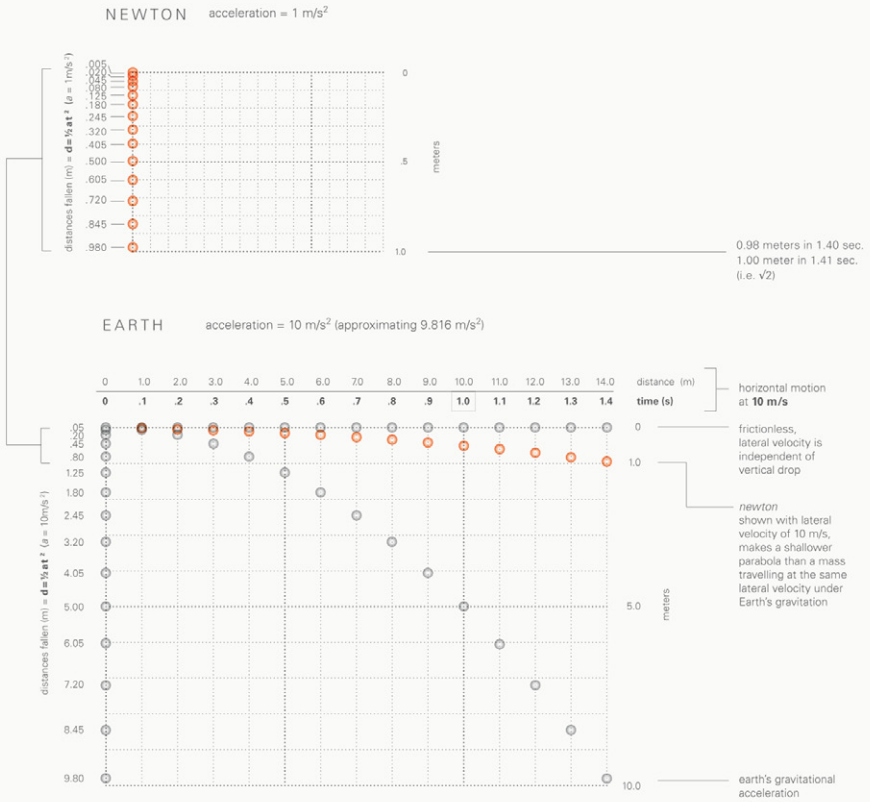


fig 1.b

from *parabolic study 7,* 2005



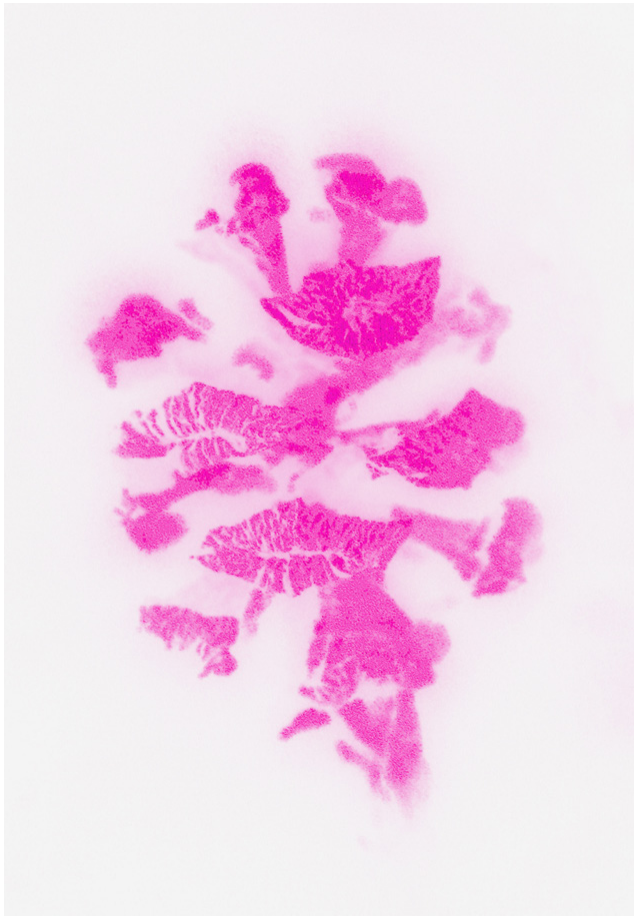
teaching tools, 2012-13



from *gravity 15*, part of *Reptile* 2013-14

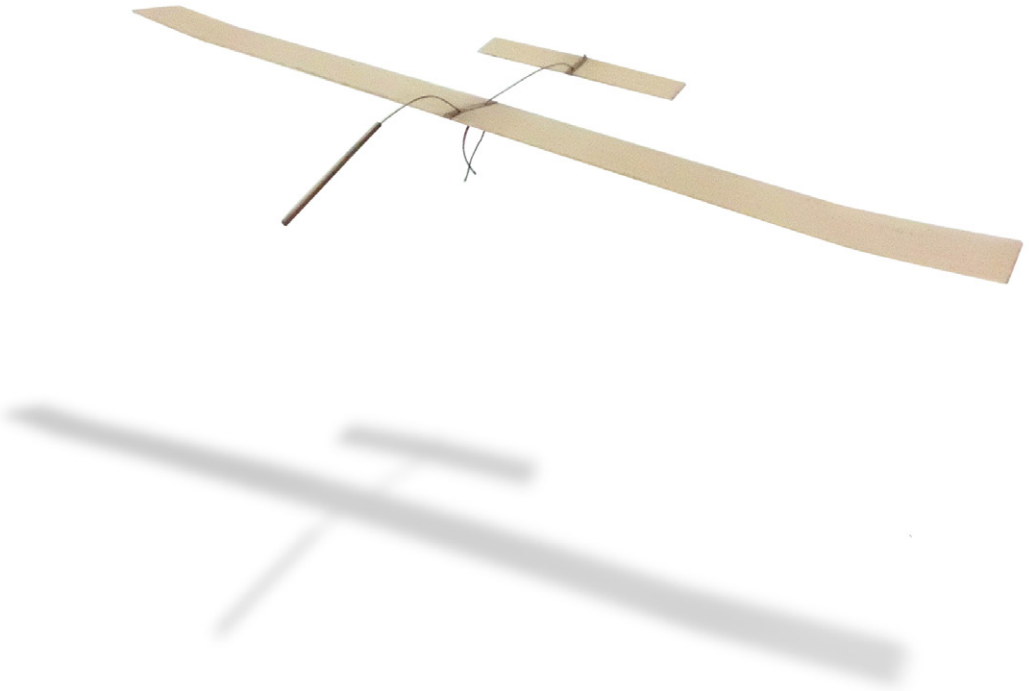
other things to do with gravity (balances), 2003—2015

perforated sheet, 2004



widn yur lanes thru th redwd forst.
make way fr th silvr se-quoi-yas. ths lnd ws made fr toyotas.
photograph, 2008

modern waste, 2007



pterodactyl, 2012

from *flesh,* 2002, 2015

INDUSTRIAL JESUS

you sold your prick for a speed machine
to burn some rubber for a backseat queen
in that ruffled shirt, white as a flake
you were the plastic groom on your wedding cake
then they raped your wife in the minutes between
the edges of night with mr. clean
and a chainlink fence 'round your suburb house
kept the baby in and your neighbors out

imprisoned by traffic in an urban scene
rushing to serve the industrial kings
an electric appliance for each of your chores
a gasoline-powered rider mower
automatic living, buttoned-up fat
popping out babies like caged-in rats
and to pay for it all as a uniformed guard
you surfed away on a gold charge card

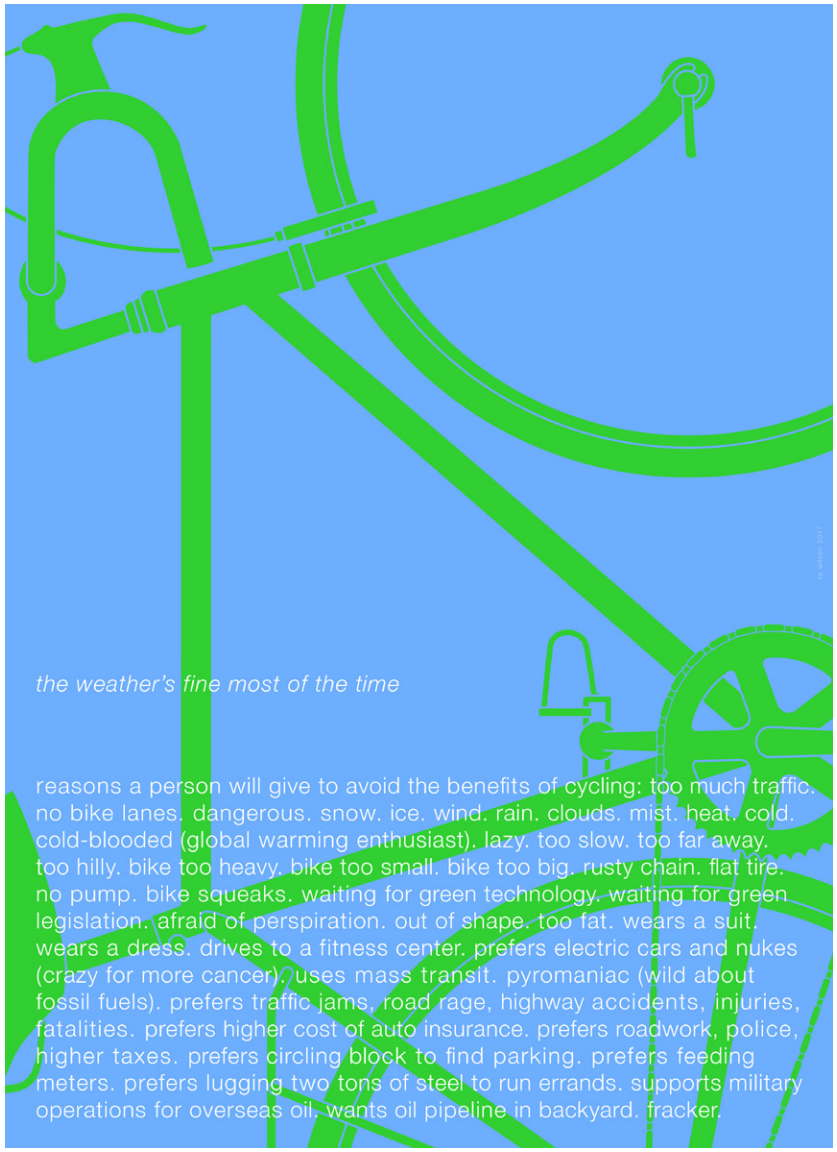
yeh you fed your kids to tony the tiger
but lickin' his chops was the advertiser
who bought the press for your freedom to choose
which bait to bite once your credit's approved
now your parents pension for which you slave
gonna leave you nothin' but their surgeon's blade
and a dozen jars of presciption pills
once you've paid off all their poor health bills

