

**DISCOVER THE UNIVERSE WITH  
DIGISTAR SOFTWARE, AS IN THIS  
REAL TIME VIEW OF SATURN FROM  
INSIDE THE ICED ROCKY RINGS**



## Welcome to the Digistar Cloud

Looking for a great nebula or galaxy model?

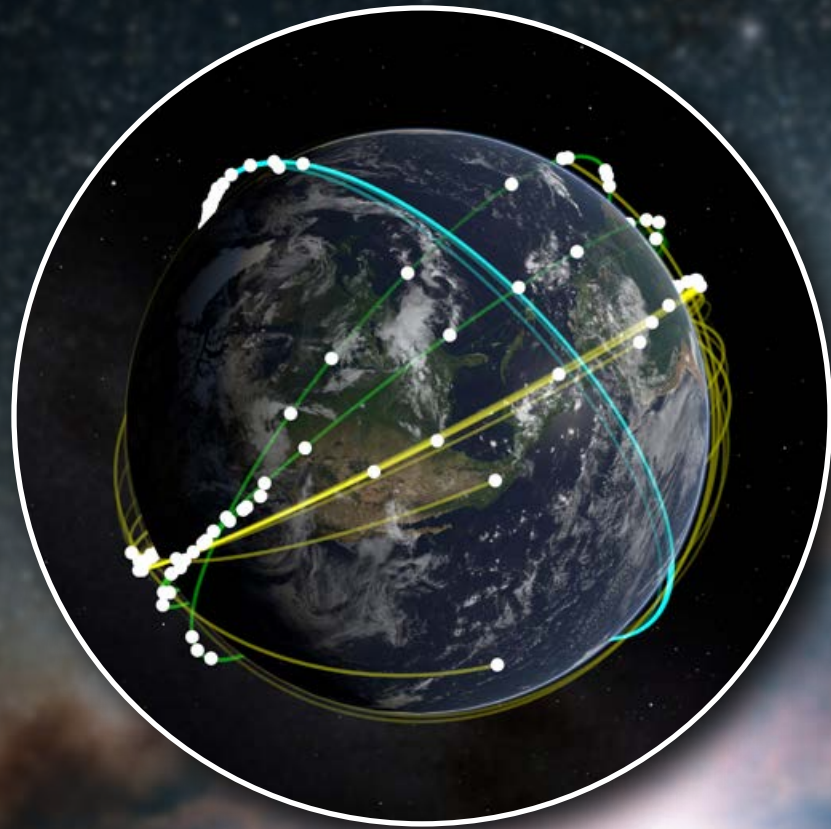
Need a script for moon phases or a trip to Orion?

Want to share your newly created spacecraft model with other Digistar users?

A simple click on the Cloud icon in the Digistar user interface takes you to an extensive online library of user-created models, scripts, images, videos and much more. There you can download what other users have created and upload your own shareable assets for colleagues at other theaters to use. Each file on the cloud is fully documented with a description of the scene, data used, and who created it.

The Cloud Library continues to grow with user generated content from around the world. Here are a few highlights of new content that has been uploaded. Thank you to our strong user community for sharing your talents – Cloud Downloads now exceed 48,000!





## Starlink Satellites

As SpaceX launches more and more components of its Starlink satellite network, stargazers and scientists around the world voice concerns regarding the impact of such megaconstellations on the night sky as well as research with ground based telescopes.

This script activates the system objects for each starlink launch and shows them in Earth orbit. The main script is merely a demo which uses the activation scripts which are intended for live shows. Many other scripts to turn various things on and off separately are also provided.

