

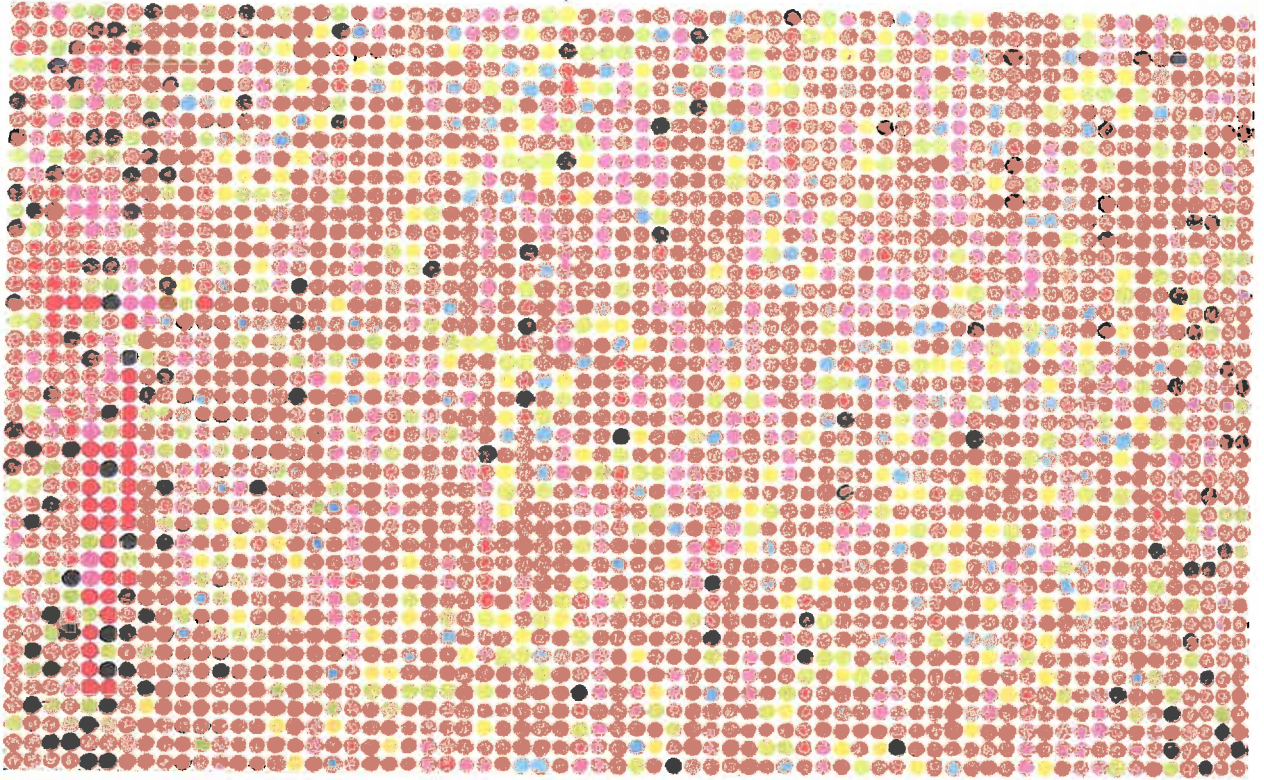
Michelle Puetz  
mpuetz@uchicago.edu  
Colour and the Moving Image Conference Presentation, July 2009  
Draft July 8, 2009

*Note: Please do not cite or circulate (citations incomplete)*

## **COLOR OVERTONES: HEARING AND SEEING THE FLICKER FILMS OF PAUL SHARITS**

I want to start by quoting from a letter that Paul Sharits wrote to Stan Brakhage in late November or early December of 1966. In this letter, written the same year that he completed the color flicker film, *Ray Gun Virus*, Sharits describes the effects of his recent experimentation with LSD and peyote as: I was given a chance to see that “single colors are not single at all – I saw several colors, at once, where, in normative experience, I would see only one rather flat material-like (rather than light-like) solid hue. ‘Color flicker’ intrigues me because it has certain parallels to the feeling that you are looking at pure light color . . . I like that idea of not being able to see what is ‘out there’ but seeing your own process of perception (something like ‘art as a mirror’).”

For most of his life, Sharits would pursue light-like, rather than material-like, color – and investigated precisely this not “out there”, but “in here” process of perception – working primarily in the medium of film, but also in painting, typography, visual design, drawing,



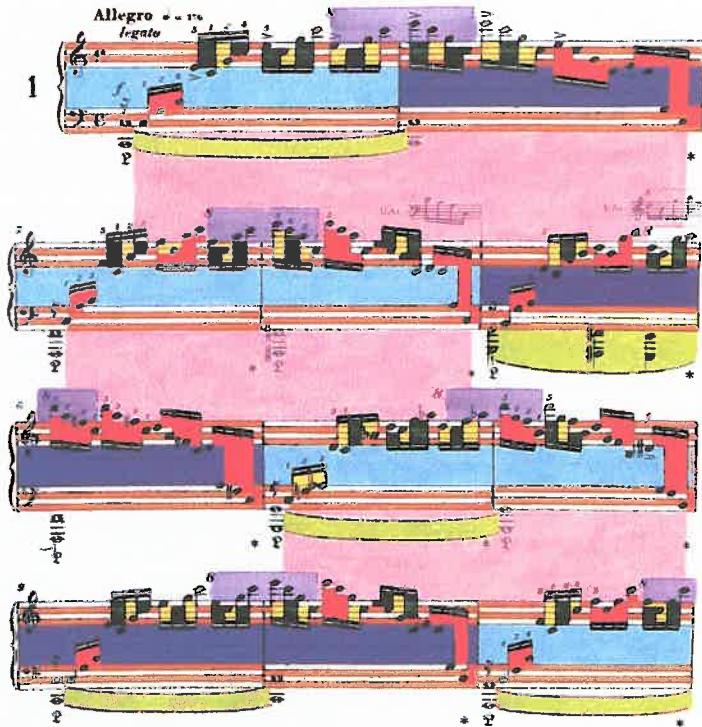
[PP Eternal] (this is one of his Fluxus drawings from 1967 titled "Eternal Bathroom Suite / Flux Sculpture Suite), and in performance art, sculpture, and sound – all with the hope of developing the visual and aural means for his art works to guide us, as spectators, into new ways of seeing and hearing.

CHOPIN

As von am F. Liszt

# ETUDES

Opus 10  
1829/32



[PP Chopin] This is another Fluxus piece, undated, an interpretation, in color, of one of Chopin's *Etudes*.

Widely considered as the first American experimental filmmaker to make “pure” color flicker films, Sharits investigated visual and aural modes of perception by examining, primarily in the medium of film, the intersections between shifting lateral and temporal fields of color and sound, the mechanics of film projection and optical sound reproduction, and what he referred to as “the operational analogues constructed between ways of seeing and ways of hearing.”

While Sharits made it clear that he was not interested in tracing out direct correspondances between colors and their sonic equivalents, he frequently played with musical analogies in both the planning (what he referred to as scoring) of his films and in the physical experiences of the films themselves. He created, what he called “overtones of color”, “major and minor tones of color”, “color phrases”, and “horizontal-temporal chords of color and sound” in his color flicker films and multi-projection locational film installations.

A large part of Sharits’ contribution to the “structuralist film” movement in the United States can be attributed to his explorations of color and sound as key formal structural elements of the medium of film. While structural cinema was critically defined by P. Adams Sitney as focusing on “formal aspects such as fixed camera positions, the use of flicker, loop printing, and rephotography,” Sharits considered color (both color as a physical property of a film strip, and the color of afterimages) and sound to be elemental and essential aspects of the medium of film.