spinning your wheels to get to the top
goin' in circles, climbing out of hock
when they rolled out detroit on the red white and blue
shoulda known back then that you were through
now a pipeline runs through your backyard fool
the corporate domain took your swimming pool
and they'll level appalacia for your coal-fired rights
leave nothin for tomorrow but a cold winter night

when those green-techs lose as much as they get
and you're runnin' on empty, what you wanna bet
when the coast of your island has shrunk by two
what god will the heathens be praying to?
not the reason you dropped on the marble steps
as you entered the temple to buy some help
from a judge reading prayers in a dog-eared script
empty as the future on a fortune cookie strip

(you fell for the american dream)

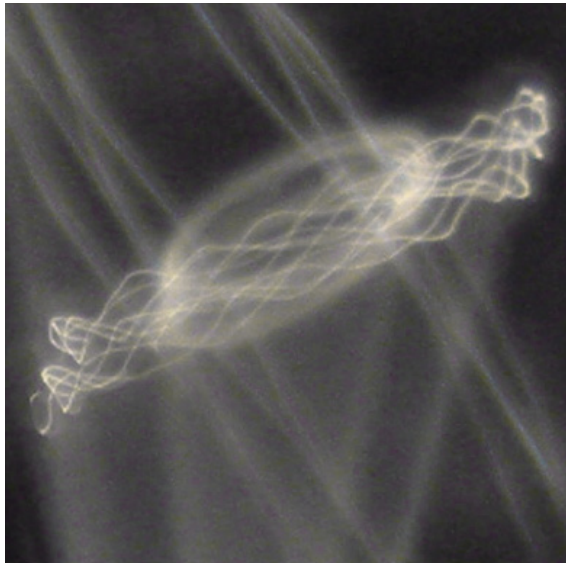
kidZ (zip kids), 2015



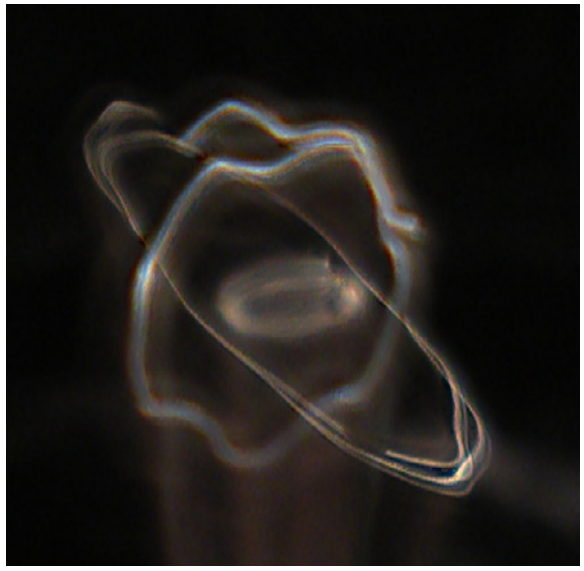
most cities are flat, handbill/poster, 2017

