“Space in the Brain” addresses the intersection of cosmic exploration and pictorial abstraction in the cinematic avant-garde. Using methods from hand-painted film to pioneering computer animation, artists have taken inspiration from the Space Race of the 1960s to create new depictions of mental interiority. Films by Stan Brakhage, Jordan Belson, Lawrence Jordan, Jeanne Liotta, Len Lye, José Antonio Sistiaga, Makino Takashi, Stan VanDerBeek, John and James Whitney.

Programmed by Gregory Zinman, Georgia Tech

Eli and Edythe Broad Art Museum & the Film Studies Program, Department of English
* This screening’s title is taken from Swedish painter and photographer Ture Sjölander’s Space in the Brain, a half-hour program made in 1969 for Swedish National Television. Working with Bror Wikström, Sven Höglund and Lasse Svanberg, Sjölander manipulated still images of the Apollo 11 mission—given to him by NASA—into full-color abstractions to produce a “space opera” set to searing acid rock by Hansson & Karlsson. These “electronic paintings,” as Sjölander called them, were the first color television signals to be electronically manipulated, and were subsequently made into a variety of still images, including tapestries, LP art, paintings on canvas, and posters.

**Stellar** (Stan Brakhage, 1993), 3min
A prodigious artist whose renown eclipses that of any other American experimental filmmaker, Brakhage began making films in 1952, eventually producing nearly four hundred works in all. Brakhage’s hand-painted films, which made up the bulk of his late output, from the 1990s up to his death in 2003, reflect his life-long interest in expanding the boundaries of vision and perception. Brakhage called Stellar a “visual envisioning of outer space.” Here, he makes extensive use of black leader to create striking contrasts in figure-ground relations, punctuating prolonged passages of darkness with flaming thicket of color. Courtesy of Canyon Cinema.

**Lapis** (James Whitney, 1966), 9min
John and James Whitney were pioneers of computer animation, and their films are dedicated to representing complex mathematical patterns that occur in nature and music. Lapis brings together James’s convictions regarding the close relationships between science and art, as well as ancient ideas about the correspondences between music and form. Propelled by a sound track of Ravi Shankar on sitar and Alla Rakha on tabla, Lapis is an attempt to portray Pythagoras’s music of the spheres via tetractys, or pyramids of dots. Lapis refers to the alchemical philosopher’s stone of transformation, and Whitney himself thought of the film as a “space/time mandala.” For Lapis, James hand-painted the imagery onto animation cels, and John’s analog computer ensured the correct placement of James’s intricately planned sequence of multiple exposures and moving imagery, in which thousands of dots were put into action on the various axes of the machine’s multiple rotating tables. The film is thus not a work of computer-graphics, but a film made with the aid of John’s artisanally-designed computer. Courtesy of John Whitney Jr., Whitney Editions, LLC.

**Eclipse** (Jeanne Liotta, 2005), 3min
Liotta has been working in experimental film, video, and performance since the 1980s, and is known for incorporating scientific concepts into her work. This film was made during the lunar eclipse of November 2003 which, according to Liotta, “is observed, documented, and translated by eye and hand via the light-sensitive medium of Kodachrome film. In the 4th c BCE Aristotle founded The Lyceum, a school for the study of all natural phenomena pursued without the aid of mathematics, which was considered too perfect for application on this imperfect terrestrial sphere.” Courtesy of the Artist.
Impresiones en la alta atmósfera (José Antonio Sistiaga, 1989), 7min

[Impressions of the Upper Atmosphere]
Basque painter Jose Antonio Sistiaga hand-painted Impresiones en la alta atmósfera on 70mm film. The large format gave Sistiaga tremendous control over detail and color. He created two different versions of the film: One is dually dedicated to the ballet dancer Vaslav Nijinsky and sculptor Jorge Oteiza, the latter a member of the artist collective GAUR founded by Sistiaga and other Basque artists. The other version is dedicated to Vincent Van Gogh, because the film, Sistiaga says, “referred to the stars, to the sun.” The first version ends with an emptying out of color and form, while the “Van Gogh” version ends with an explosion of light and color. The dedications are to a trio of suicides, all artists who were consumed by madness. This film is composed of ten thousand individually painted frames and anchored by a central image of a circle, in and around which colors pulse and scatter. Although the film’s imagery is unabashedly cosmic, bringing to mind planets, black holes, and supernovae, the soundtrack is grounded in the Basque countryside and features a whirring white noise that recalls a whistling wind, and concludes with a shocking cry—the “irintzi” call of Basque shepherds. Courtesy of Light Cone.