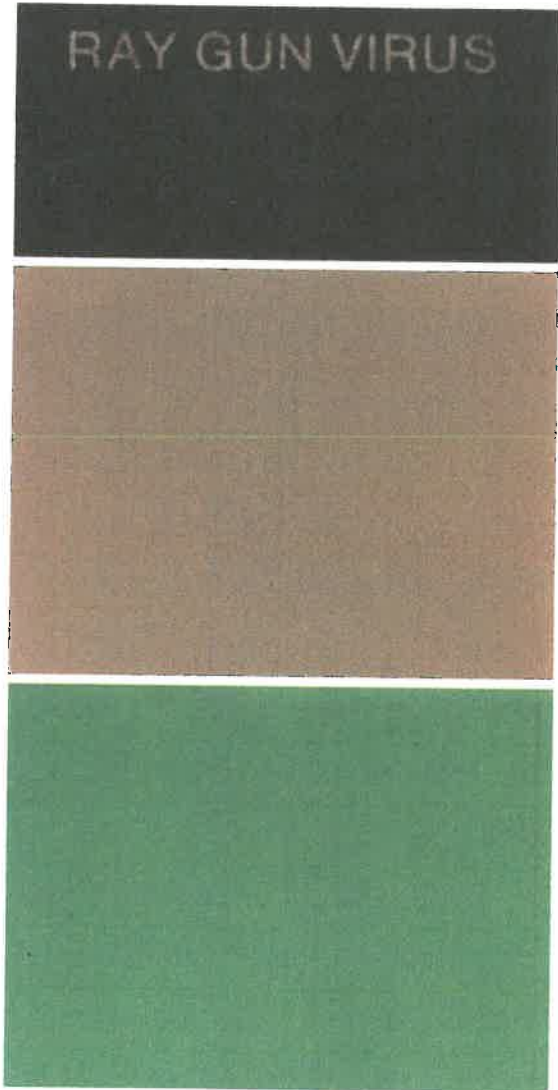
Sharits came to filmmaking with formal training in visual design and painting




[PP Marker2] (this is an undated drawing he made using colored markers), and while he initially made what he called normal films – figurative black and white psychodramas which he famously destroyed nearly all of in a rage of “non-narrative commitment”, with the completion of *Ray Gun Virus* in 1966 Sharits had embarked on a new journey of investigation into deeper questions related to what he called “cinema as cognition”. In his 1975 essay, “Cinema as Cognition”, he stated that he was interested in formal questions “concerning the grain particle, the frame and its duration, the shutter and its rotation and other infrastructural units of information, signification, and meaning”<sup>1</sup> as well as the way in which cinema could reflect and alter our thought patterns, emotional states, and perceptual capability.

<sup>1</sup> Sharits, “Cinema as Cognition: Introductory Remarks”, 1975

*Ray Gun Virus* consists of a series of rapidly and intermittently flickering fields of color that Sharits created by filming sheets of colored paper.



[PP RG2] This choice was most likely the result of his limited access to equipment, but, by using these, often textured, sometimes dirty and poorly-lit sheets of paper, Sharits is replicating colors that are only “pure” in so far as they represent or signify a color – they are clearly *not* a given color in its most pure manifestation, but rather signify a representation of color.



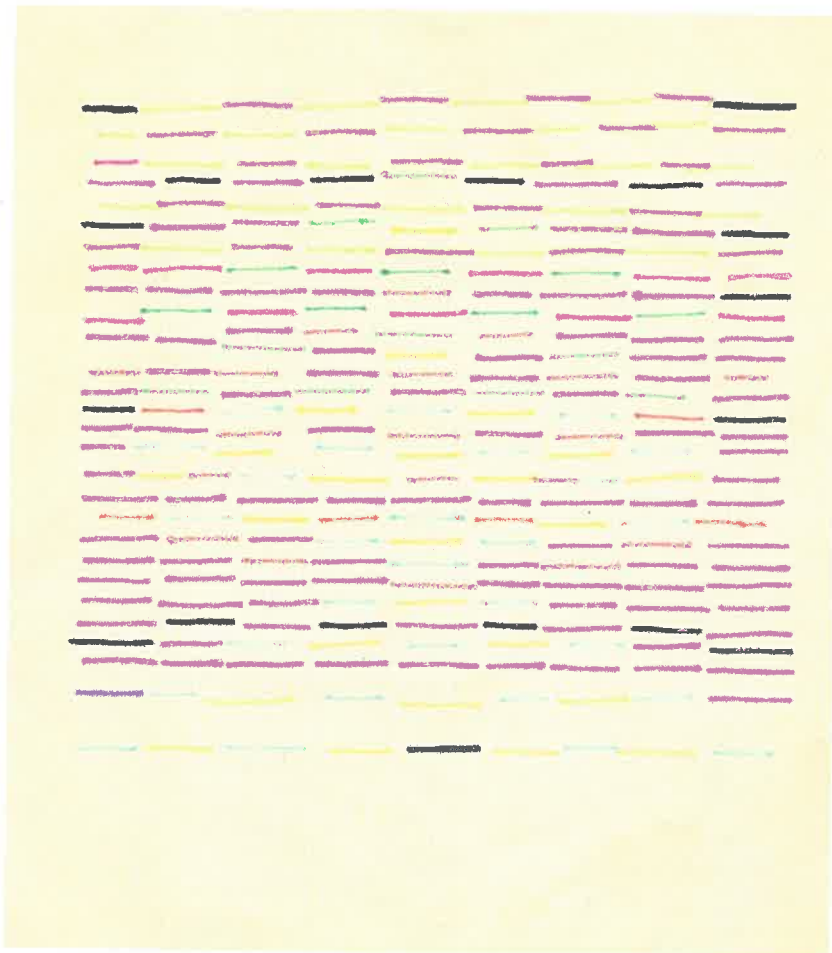
# RAY GUN VIRUS

[PP RG1]

These rapidly alternating frames of color are accompanied by an open system soundtrack made possible by double perf 16mm film – what we hear when *Ray Gun Virus* is projected is the sound of sprocket holes passing over the optical sound head of the projector. Sprocket holes function as a metaphor for the cinematic apparatus of projection, movement, and duration, and become an aggressive and highly rhythmic

means of structuring our experience of film as something that moves, rapidly, 24 frames per second.

Sharits described the soundtrack in his essay "Hearing : Seeing" (published in Film Culture in 1978) as "an accurate representation of technological modularity, framing – thereby noting – the ultimate matrix of 16mm film's capability for visual *re-presentation* (there being one sprocket hole for each frame of image along the film strip)." Re-presentation is written here not as one word, representation, but as re (dash) presentation. The film is scored, as it were, by the very perforations that allow a strip of still photographs to come to life – the sprocket hole.





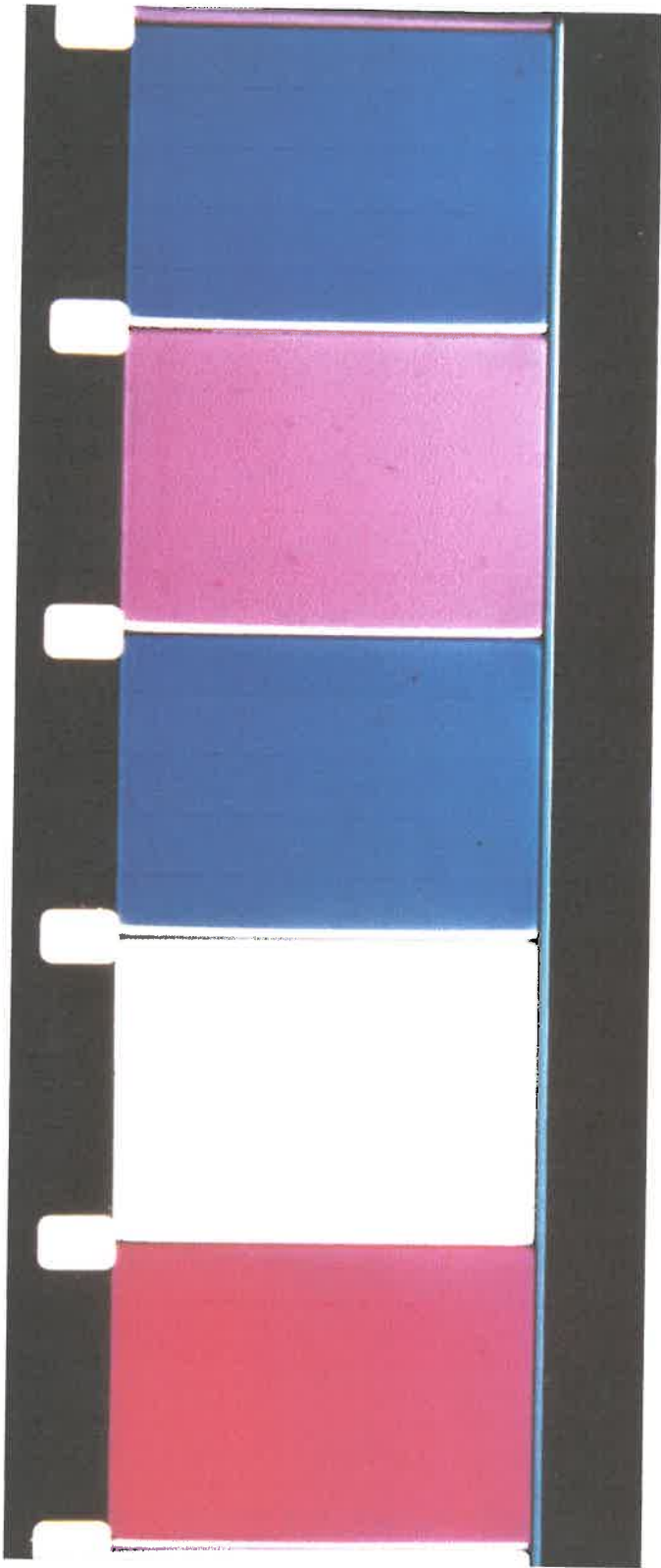
[PP Marker1] (this is another untitled and undated drawing made in colored marker)

Shartis said that in *Ray Gun Virus*, as in his other early color flicker films (produced prior to 1968), "clusters of differentiated single frames of solid color can appear to almost blend or, each frame insisting on its own discreteness, can appear to aggressively vibrate – these films are filled with attempts to allow vision to function in ways usually particular to hearing . . . rapidly alternating color frames can generate, in vision, horizontal-temporal chords, as well as the more expected melodic lines and tonal centers"<sup>2</sup>.