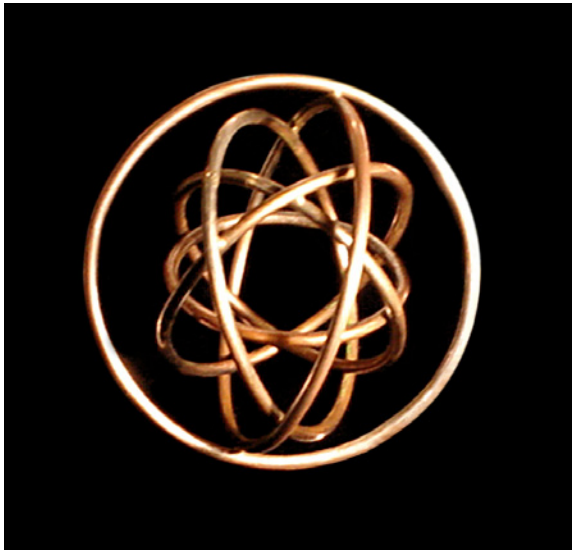
pawn, 2016

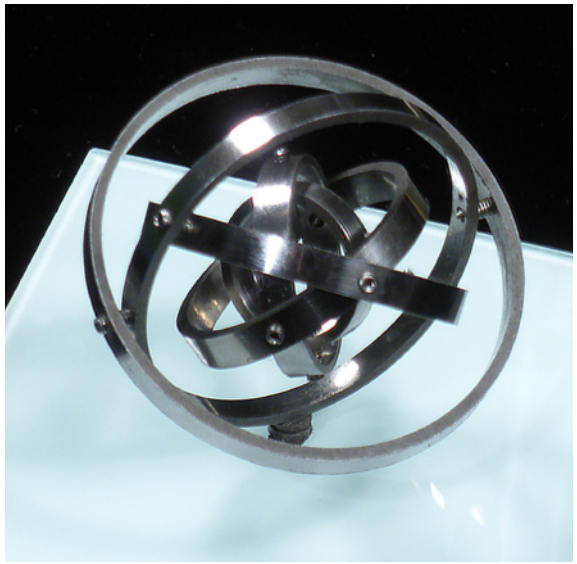
2004—2017



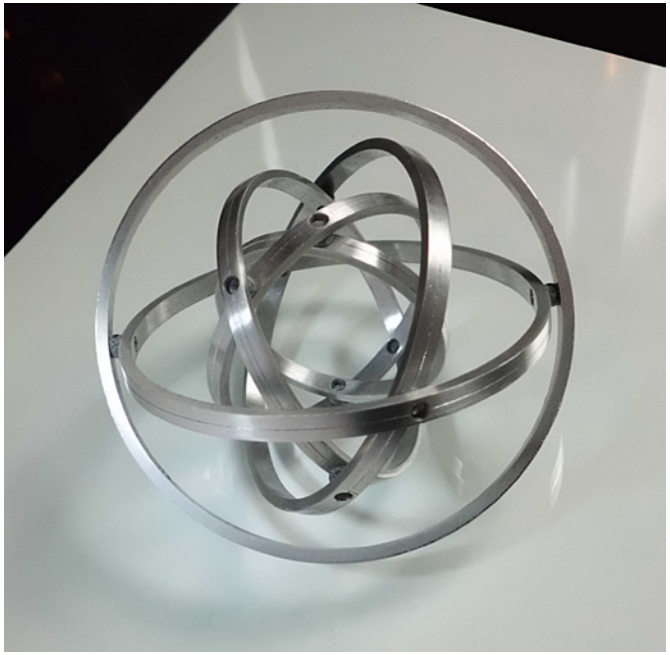
atoms spectra optics primes



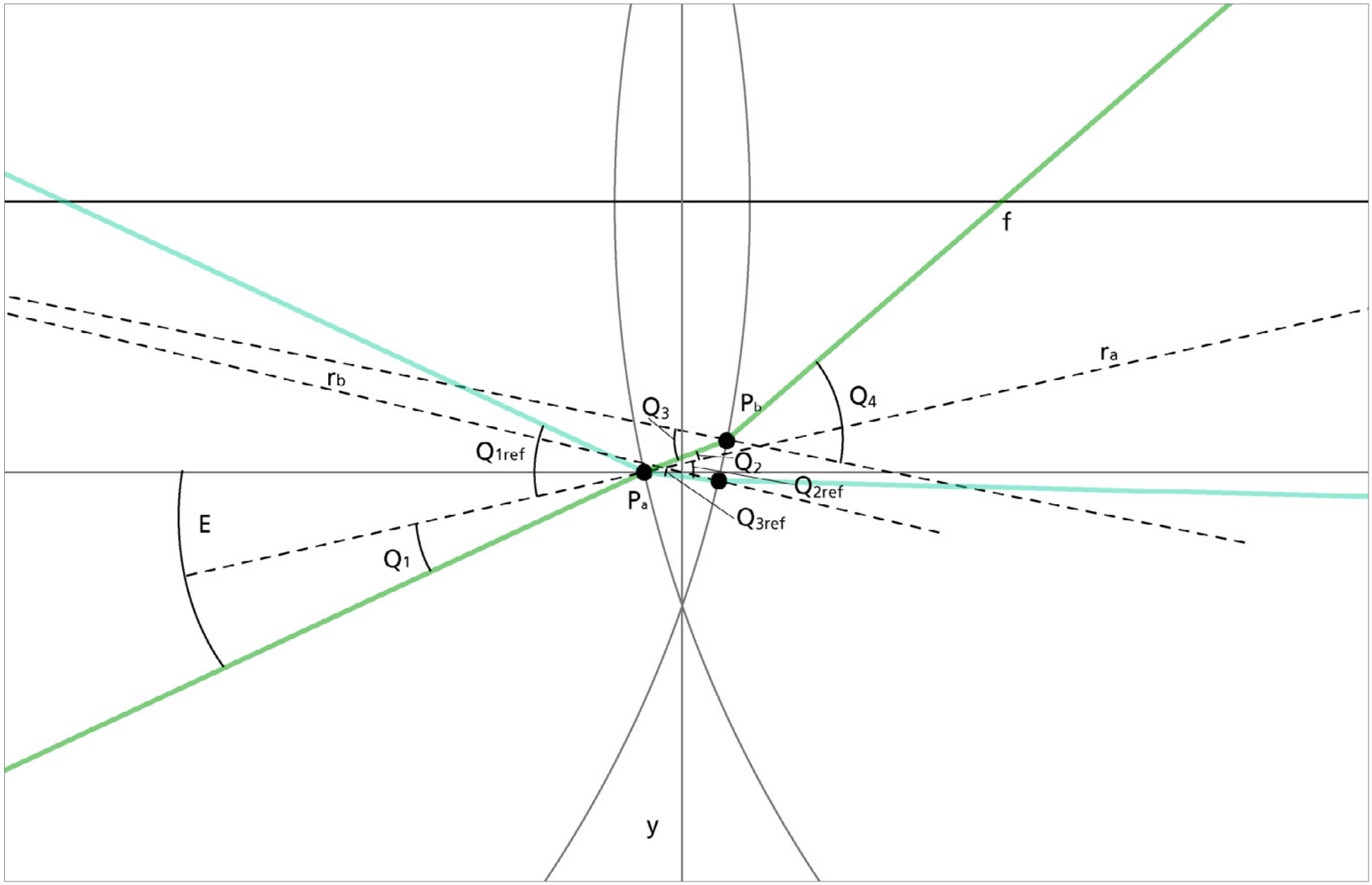




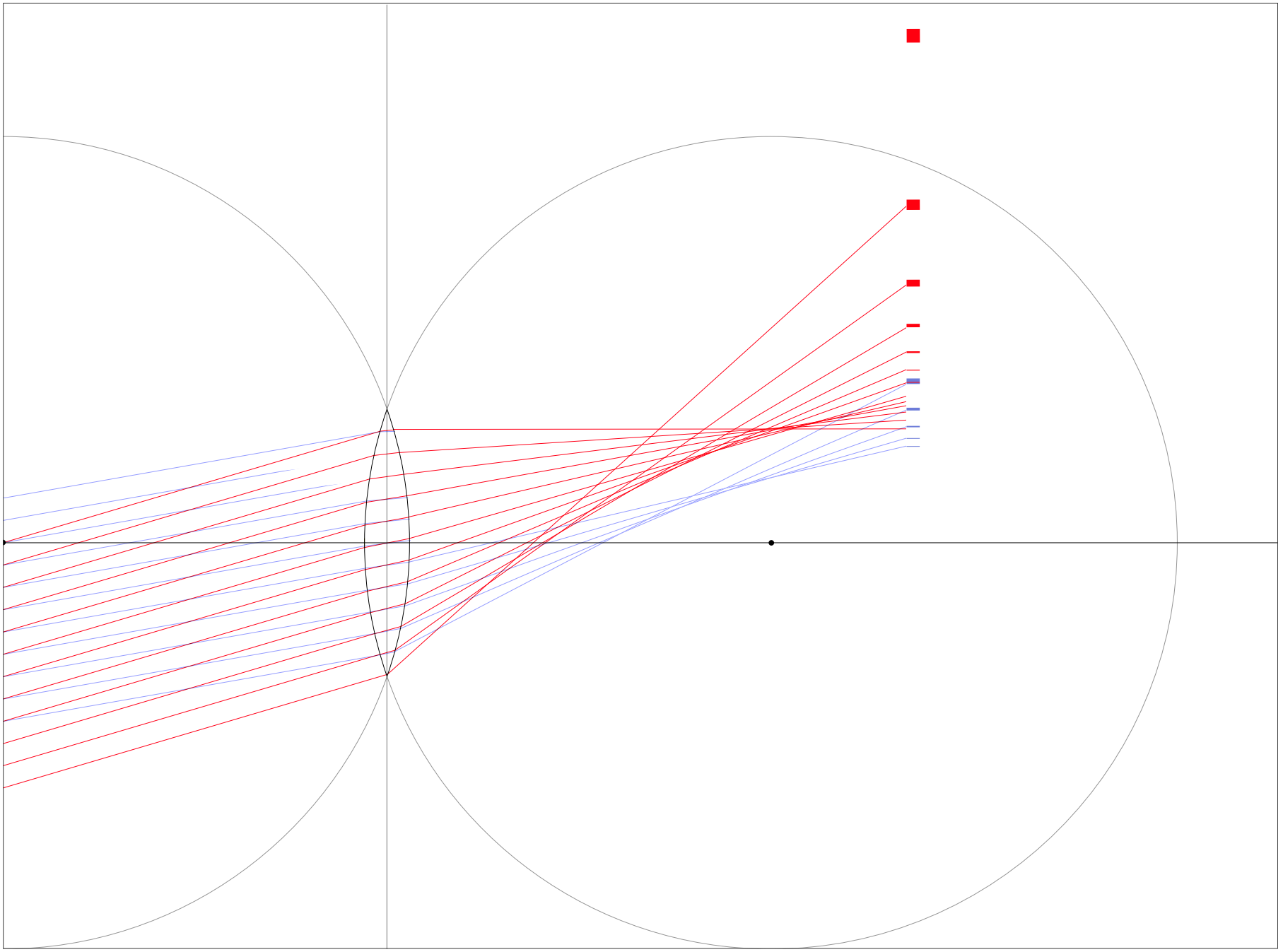
trunci 2, 2004 and *trunci 4,* 2005



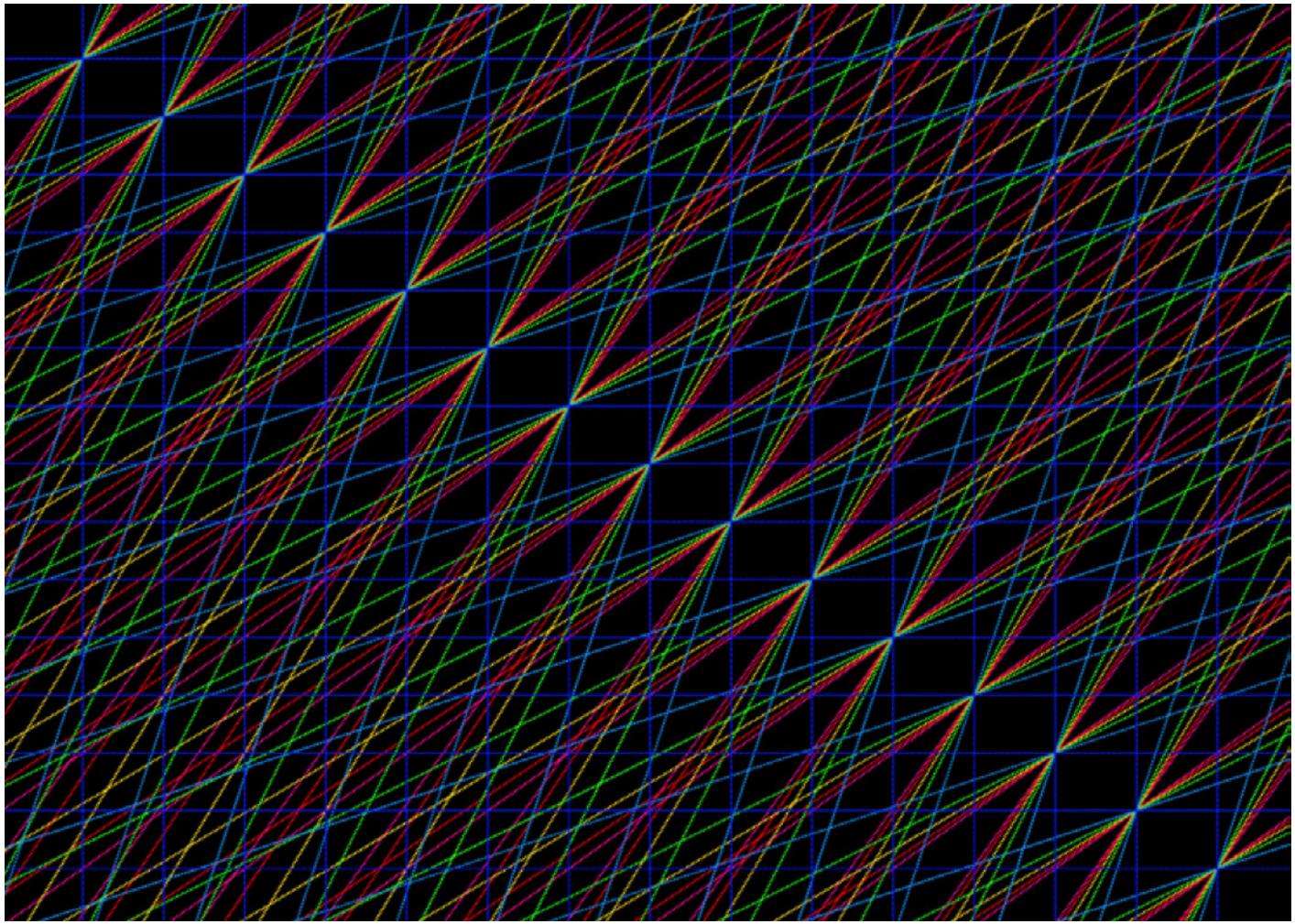
trunci 5, open and collapsed, 2005, and *trunci 4,* 2005