**Created by Marc Horat**  
**Planetarium Verkehrshaus der Schweiz**  
**(Swiss Museum of Transport)**





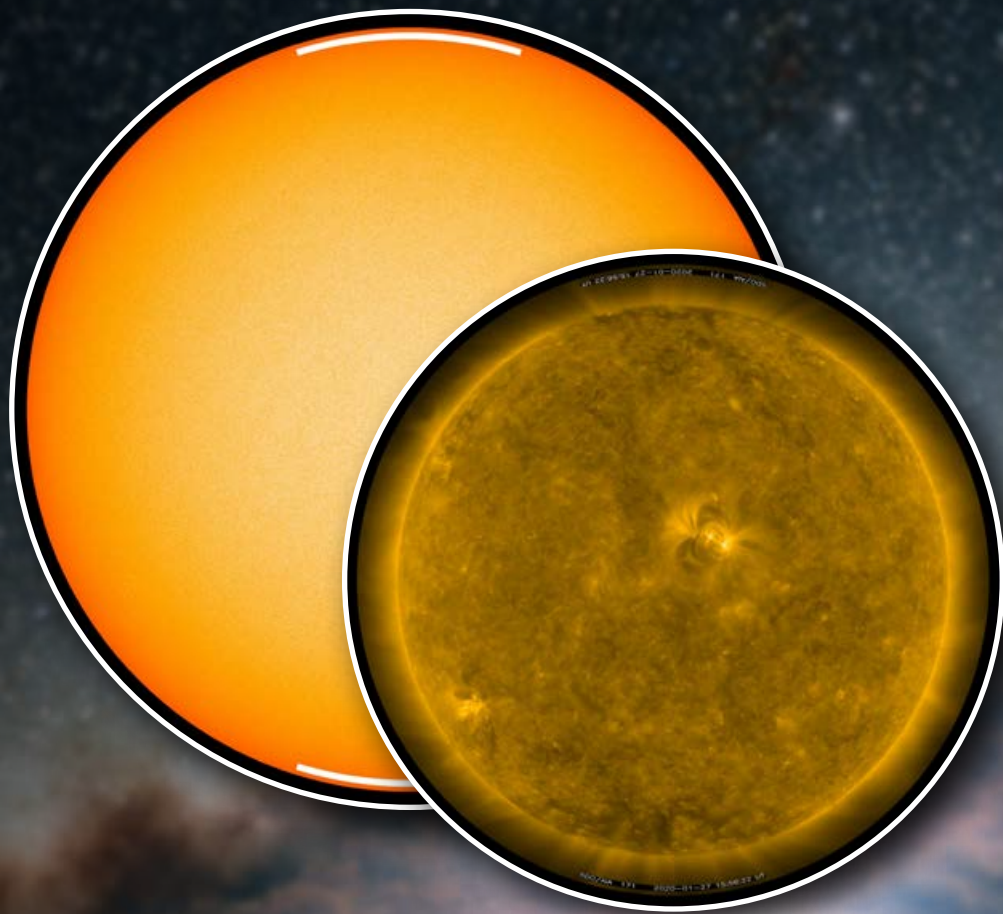
## Latest Earth Full Disks

This set of scripts fetch the latest available fully illuminated Earth picture from various satellites and displays them as Allsky images on the dome. Your previous scene is left intact and after fading the image out with the script provided you can continue as you left. So it's suitable for live presentations.

The following sources are available:  
GOES-16, GOES-17, Himawari-8,  
Eumetsat/MeteoSat 0 degrees, Eumetsat/MeteoSat 9.5 degrees

**Created by Marc Horat**  
**Planetarium Verkehrshaus der Schweiz**  
**(Swiss Museum of Transport)**





## Sun Image Live -SDO 171 & Continuum

These scripts fetches the latest 4x4K full disk Sun image of the Solar Dynamics Observatory (SDO) at 171 ångström or continuum and displays it as an Allsky on the dome. A script to turn it off properly is also provided.

This is suitable for a live presentation format and you'll need Internet access for it to work.