Here, by melodic lines and tonal centers, he is referring to the way in which specific colors can create a dominant, major, or recurring theme throughout the course of a given film, and by chords, he is referring to the two ways that the film creates overlapping and multi-tonal experiences of color. Sharits believed that a chord, which is quite simply the simultaneous playing of two or more notes, could be achieved in color and on screen through the rapid alternation (or flicker) of individual frames such that through their quick succession and temporal momentum, as well as through our spectatorial experience of afterimages, we are privy to more than one tone at once – we can see vibrations and variations of a given major note, tone, or color.

---

<sup>2</sup> Sharits, "Words per Page" Film Culture p.70-71



[PP Nothing]

Sharits described major tones or notes of color as akin to 24 frames of bright blue; chords and overtone experiences of color would look something like two frames of blue, one frame of bright pink, two frames of blue, one frame of orange, two frames of blue, one frame of pink, and so on. Overtone is a key critical term here – it is a musical term that denotes the resonant variance or vibration of a sustained note or tone in which the primary vibration of the tone or note is broken up into several other partial modes of vibration which generate a series of overtones – essentially harmonics – which contribute the richness, fullness, and depth of the original tone or note.

In the essay, “Hearing : Seeing”, Sharits questions “can there exist a mixture of a fundamental tone with its overtones? . . . how can one film frame of one solid color possess such a quality? It cannot. Yet, a series of single frames of different colors, which creates a ‘flicker’ can, depending on the order and frequency of the tones, and can suggest the visual experience of sonic overtones.”

One of the other reasons that Sharits worked with color flicker was to attempt to create colors that were “indefinite.” He alternated colors so that our minds wouldn’t fix and register yellow or orange or purple, but would rather be allowed to, in his words “move into and relish [the color] like you’re trying to taste it . . . if I look at one color that is very definite, my mind registers a recognition of this color and prevents me from becoming totally lost within it; so I tend to like colors that are off-colors, that are a bit less definite. I particularly like some layered passages in Monet’s paintings, because as you look at

these areas you become aware, over a period of time, of a multitude of colors interacting and you don't fix on one or the other. It becomes almost like tasting the color; it's a very physical thing."

Sharits' early experiments with color flicker, *Ray Gun Virus* being the most direct, were an attempt to try to recreate a sense of color depth that Sharits had only ever experienced on psychedelics, but were also an attempt to some how represent his extremely anxious and depressive emotional state.

HOFFMANN-LA ROCHE, INC.  
NUTLEY, NEW JERSEY 07110

CONTROL NUMBER (69-73)

PACKED BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_

TYPE OF BOX: \_\_\_\_\_

Dr. Attar  
Columbia State Hospital  
Helmuth, New York

SHIPPING CHARGES: \_\_\_\_\_

SHIPPED FREE OF CHARGE

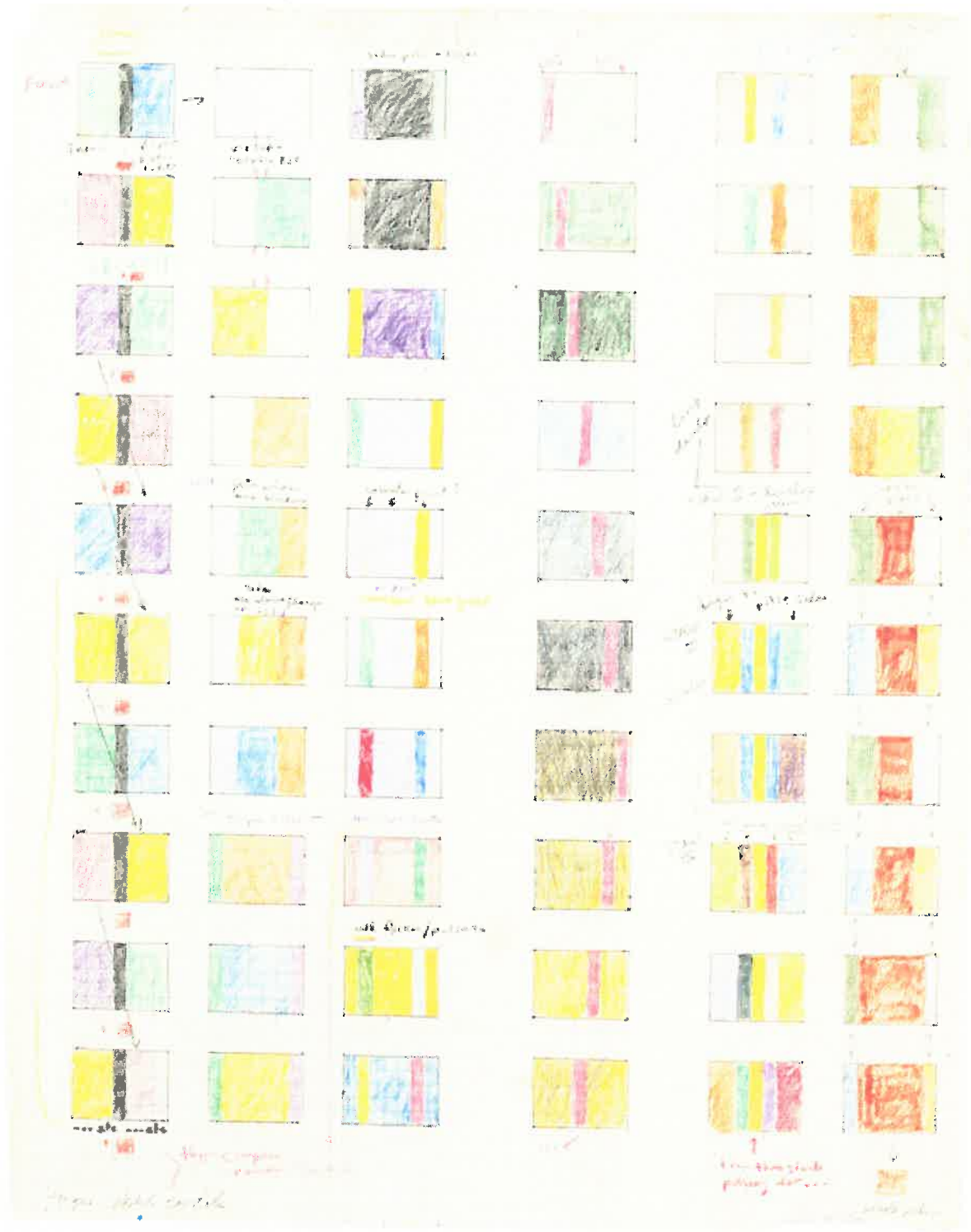
DATE	REQUESTED BY AND TYPE INITIALS	ACCOUNT CODE (17-31)	(22-24)	WCH
2/1/66	RSB:mk			1

PRODUCT CODE (1-9)	QUANTITY (14-20)	Package Size	DESCRIPTION	LOT NO. (57-61)
			Aspects of Anxiety	

2  
7263

This [PP GN14], a bit of an aside, is an unexplained packing slip from one of Sharits' hospitalizations, in 1966, in which "aspects of anxiety" were shipped by one "RED: mk".

Sharits often referred to *Ray Gun Virus* as being made on the verge of suicide, and as a film that, on completion, pulled him out of the depths of depression and back to life – what he called "re-birth as self-projection" – again, to use Sharits' words: "Light-color-energy patterns generate internal color-time-shape and allow the viewer to become aware of the electro-chemical functioning of his own nervous system. Just as the film's consciousness becomes infected, so does the viewer's consciousness: the projector is an audio-visual pistol; the screen looks at the audience; and the viewer's normative consciousness. The film's final 'image' is a faint blue; the viewer is left to his own reconstruction of self, left with a screen upon which his retina can project its own patterns."