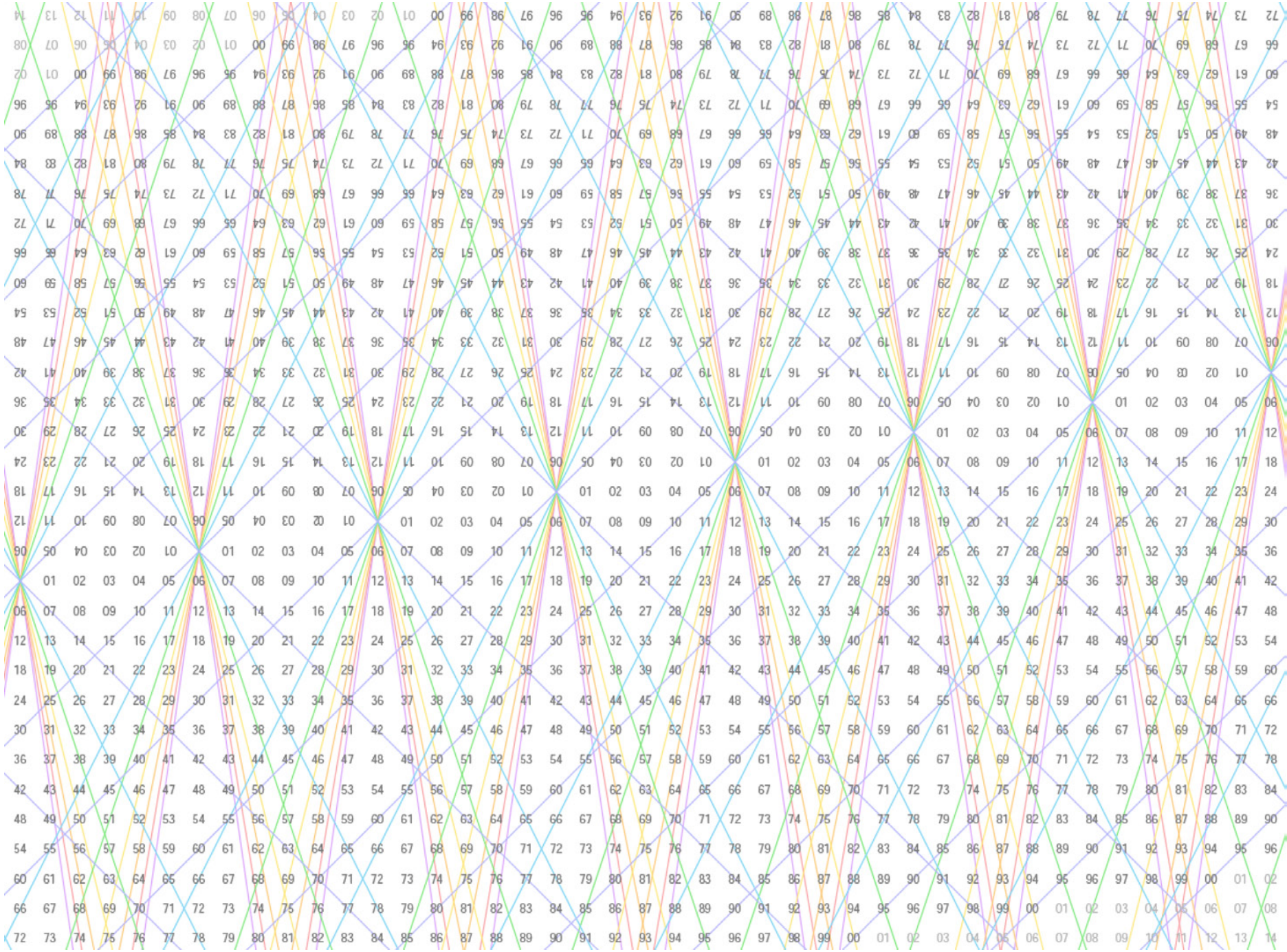
from *lens 9*, 2005



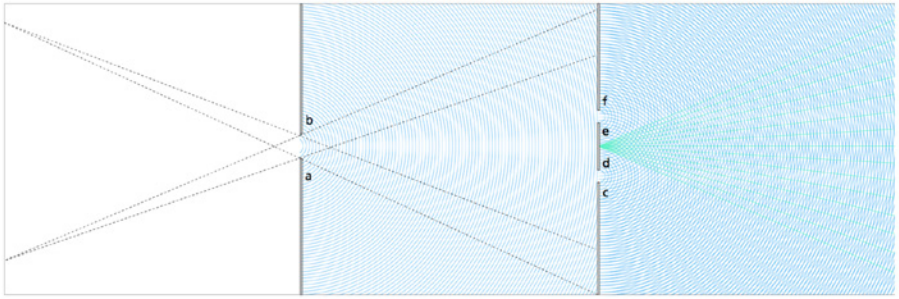
from *lens7b (cor. 16b)*, 2005, subtitle: *hydrogen*