**Created by Marc Horat**  
**Planetarium Verkehrshaus der Schweiz**  
**(Swiss Museum of Transport)**



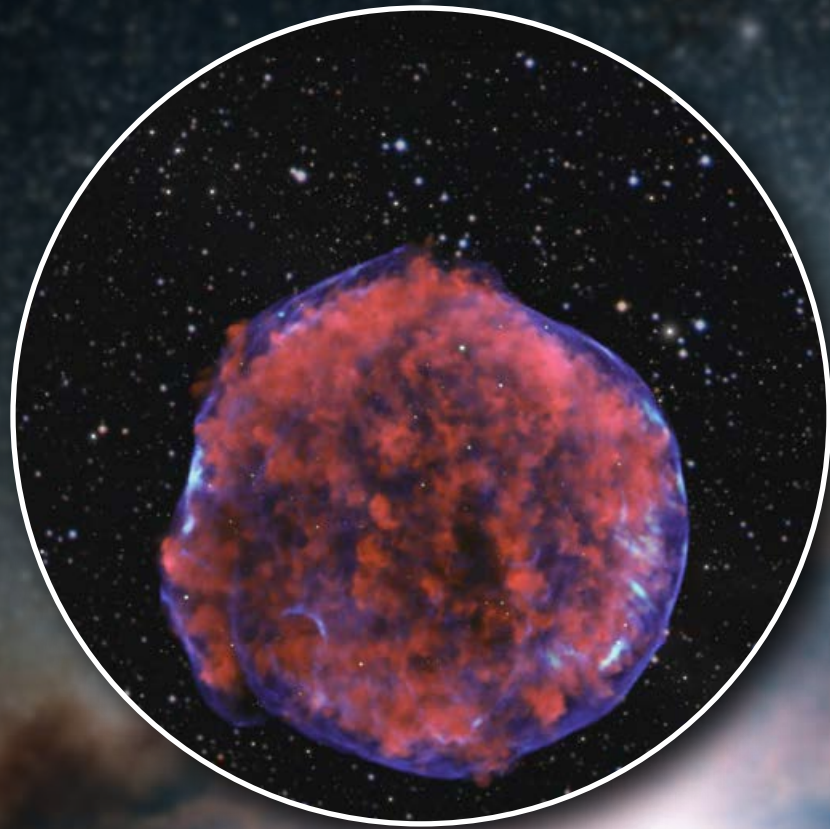


# Kaleidoscopes

A set of 2 minute video kaleidoscope based on the Antennae and NGC 602 Galaxies.

**James Enos**  
**Mesa Community College**





## Making of a Star and Her Entourage

The Making of a Star and Her Entourage traces the evolution of humankind's understanding of the universe. Discover the long journey beginning with the Earth-centered model of the universe in which the Sun was considered a planet, to our current understanding that the Sun is a star centered in the Solar System and is one of billions that reside in the Milky Way.

Visuals were completely produced by students from Colgate, RIT, & Sherburne-Earlville High School: Colgate students - Abi Conklin '13, Alex Crawford '12, Karen Alley '12, Caitlin Grossjung '13, Matt Johnson '15, Ian Dwyer '14, Sarah Byer '15, Brett Rojec '14; RIT student - Alex Burnett '15; Sherburne-Earlville High School - Daniel Galvez. Music produced by Morwenna Lasko & Jay Pun. 5.1 Surround Sound Mixing & Design by Astral Projections. Written by: Jeff Bary, Joe Eakin, Karen Alley '13, Alan Dowling '15, Carrie Burgess '14, Tiers Congdon. Narration by: Anthony F. Aveni, Tiers Congdon.

**Created by Joe Eakin**  
**Ho Tung Visualization Lab**  
**Colgate University**





## Adjustable Betelgeuse

Use this script to demonstrate the fainter appearance of Betelgeuse as of January 2020. This will add a custom Betelgeuse to the sky. Run this script after "Sky On".

**Created by Joe Ricci**  
**Strasenburgh Planetarium**





## Fly To CHEOPS Satellite

This script brings you to the CHEOPS satellite in low Earth orbit. It assumes that the sky is visible and the satellite in a direct line of sight. Included is a 3D model downloaded from <http://scifleet.esa.int/#/model/cheops>

Many thanks to Justin Bartel from SMV for his initiative and the discussions afterwards.