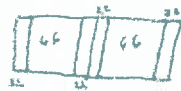


[PP Music Drawing]

Sharits had created multi-screen projection pieces as early as the double-projection *Razor Blades* dated from 1965 – 1968, and by the early 1970s he was making what he referred to as “locational film pieces” – films that would occupy spaces other than that of the theater – spaces whose shapes and scales of possible sound and image sizes were part of the piece<sup>3</sup>, film works which often could be screened in various configurations. *Shutter Interface*, from 1975, like many of Sharits’ films from this period was made in two different forms

Note: Drawings of Arrangements

To do: Arrangement II

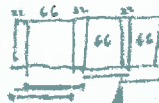


Done:

Arrang. I



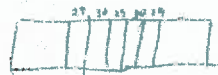
Arr III



Arr II

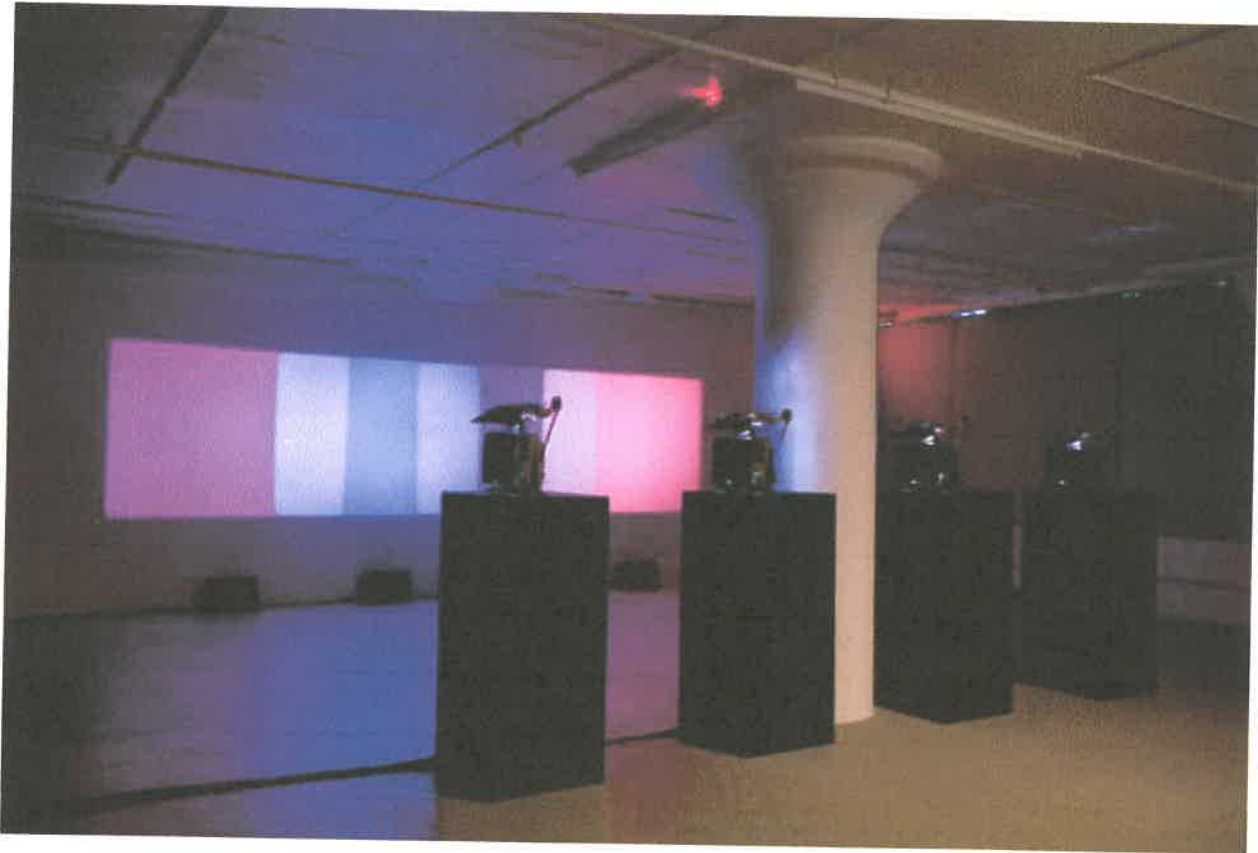


Arr (Optional)



<sup>3</sup> Sharits, “Statement Regarding Multiple Screen / Sound ‘Locational’ Film Environments – Installations” 1976

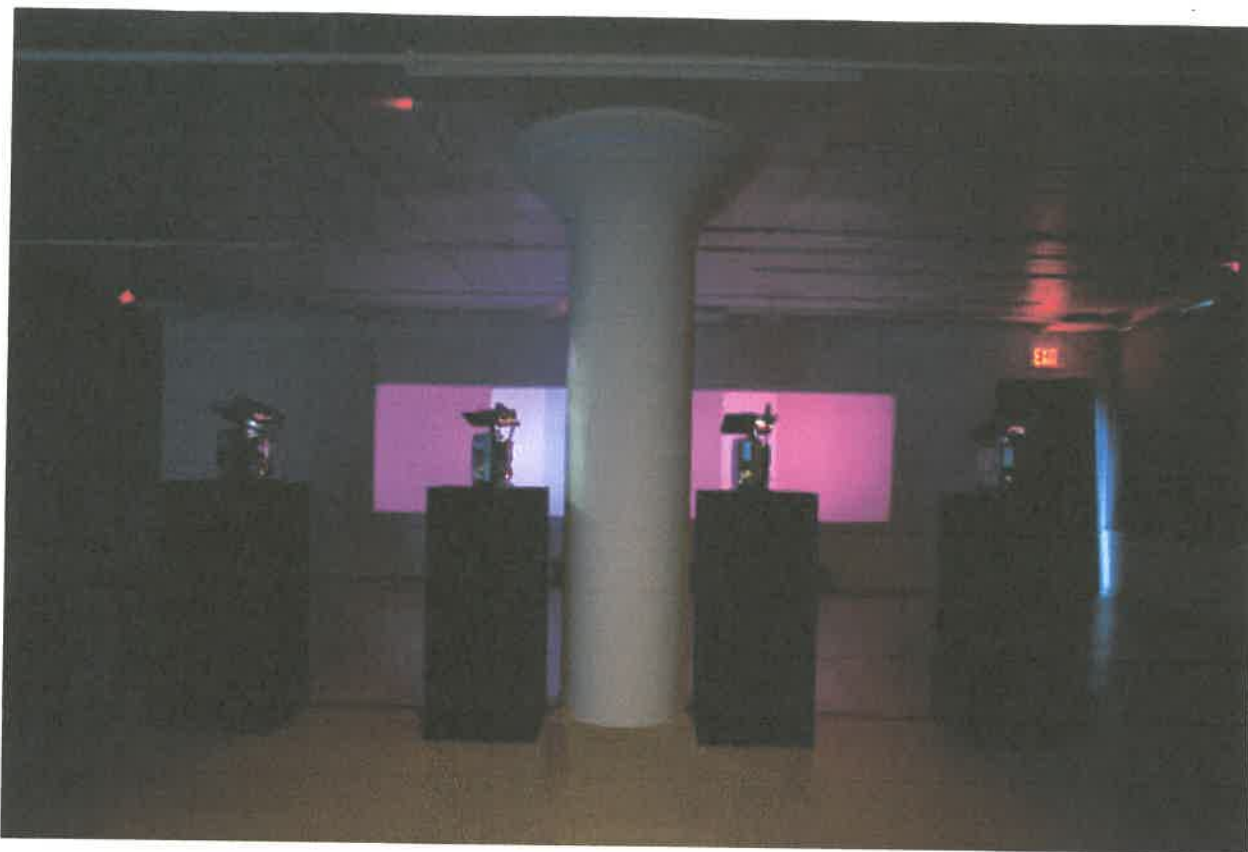
[PP GN18] --- this is an early sketch for some of its configurations --- and ended up existing as a two-screen projection meant to be screened on a screen in a movie theater and as a four screen image and sound loop projection of indefinite duration meant to be installed in a gallery space.