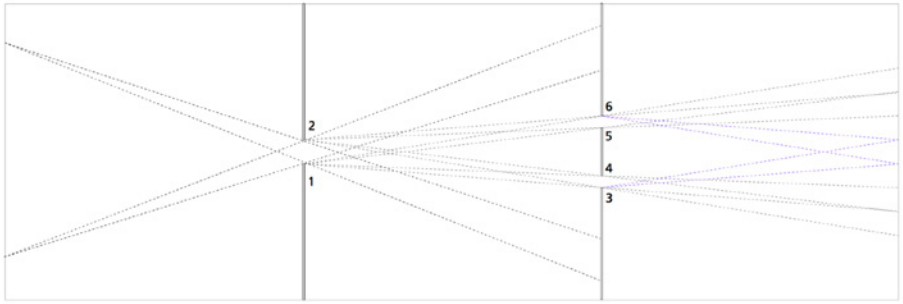


from *numbers 1,* 2005

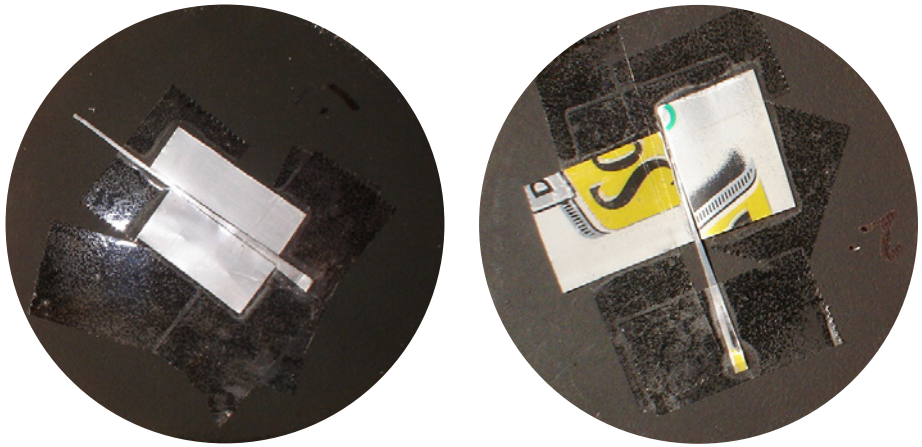


from *numbers 4*, 2005

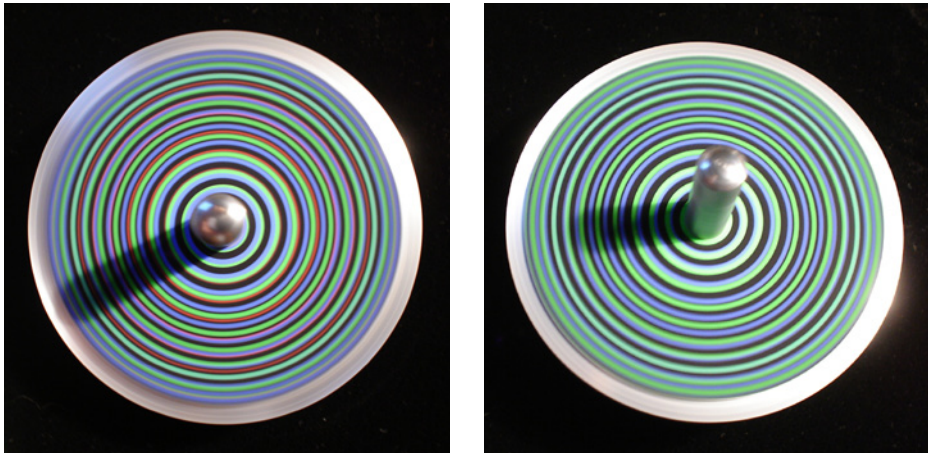




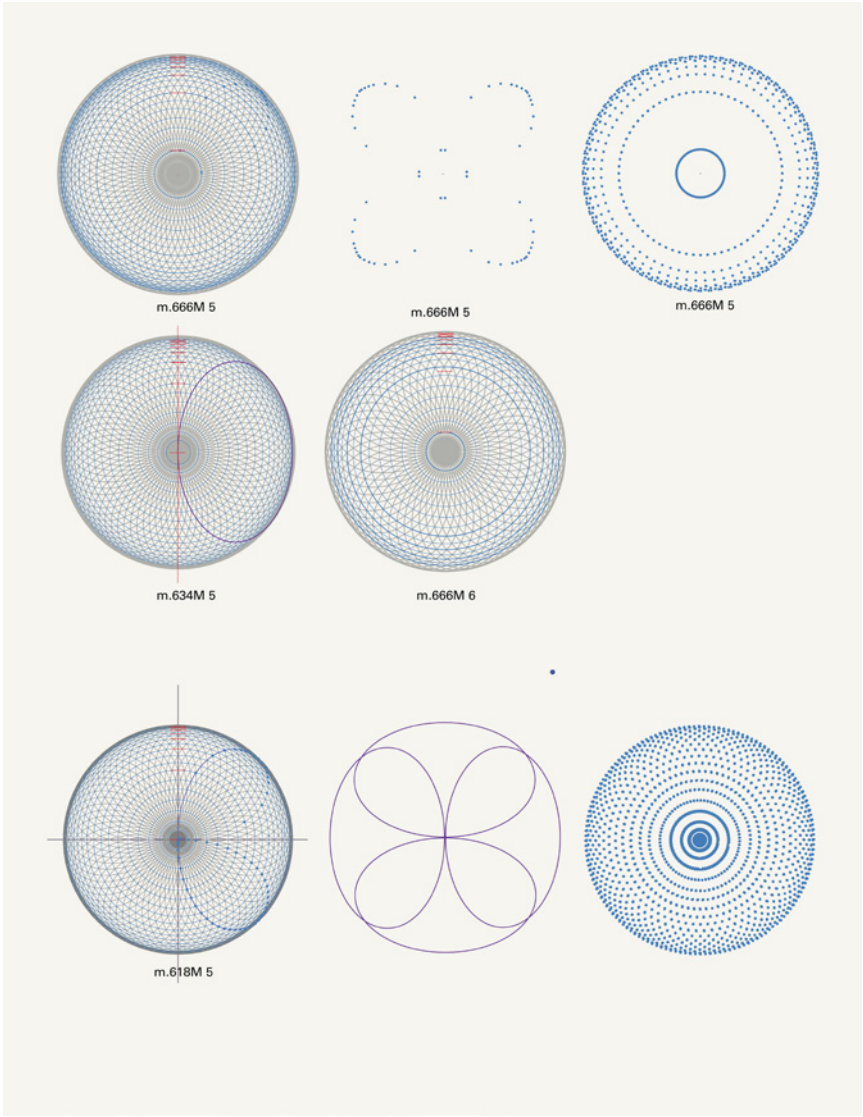
from *apertures 21*, digital drawing, 2006



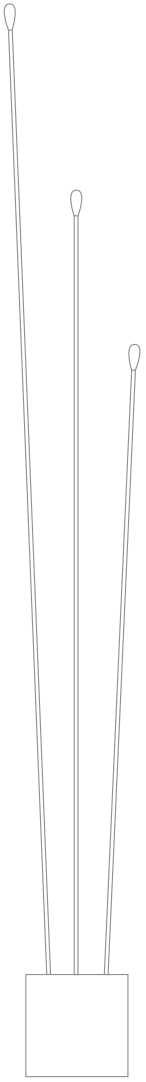
from a doulble slit experiment, 2006



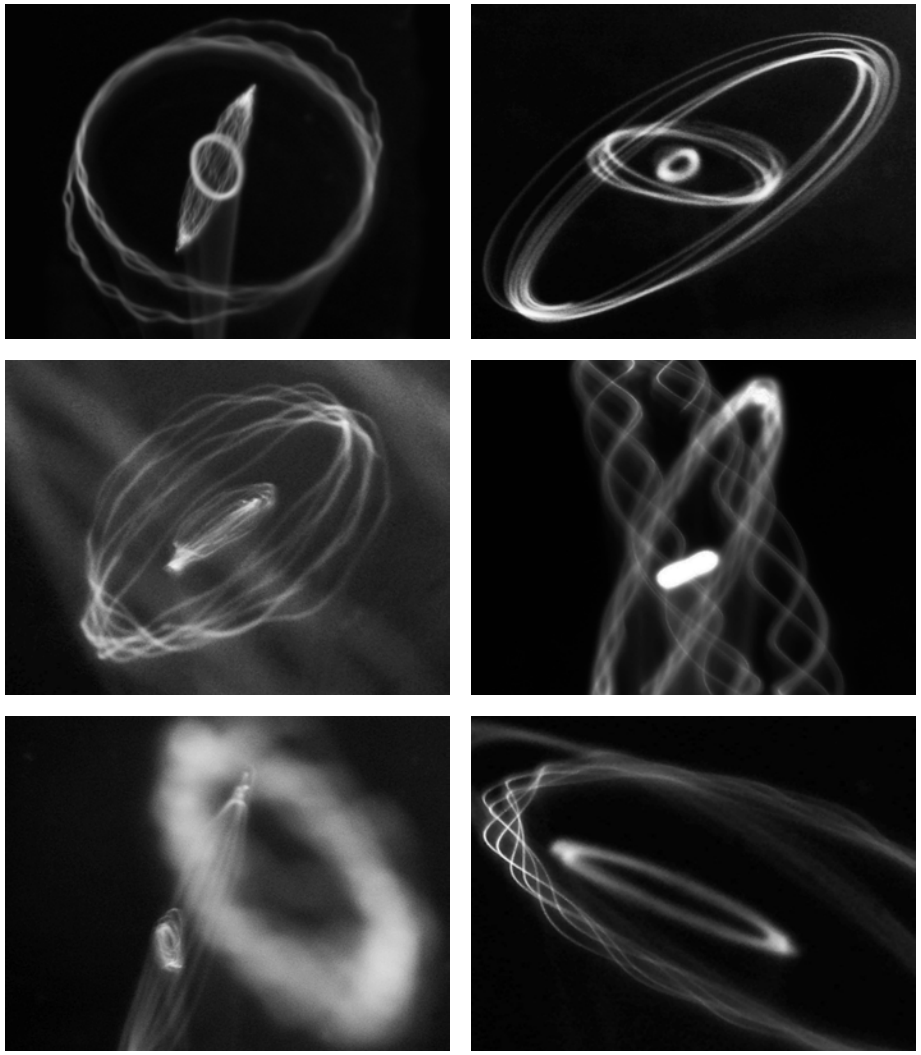
mercury, 2006



study for *mercury,* 2006



vibrator, 2011

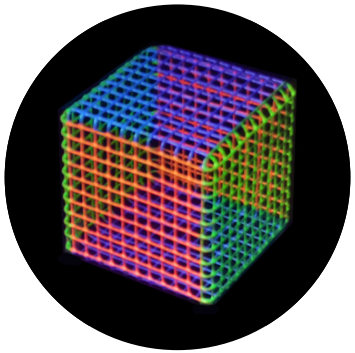


electrons, 2011 and 2017, photographs

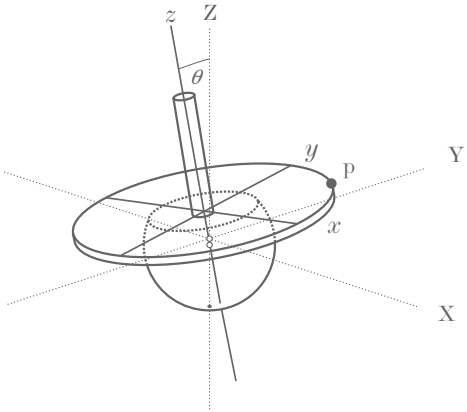
2003–2006

study in red green and blue

swf animation no longer operates



static (special)



kinetic (general)

kinematic (quantum)

STUDY IN RGB

It is well known that a painter cannot mix red and green pigments to achieve a luminous yellow. Nor will he obtain white by mixing blue and yellow. Stirring red and green pigments together yields a dull rust color, not yellow. And blue and yellow pigments make green, not white.

A digital artist gets different results when mixing the same colors on a computer screen. She easily makes yellow from red and green, and white from blue and yellow.