**Created by Marc Horat**  
**Planetarium Verkehrshaus der Schweiz**  
**(Swiss Museum of Transport)**





## The Planets of Star Wars - Update

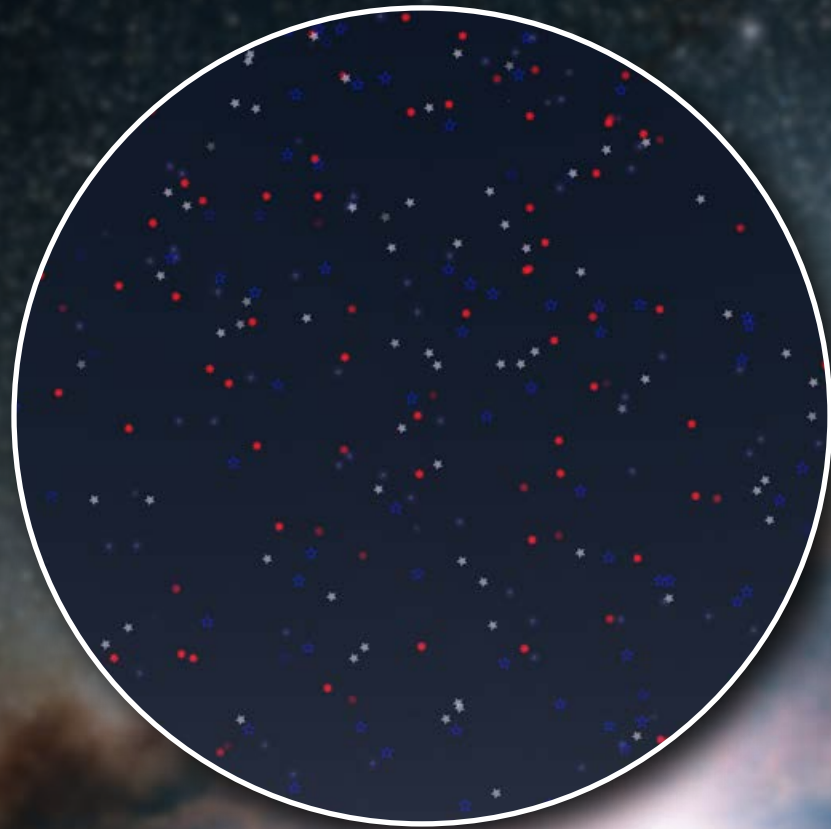
The unofficial Star Wars expansion for Digistar! Including over 30 planets, custom music, landscapes, starships, and everything else you could imagine.

\* 12/29 Update \*

General update fixing bugs in planet behavior (ie. with Lunar and Solar Orbit buttons). Updated unfinished planet list (most are flyable to, but lack certain components). Galaxy Orbit hyperspace effects have been adjusted slightly for performance. I've been working on a production method for creating planets 100% from the ground up without any prior equirectangular assets, and am happy to report the process is largely finished.