[PP SI-OtherSideInstallation]

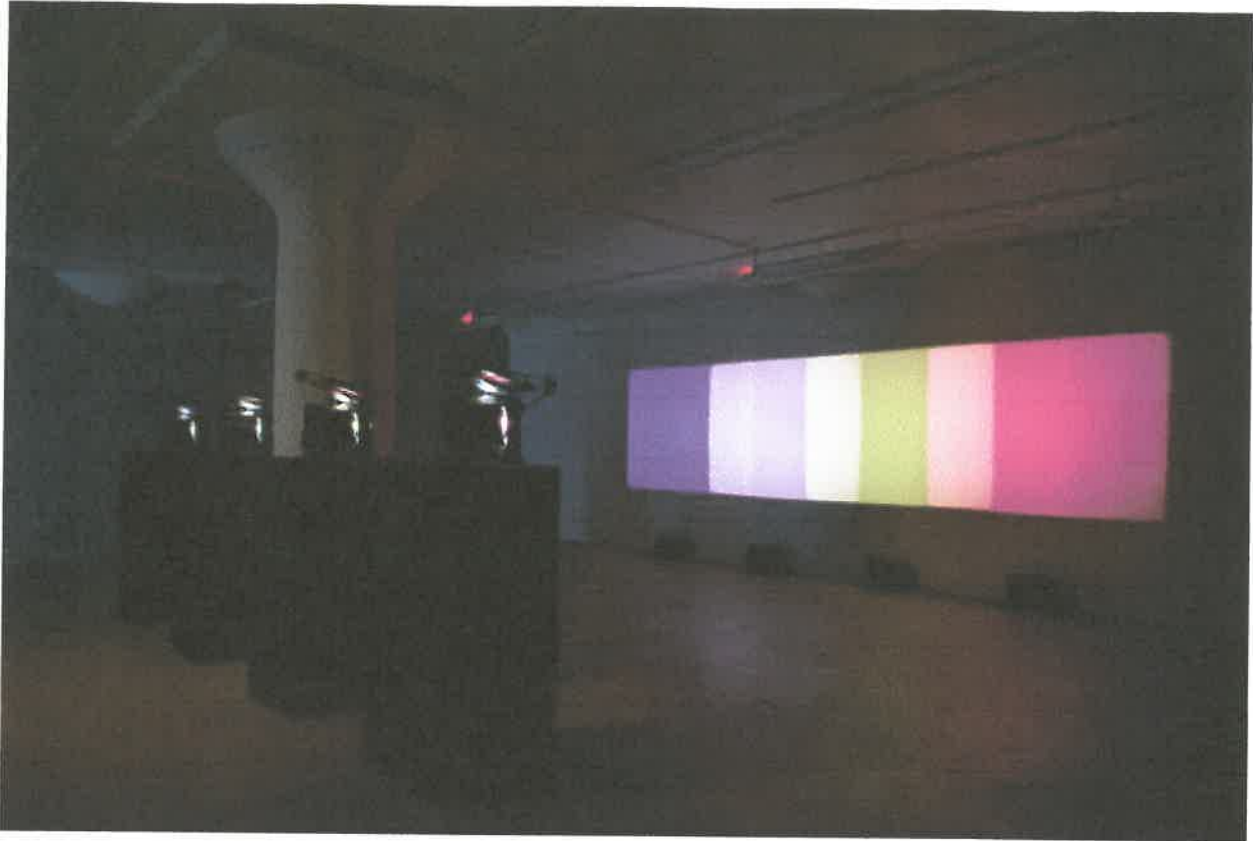
*Shutter Interface* was made while Sharits was in residence at Artpark in Western New York and it screened there in its 4-projector installation form in 1975 and at the Droll / Kolbert Gallery in New York City in December of 1977. The original film loops were recently restored by Anthology Film Archives and the 4-projector installation version of *Shutter Interface* screened earlier this year, I believe for the first time since 1977, in a solo exhibition of Sharits' work at the Greene Naftali Gallery in New York.





[PP SI-BehindProj]

The piece consists of four projectors placed visibly inside the gallery space, side-by-side, 34 inches apart on four 4 and a half foot high, 2 by 2 foot pedestals placed 18 feet from a large wall. Four speakers which correspond to each of the projectors are placed directly beneath the projected images.

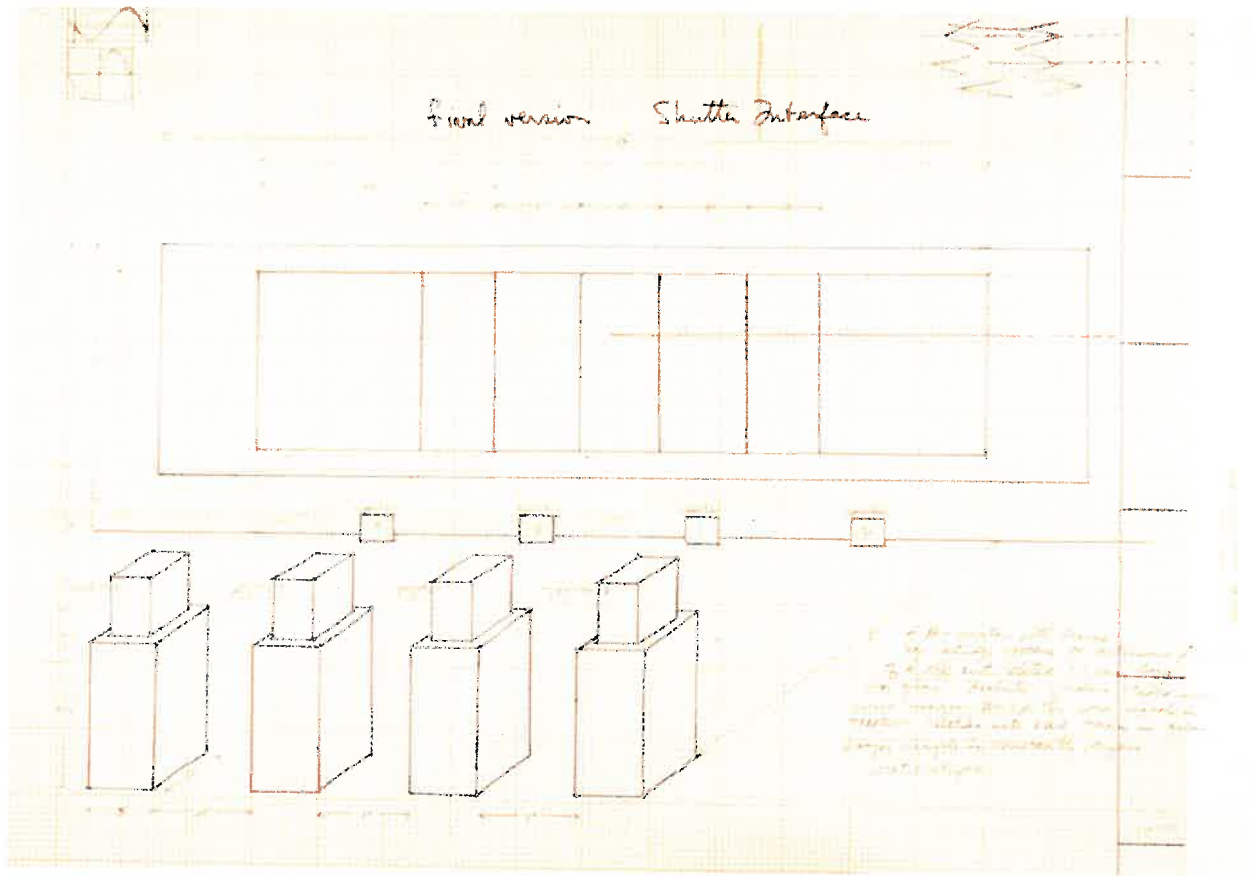


**[PP SI-31]**

The projections overlap so that they create a composite projection 26 feet in length and 6 feet high.

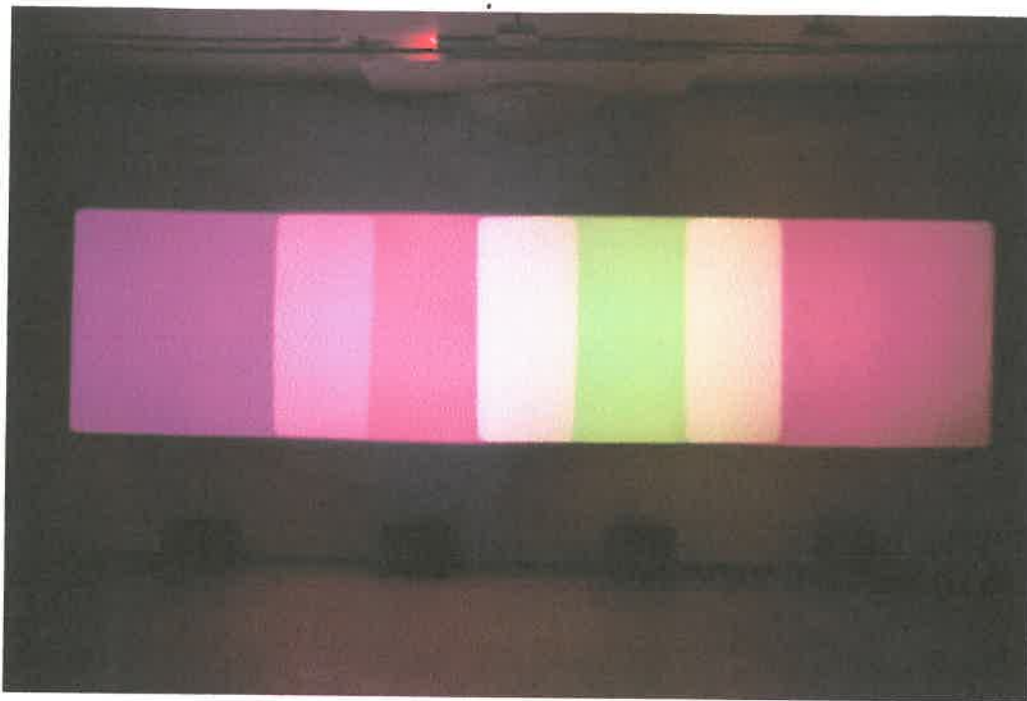
**[PP SI-Front1]**

The size of this projection – its aspect ratio as it were, makes it about 1 unit high to 4.33 units wide, significantly wider than anamorphic cinemascope projection.