Solar Sight (Lawrence Jordan, 2011), 15min
A dreamlike collage animation film by a master of the form who has been making experimental films since the 1950s. Courtesy of Canyon Cinema.
“A question I had in mind was: what’s the place of the human being in the cosmos? More and more we think about what is ‘beyond.’ Less and less is art concerned. I don’t know why. The question seems a bit grandiose, but I approached it quite simply. I have never worked with color photography as primary background to cut-out animation before. I was surprised that the result was so powerful (helped by John Davis’ very resonant music). It was liberating to release human figures into an apperception of suggested space, along with the primordial enigma of the revolving sphere.” – Lawrence Jordan

Particles in Space (Len Lye, 1980), 4min
New Zealand artist Len Lye was a pioneer of direct animation techniques, creating the first publicly-seen example of hand-painted film with A Colour Box in 1935. Lye began work on Particles in Space in 1966 and completed it with the help of his assistants Paul Barners and Steve Jones in 1979, a year before his death. Lye scratched into the emulsion of the celluloid with a wire brush to create what he called “nests of energy.” The film’s soundtrack brings together several different sound sources, including drumming from the Yoruba in Nigeria, as well as noises produced by Lye’s own kinetic sculptures Flip and Two Twisters (1965) and Storm King (1964). Animation historian Paul Wells views the film as Lye’s “attempt to project the cellular life of his brain and body directly onto film, in the hope that its abstract pattern and movement was a document of the dissolution of his neuro-physiological state as he neared death.” Lye claimed he found inspiration for the film’s imagery while reading accounts of the Apollo 14 astronauts, who had seen a variety of light-particle phenomena outside their cabin window while in orbit. Digital version by Weta Digital and Park Post Production Ltd, from material preserved and made available by Nga Taonga Sound & Vision.
PoemField No. 5  (Stan VanDerBeek and Kenneth Knowlton, 1968), 7min
VanDerBeek began making experimental films in the fifties, and, between 1964 and 1968, he collaborated with Bell Labs computer programmer and artist Ken Knowlton on a series of eight computer-generated films using Knowlton’s BEFLIX (“Bell Flicks”) programming language. BEFLIX was written in Fortran and produced punch cards that were then put into an IBM 7094 that was connected to an SC-4020 microfilm plotter. The resulting hybrid works were titled PoemFields, made on computer and recorded with a 16mm film camera. The films combined color flicker patterns, text fragments, computer graphics, live action shots, and VanDerBeek’s collage animation, which he had refined in earlier films such as Science Friction (1959) and Breathdeath (1963). VanDerBeek described the PoemFields as “samples of the art of the future” that in time would resemble illuminated manuscripts in comparison to the sophisticated and ever-accelerating moving images to come, “a step away from mental movies.” Poemfield No. 5 animates the letters F R E E F A L L with superimpositions of skydivers on computer-animated sequences of geometric forms, numbers, and words. Courtesy of the Estate of Stan VanDerBeek.

still in cosmos  (Makino Takashi, 2009), 17min

“When watching a film, the viewers all sit in the same darkness and receive the same light and sound but each of them sees a different dream. I believe that this symbolizes a reversion to their initial state, that when they look at total chaos through newborn eyes, they give birth to a new cosmos. Though this process they are able to reconfirm their existence which is an act of true creativity. Human beings have produced a world of speech that we are taught is real, but I believe the truth is that we carry many important things with us though our lives that cannot be satisfactorily expressed in words or images. I sincerely hope that the violent chaos that exists in still in cosmos will give rise to the same number of new cosmoses as there are viewers.” —Makino Takashi