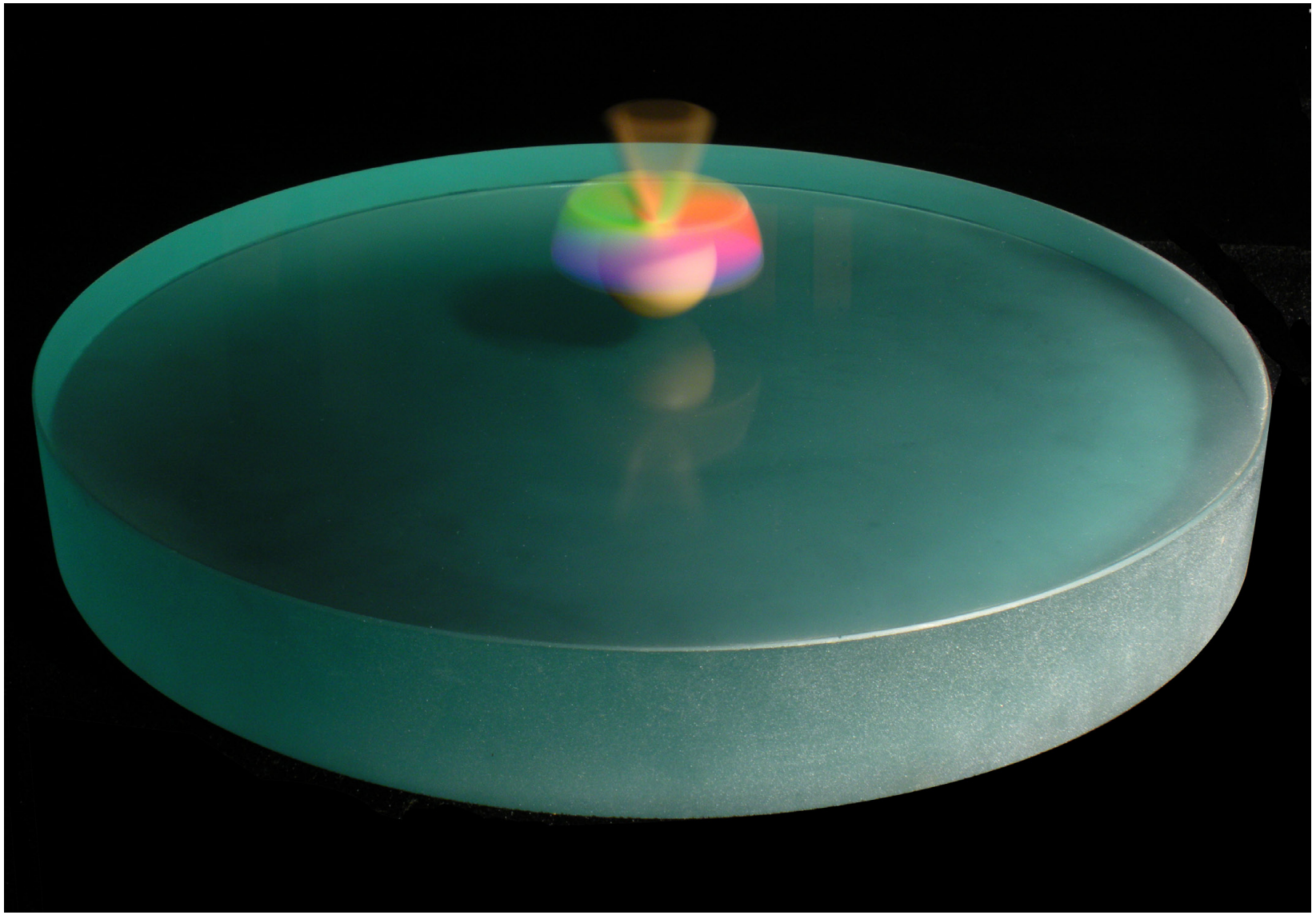
The subtractive color mixing system, used by artists for reflective matter, can effectively be reduced to primaries of yellow, cyan, and magenta, which together make black. The primaries of the subtractive system are the secondary colors of the additive system.

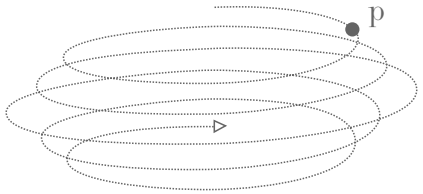
The additive color system, used in light-emission products like television and computer screens, employs colored light of red, green, and blue, which when mixed together in equal proportions (on the retina), yield white. The primaries of the additive system are the secondary colors of the subtractive system.

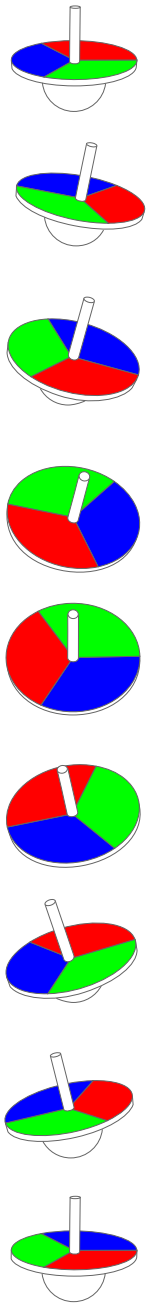
Notice the additive primaries are warm and the subtractive primaries are cool.

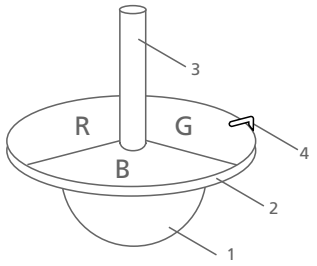
If a swatch of color appears most intense and brighter on a black ground, then optical color mixtures of additive primaries might also appear most intense and brighter on a black ground.

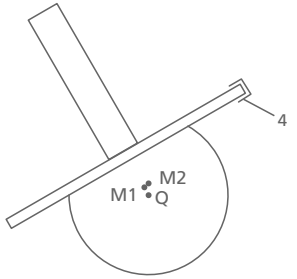
In these studies the apparent luminance of mixtures of additive primary pigments (red, green, blue) is enhanced by the introduction of intervals of zero or low light. In one type of structure intervals of black lie between colored regions as opaque pigments on static openwork structures. In a second type the intervals of darkness are integrated between rapid successions of colored regions. In a third type the intervals of darkness are also integrated between rapid successions of colored regions, but the domains of the red, green and blue primaries are configured as openwork structures. Under incidental white light the works exhibit additive primaries by diffuse reflection to stimulate sensations of secondary colors—magenta, cyan, and yellow—and tertiary colors.