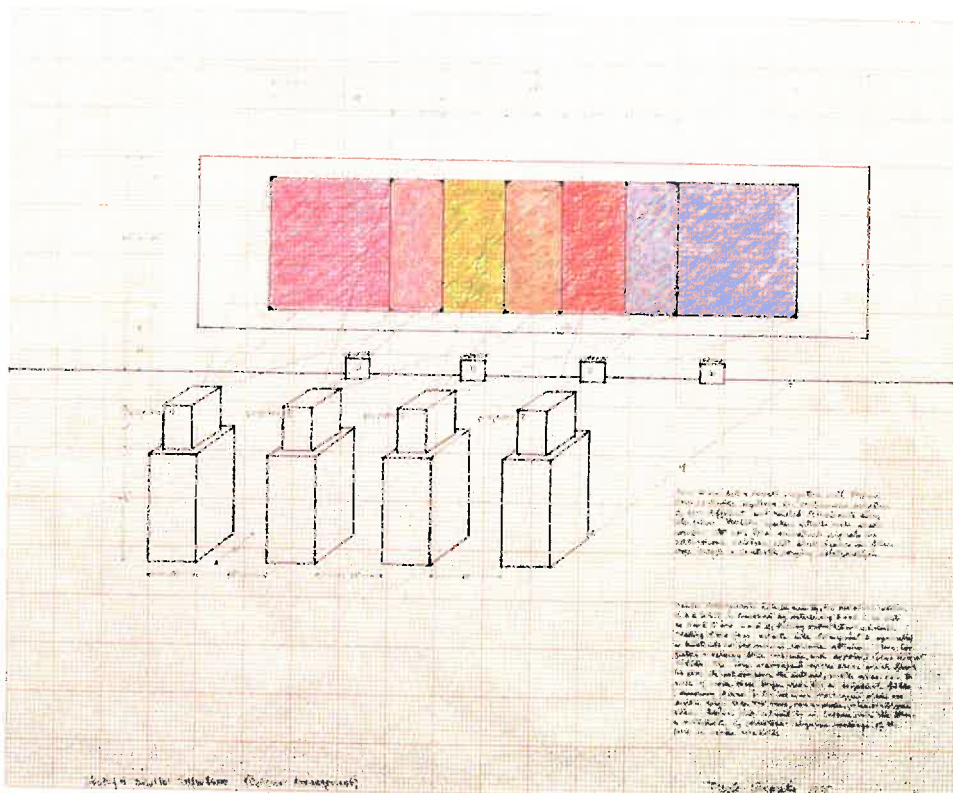
[PP GN21]

The four projections create 7 interlocked rectangles – with the two largest on the extreme left and right sides of the projection.



[PP SI-Front2]

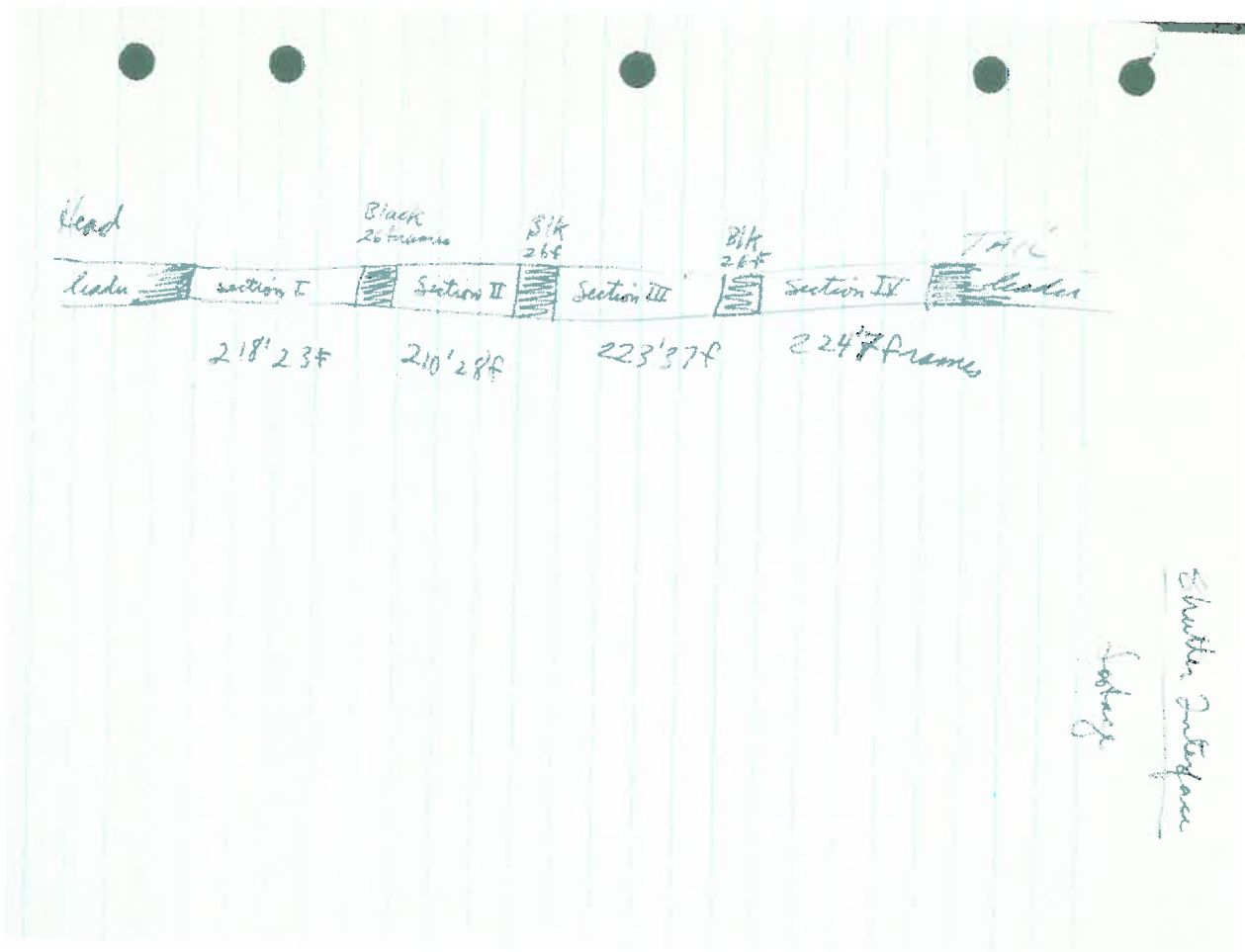
On each loop, sequences of color frames are printed that range in length from 2 to 8 frames, and these color frame sequences are punctuated by single black frames.