**Created by Kevin Scheiman**  
**Boonshoft Museum of Discovery**





## Star Rain Animation

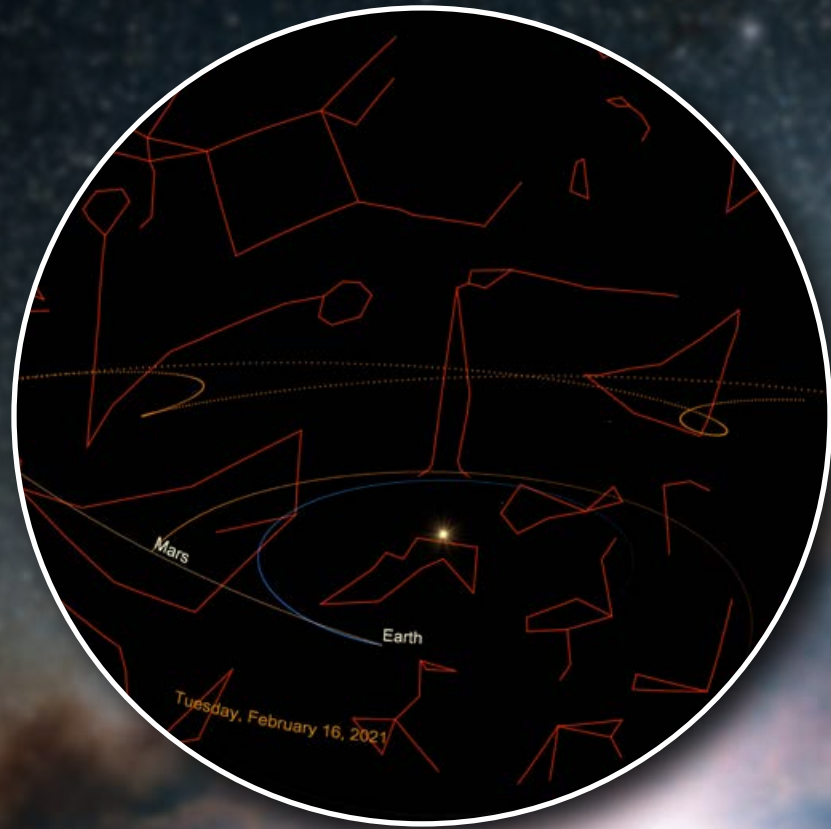
A simple, colorful, effect to fill the dome with raining stars which change colors randomly (an effect which I've achieved with JavaScript).

A script to fade it out is also provided.

This is based on the SnowFX item.

**Created by Marc Horat**  
**Planetarium Verkehrshaus der Schweiz**  
**(Swiss Museum of Transport)**



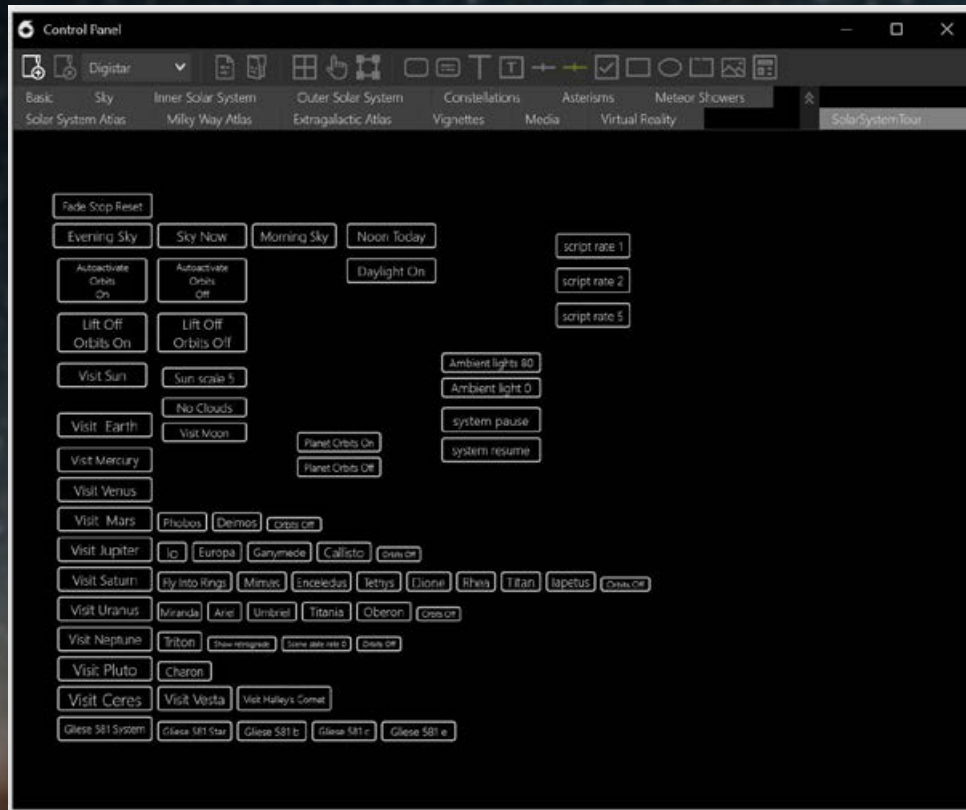


## Mars Retrograde Demo

Demonstration of Mars retrograde 2018. This is a three dimensional visualization of Mars retrograde from a third person view of the solar system.