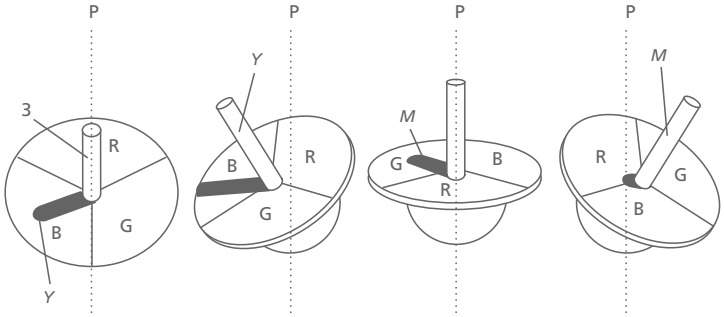


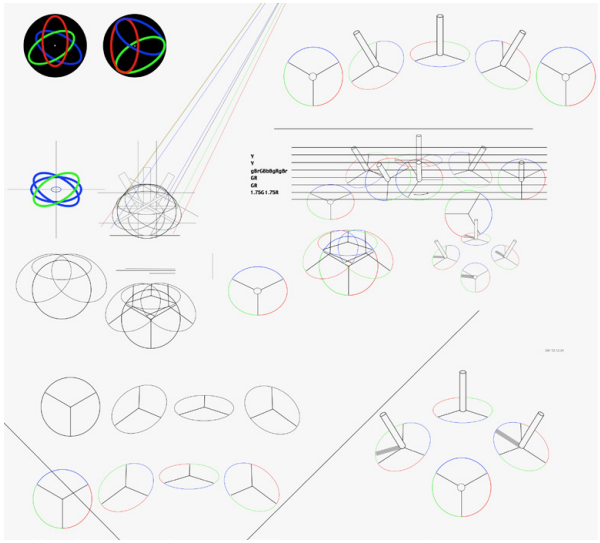

p

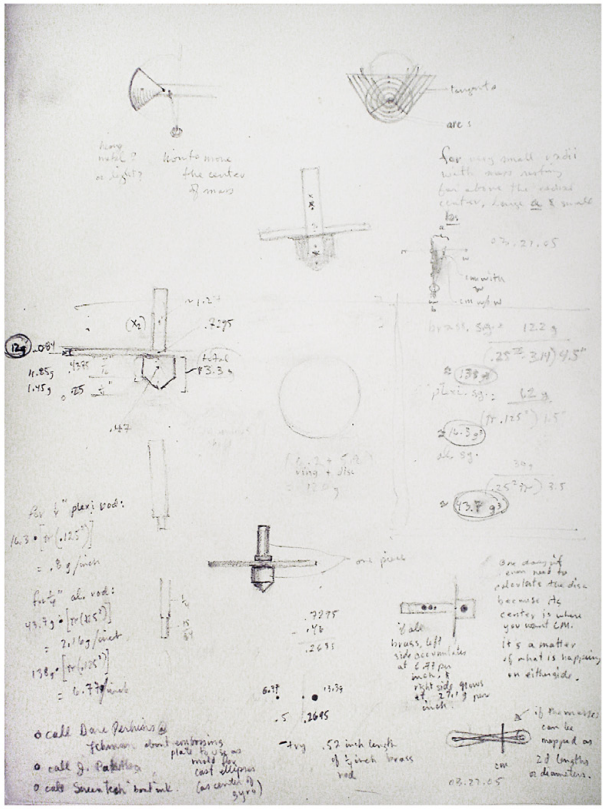


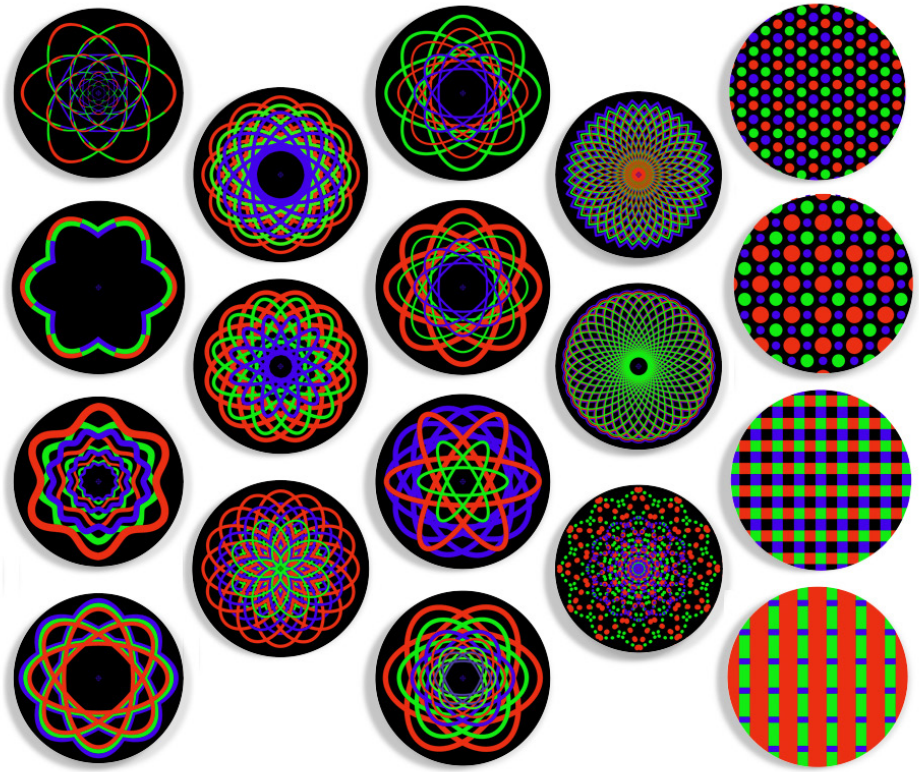

3
R
G
B
4
2
1

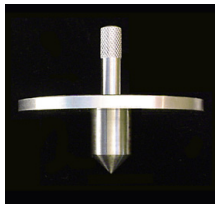

4
M1
M2
Q

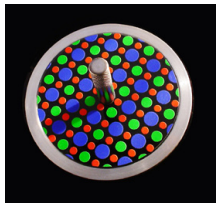

P
3
R
B
G
Y
P
Y
B
R
G
P
M
G
B
R
P
M
R
G
B

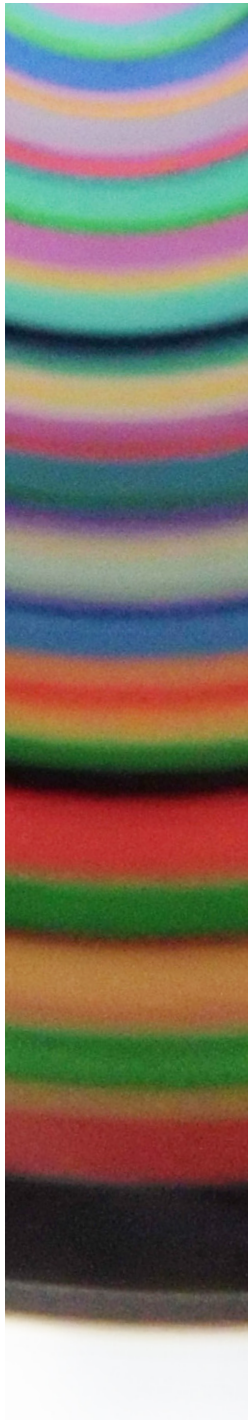


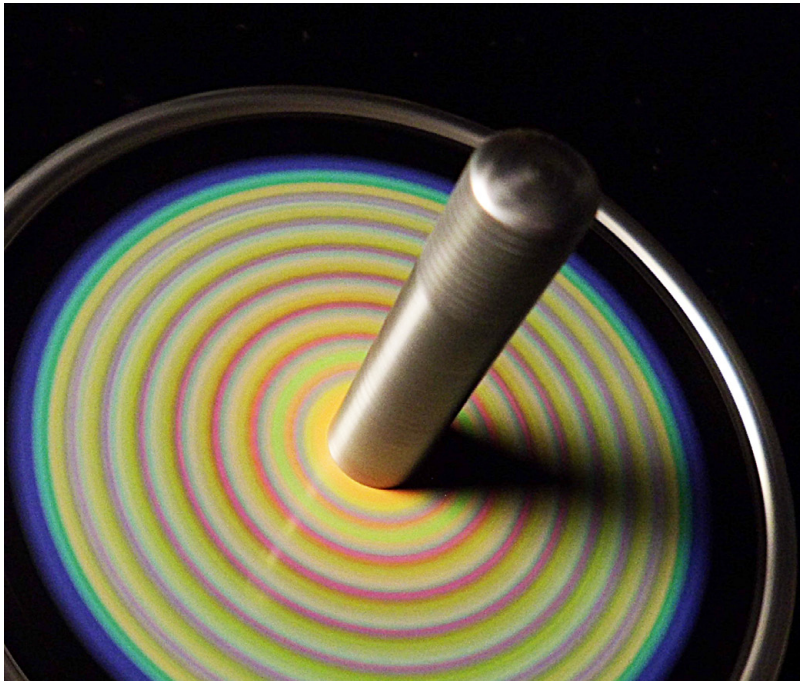




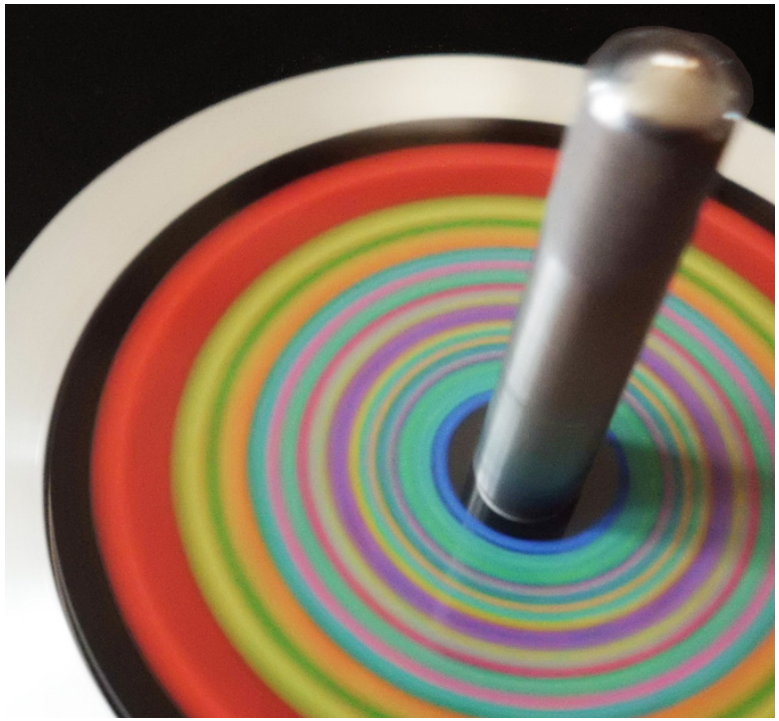


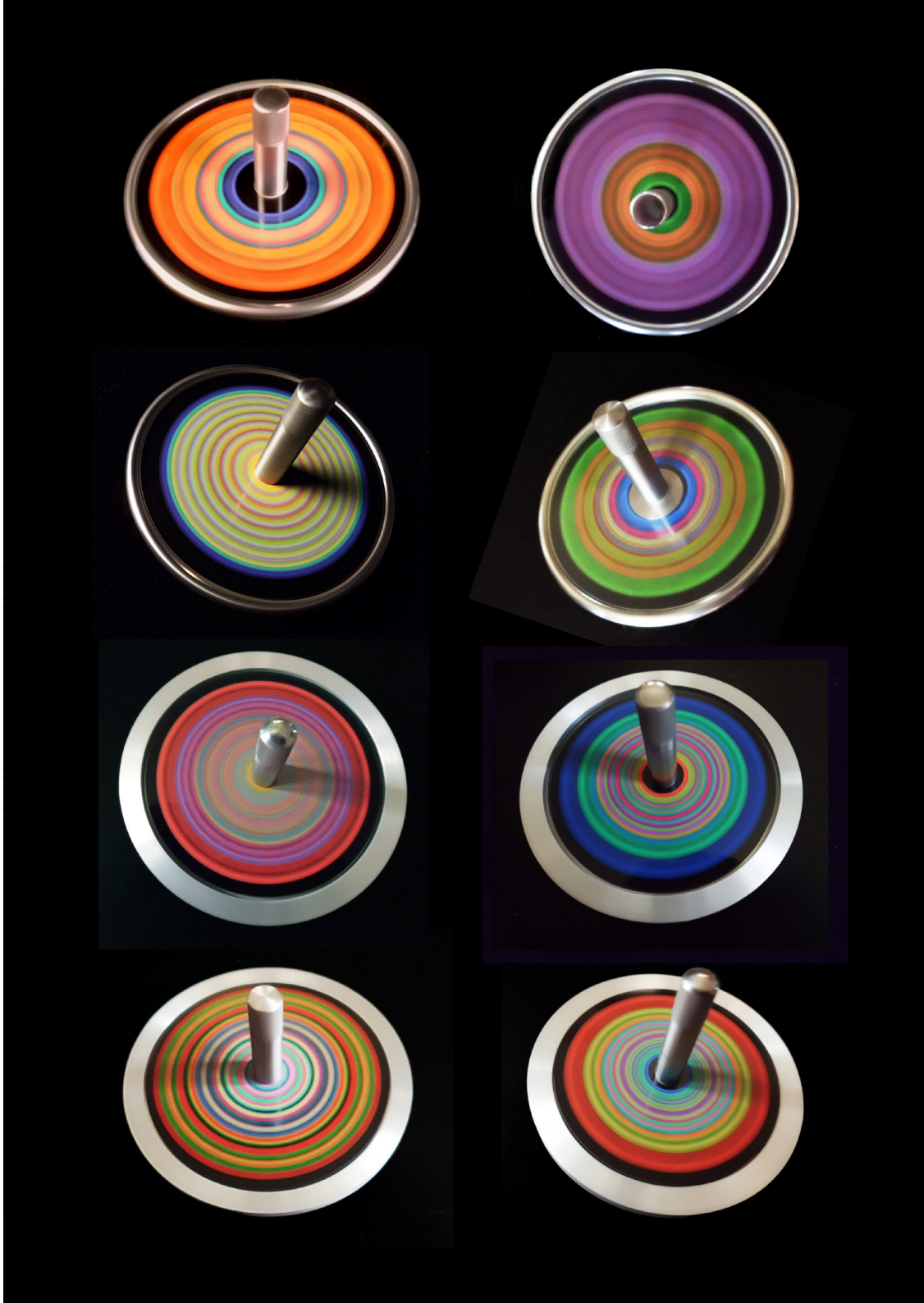




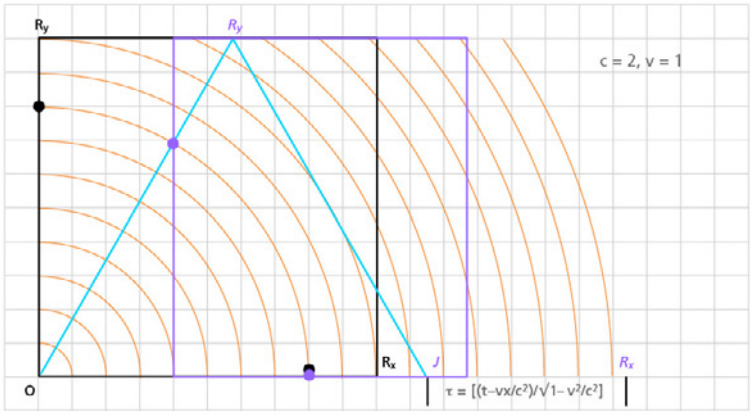


spinning

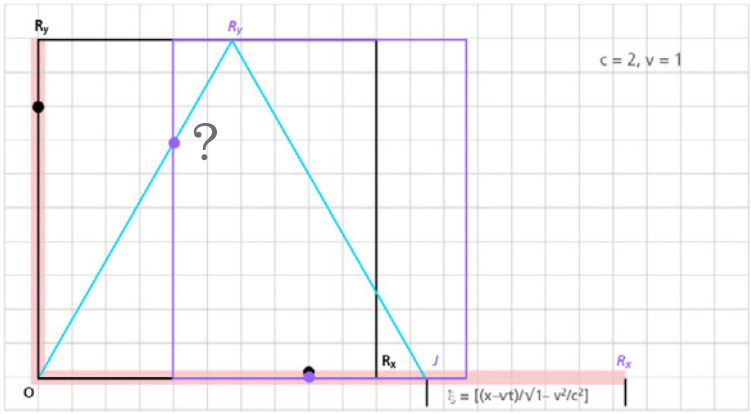




1999—2000



The Spherical Light in Einstein's *Electrodynamics*



swf animation no longer operates

The spherical light in Einstein's *Electrodynamics*

In his special relativity paper (*Electrodynamics*), Einstein proposed that a spherical light be used in determining the transformation equations for two systems in relative motion. But a spherical light seems an insufficient means by which to justify the constancy of the speed of light with the principle of relativity (see §3 of the paper). A simple experiment reveals that a narrow laser beam propagated laterally in a moving system will arrive at its destination by passing through a region permitted by a spherical light, but prohibited by the focus of the laser.

These illustrations compare an event observed in two systems, one in motion, *k*, indicated in purple, and the other stationary, K, indicated in black. For each of the two systems, *k* and K, two paths of light are represented by dots which begin at a single origin, O, and reflect, R, at the edges of their respective systems. The simultaneous reuinion of the two reflected paths in the moving system *k* occurs at point *J* and is achieved by shortening the x-axis length of system *k* (the Lorentz-Fitzgerald contraction) by the factor $\sqrt{1-v^2/c^2}$. This factor is also the sine of the angle at O formed by $\angle R_yOJ$.

In the top illustration (a) I have included a series of concentric arcs representing the radial dispersion of light propogating through both systems. The speed of light, c, is at twice the velocity, v, of the moving system *k*. The path OR_y inclines at an angle for observers in K, but proceeds perpendicularly for observers in system *k*. For observers in K the light along path OR_y also travels away from the origin at the speed of light, whereas in *k* it appears to move parallel to the y-axis and at a rate slower than the speed of light by the factor of $\sqrt{1-v^2/c^2}$. To account for this difference between an otherwise constant speed of light, all times measured in K are equated in *k* with the time transformation $\tau = [(t-vx/c^2)/\sqrt{1-v^2/c^2}]$ and observers in moving systems still measure the velocity of light as c and not $c\sqrt{1-v^2/c^2}$.