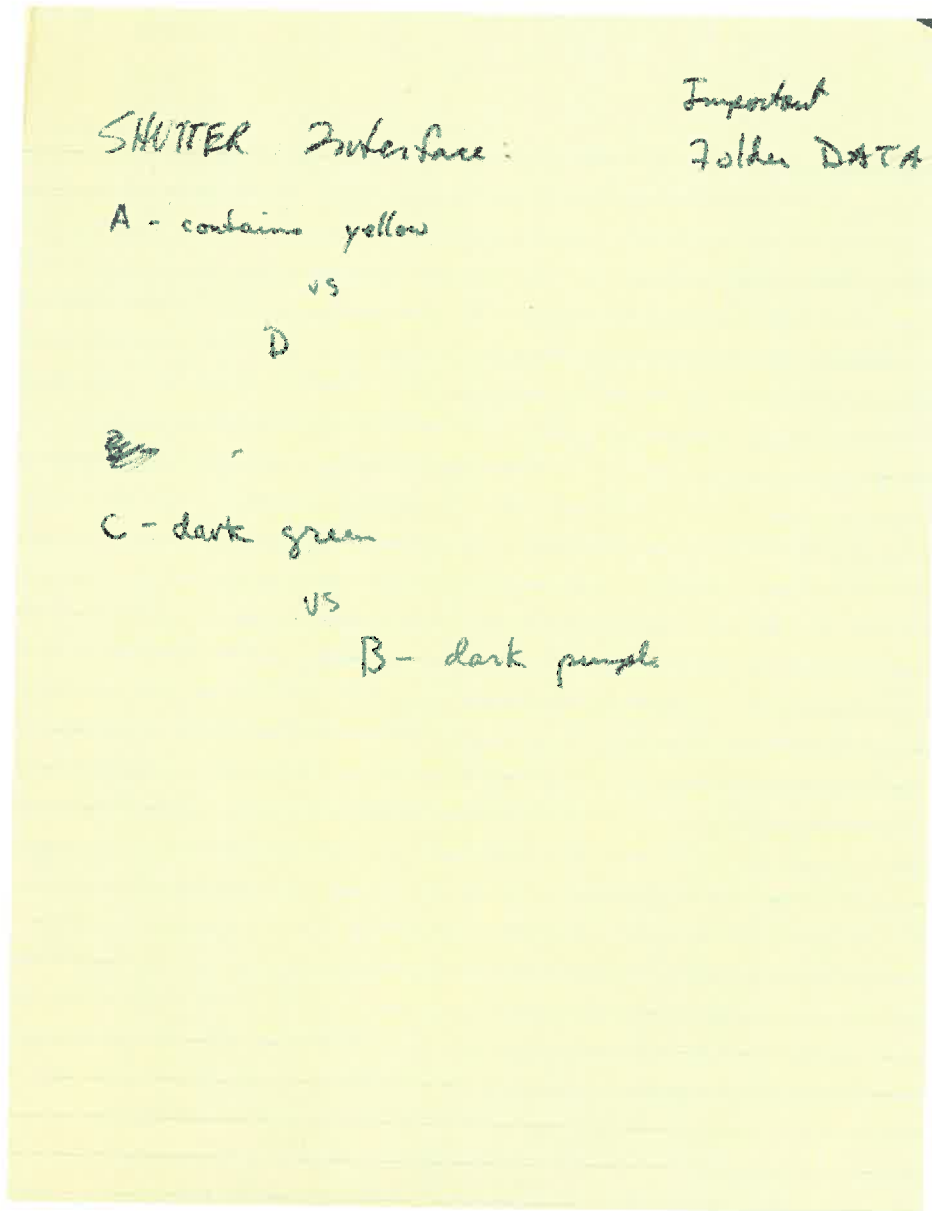
[PP SI-Plan1]

Each black frame directly corresponds to a 1000 cycle per second tone that is printed on the soundtrack such that, on any of the 4 individual film strips, tones occur synchronously only with black frames.

Each loop is a different length, visible here in one of Sharits' notes,



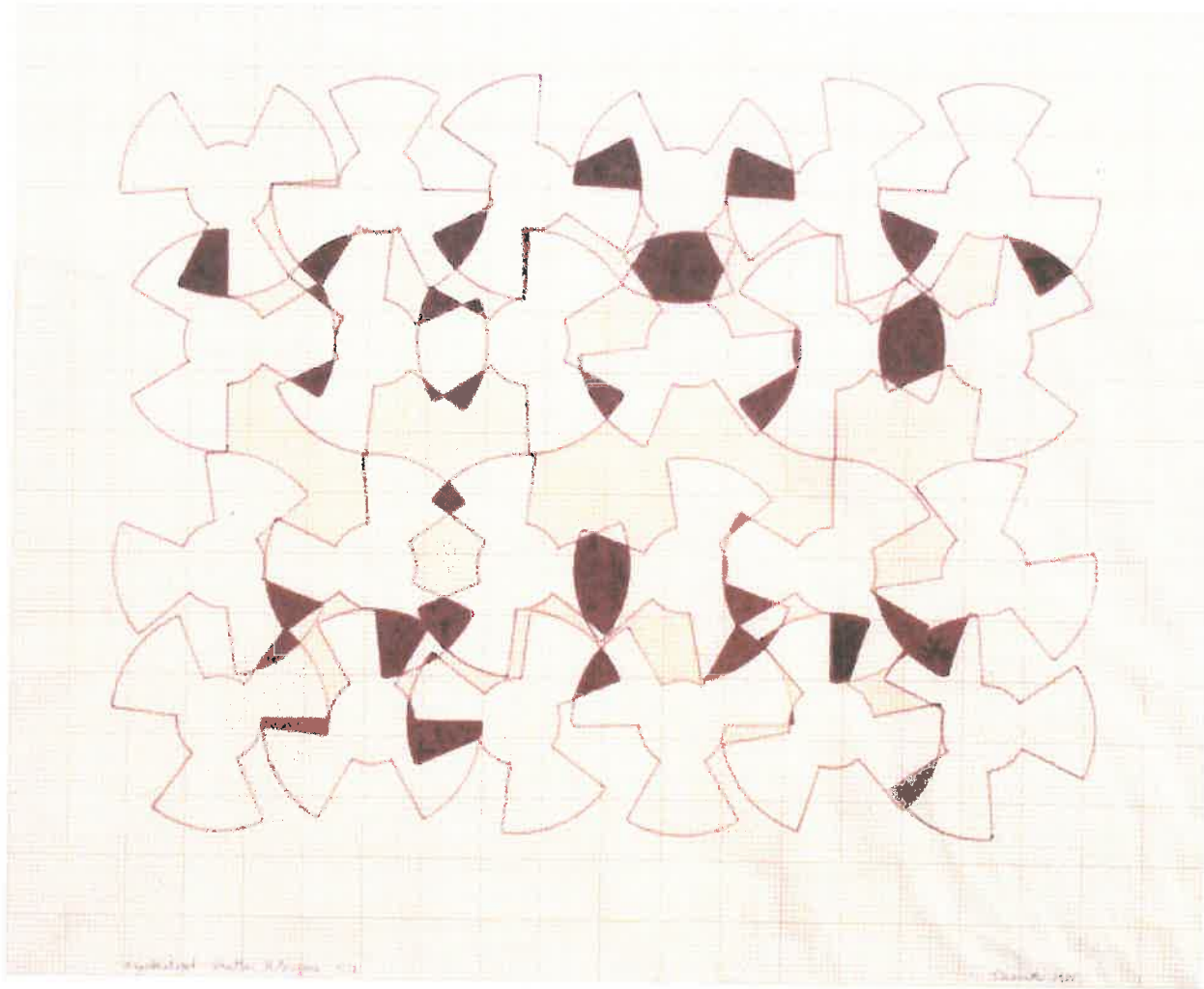
[PP GN33], each is around 6 minutes give or take a few seconds. Each loop is dominated by a slightly different color and pattern of alternating colors – here



[PP GN35], as you can see, loop A contains yellow, versus D; and C contains dark green vs B which has some dark purple. Lighter colors, like various shades of pink, green, blue, and yellow, dominate A. Dark purple, pink, and navy blue dominate B and D. C is comprised mostly of dark green, pink, and light yellow<sup>4</sup>.

<sup>4</sup> Stuart Liebman, "Apparent Motion and Film Structure: Paul Sharits' *Shutter Interface*". *Millenium Film Journal*, 107.

[PP SI-ShutterDrawing] This is a representational drawing of the piece from 1974 titled "Shutter Interface".



As Sharits describes the piece in the notes for the film's original installation at Artpark: "The central idea was to create a metaphor of the basic intermittancy mechanism of the cinema: the shutter. If one slows down a projector, one observes a 'flicker'. This flickering reveals the rotating shutter activity of the system. Instead of slowing down a projector, one can metaphorically suggest the frame-by-frame structure of film (which is what necessitates a shutter blade mechanism) by differentiating each frame of the film

by radical shifts in value or hue . . . I discovered, two years ago, that I could heighten this metaphor by partially overlapping two screens of related but different ‘flicker footage’ and the conception of four overlapping screens began to evolve.”