In the second illustration (b), the radial framework is eliminated and the light is confined to narrow pink bands (laser beams) along the x and y axes. It is clear that such beams of light emitted from the origin of the stationary system cannot reach the point R_y (nor point *J*). A narrow beam of light projected laterally to the moving system *k* which *is* observable at R_y *must* have its source in the moving system. How then does it arrive at R_y? How does it *predict* point R_y? (If the velocity of light is not affected by the motion of its source, at least its trajectory is.)

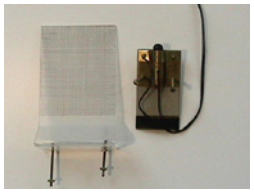
—sw 7.26.2000 (grammatical and clarification edits done 2017.03.09)

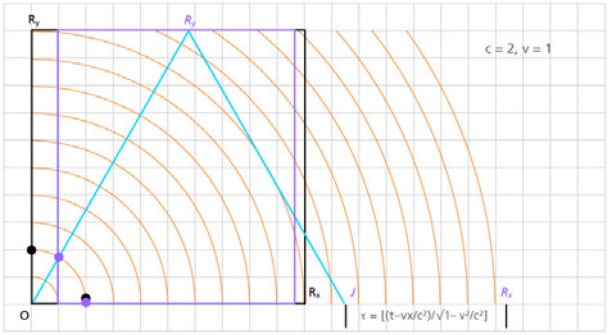
From my notebook, page 71:

Experiment. Although sophisticated satellite technology is proof enough, on March 27, 2000 I conducted the following experiment:

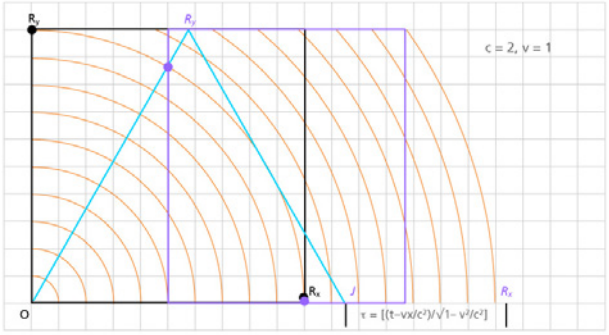
In the basement of a building on College Street, New Haven, I measured out 10 meters… In the easterly corner I secured a laser to a cinder block and in the westerly corner I secured a piece of matte plexiglass upon which was drawn a grid of 2mm units. Behind the plexiglass I mounted a camera on a tripod and took photographs of the light on the plexiglass measuring plate at 12 noon, 2pm, 4pm, 6pm, 8pm, 10pm and 12 midnight. The camera was about 1 foot from the measuring screen, upon which I also placed a piece of black tape to block out the intense central point of the laser light. Once the photographs were developed, I scanned them into the computer and compared the 6 pm exposure and the 12 midnight exposure by superimposing them in Photoshop. This photo-editing program allowed me to examine any discrepancies with great accuracy and high magnification. By making one image negative and the other positive I should detect the slightest variation (a negative and positive of the same image cancel each other out) but I detected no difference between the images taken at different times. According to the theory described on the previous page, 70, the light should have been displaced by 1mm (1mm being 1/10,000 of 10 meters and the velocity of the earth being 1/10,000 of the velocity of light). The light, a crisply focussed beam at a distance of 10 meters, appears to have travelled along φN of the second illustration, page 70.

4.6.00

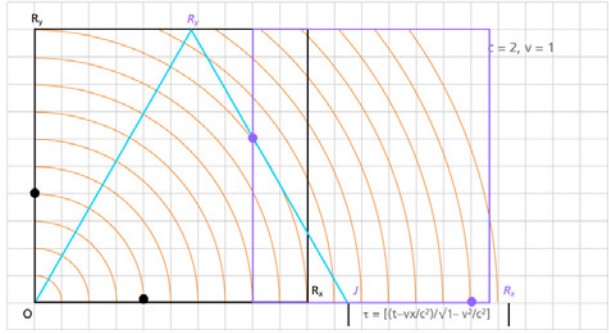




t_2



t_5



t_8

t_{10}

2000—2001

DELINEATIONS