[PP screen clips of the installation]

Sharits described the movement of the colors in *Shutter Interface* as like watching “fireflies or water flowing over a dam – something that’s moving. A fire or a candle – it’s shifting – but it doesn’t change its form dramatically.” The colors do move in really fascinating ways – distinct colors are articulated and separated in one instant, then seem to move in horizontal washes across the screen, then pulse and flicker in and out of one another. A pink will seem to dominate, followed by bursts of yellow, followed by magenta, followed by purple. Dominant colors are always balanced and challenged by other minor, responsive colors, which reflect and respond to the shifting major tones. There is often a direct and kinetic movement of color from left to right – almost like a wipe or “chromatic wave”<sup>5</sup> across the projections . . .

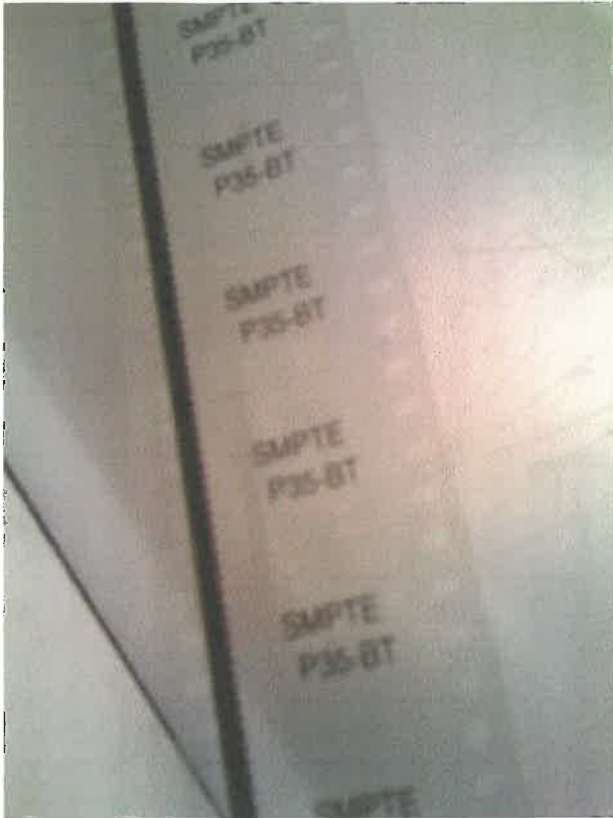
In the overlapping areas, the colors have a tendency to blend together and push toward a kind of whiteness . . .

this overlap, or interfacing, is really beautifully mirrored in the overlap of tones that accompany the color shifts – which I’ll talk about in a moment.

---

<sup>5</sup> Liebman, p. 107





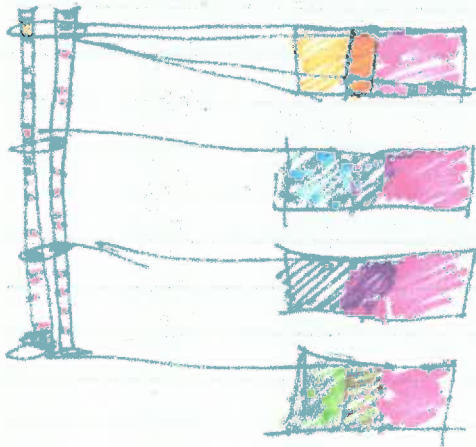
[PP Pink Noise Loop] loops that contain electronically generated pink noise that are used to test the sound frequency spectrum in a given theatrical space. [PP GN37] Interestingly, in connection to both Sharits' and structural cinema's emphasis on flicker, one of the most commonly occurring types of pink noise is called "flicker noise" --- in questioning the "pink-ness" of the film and its original title, this, somehow, doesn't seem insignificant.

In Sharits' notes for the film, he continually questioned how he could signify something – a movement or a function – that isn't visible.

Strips

Representation of Shutter Phasing

Intro. of black frames between images (color of  
variable lengths from 24 to 14)



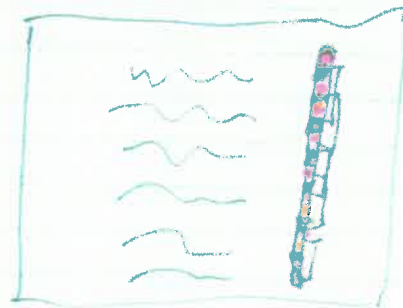
Not perceivable because too short brief

[PP GN2] Sharits used single black frames to create a flicker effect and reference the shutter mechanism of the film projector, but it wasn't solely the blackness, or absence of color, of these frames that he relied on to reference the shutter. In this note for the film,

## Strips: Sound <sup>function</sup>

Representation of shutter <sup>function</sup> sound. If each black frame ~~means~~ signifies the momentary blocking of light by the projector shutter ( ~~the~~ a fact which is not directly perceivable), then if tones are correlated to these these tones will indicate -- point to -- ~~the~~ imperceivable dark moments

Note that sound & image are separated 26 frames on the film strip



[PP GN3] he writes, "If each black frame signifies the momentary blocking of light by the projector shutter, then if tones are correlated to these, these tones will indicate these imperceivable dark moments . . . sound units are perceived more clearly, distinctly, than their visual-temporal equivalents --- the colors tend to blur into each other, due to retinal inertia, yet it becomes clear that the sound separates the light flashes and helps to "see" the individual black frames so that the shutter signifier (the black frames) is signified

aurally. In a later note, he writes that the "soundtrack is in sync with what we cannot see but which is the basis of the entire enterprise."

<sup>shutter</sup>  
our "signifier" (6k frames) being  
signified ~~by~~ ~~audition~~ aurally  
Our soundtrack is in sync with  
what we can not see but  
which is the basis of the entire  
enterprise.

[PP GN8]. The entire enterprise, here, I believe, referring not only to the film but also to the entire enterprise of cinema.

Sharits has said that he wanted the sonic and visual rhythm of the film to be pleasant and in order to make the experience as pleasurable as possible, he would model the sound used after high-amplitude alpha waves. He did biofeedback and listened to the sound of his own alpha rhythm and then tried to approximate this sound in his choice of tone.

If you were to walk up to each of the speakers and put your ear directly in front of it, you would hear something like this:

[PP - play sound of individual speaker]

And, if you were to stand in the middle of the gallery, you would hear something like this:

[PP – play sound of room tone]

Because at any given moment it is likely that at least one black frame will be projected, the discrete tones on each film strip dissolve into a continuous, high-pitched whine --- something like the sound of air whistling through an elevator shaft.

This whine varies greatly in both pitch and volume depending on the number of black frames projected at any given time. The sounds are locked together in a type of overtone, phase relationship – recalling the phase work with tape loops done by composers like Steve Reich. The pacing of the tones, in conjunction with the slight differences in speed of the individual projectors and the irregular and unpredictable build-up of dirt on the film strips or optical readers, causes minor, micro-tonal differences in pitch.

Of course, because all four projectors are running simultaneously, sound is constantly occurring --- tones are bouncing all around throughout the space – they are sometimes sustained, almost like a drone, and at other times seem to ping pong back and forth across the space – almost like they are bouncing off of one another. They stutter and blur – move and seem to come together in a wash, then break away into individual, discrete pulses.

The sounds beautifully mirror the movement of color in the piece, yet progress at what seems like an entirely different pace. The different momentum of sounds and images seems to respond to Sharits' question, posed in his essay "Hearing : Seeing" – "What possibilities are there for developing both sound and image from the same structuring principle and simply presenting them side-by-side as two equal, yet autonomous articulations of one conception?"<sup>7</sup>

In Barbara Cavaliere's review of the piece in Arts Magazine in February 1978, she writes that:

"Paul Sharits' installation invites the viewer into its encompassing aura; on walking into the room, one enters into the dreamlike atmosphere of technicolor sound; one becomes the shadowy form of self surrounded by the whir and hue of infinite life in the technology of the fascinating cinema screen."

This shadowy form of self, the self surrounded by the whir and hue of infinite life, evokes Sharits' statement to Hollis Frampton in 1973, the year he started working on

---

<sup>7</sup> Sharits "Hearing : Seeing" FC 42

*Shutter Interface* in which he stated that he wasn't working on the translation of narrative into color, but was rather working on color narrative. The color narrative of *Shutter Interface* is, at least in part, the color narrative of self, of humanness, of our perceptual in-here-ness, as reflected in cinematic space.

In 1983, 10 years after he started working on *Shutter Interface* and 10 years before he died in Buffalo, New York, Sharits described a film he was working on – a film that had a beginning, but no end. These are images from the scores for that film, *Passare*.

In Sharits' words:

"It is a kind of chronicle done in pure color of experiences, various types of experiences --- emotional, visual experiences, experiences in different places ---- and trying to translate those feelings or perceptions and so forth into color patterns. I'm using my experience in the world as a subject, but there's nothing guiding this, it's just like in my life: I don't know whether I'm going to feel sad or happy the next day . . . this film will end when I end."

And, with this tone lingering among us, I have ended.