**Created by Erin Nagelkirk  
U.S. Space & Rocket Center**





## Solar System Tour

Take a free-wheeling tour of the planets, moons and dwarf planets of the solar system. Even investigate an exoplanet.

**Created by Ken Broun Jr.  
Tidewater Community College**





## Five Brightest Objects in the Sky

This script/JavaScript combination will mark, label, and display a ranked list of the five brightest objects currently visible when viewing the sky from Earth. Starting from an example Jacob shared at a DUG workshop a few years ago, I'm using the Ephemeris objects for each planet along with a custom starInfoPreferencesClass object for some of the brightest stars to sort out the brightest objects visible from any time and location on Earth. It's meant to demonstrate to people how often the brightest thing(s) they see in the sky are planets.

**Created by Justin Bartel**  
**Science Museum of Virginia**

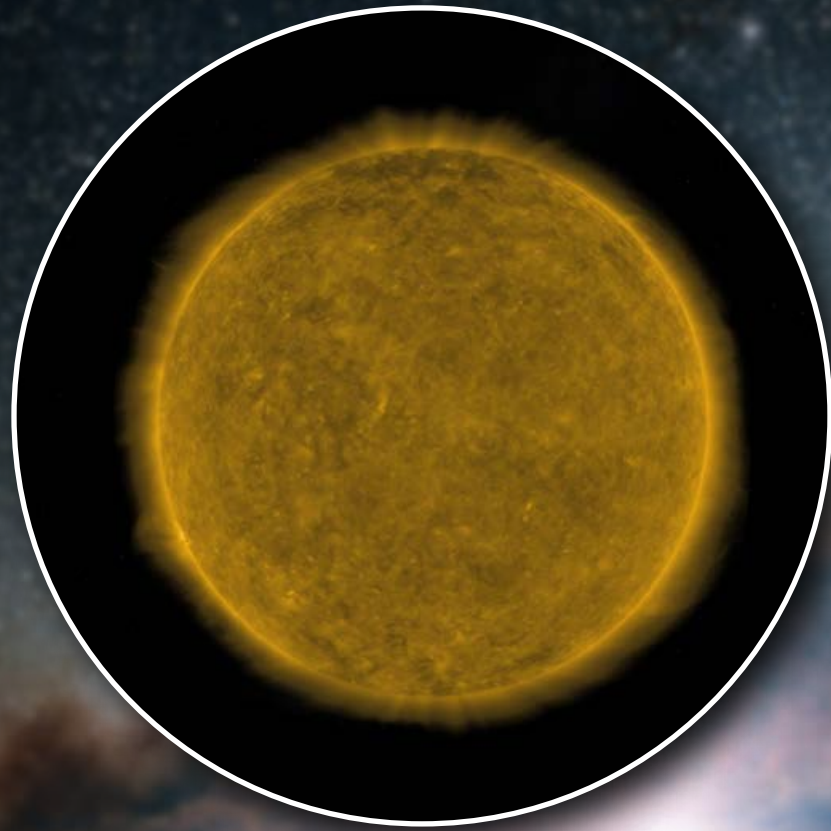




## Cassini Enceladus Plume Dive Oct 28 2015

Simulation of the Cassini spacecraft during the October 28, 2015 Enceladus Plume dive. Cassini flies along the correct trajectory, plumes are to scale and with correct positions and orientations.

Created by Erin Nagelkirk  
U.S. Space and Rocket Center



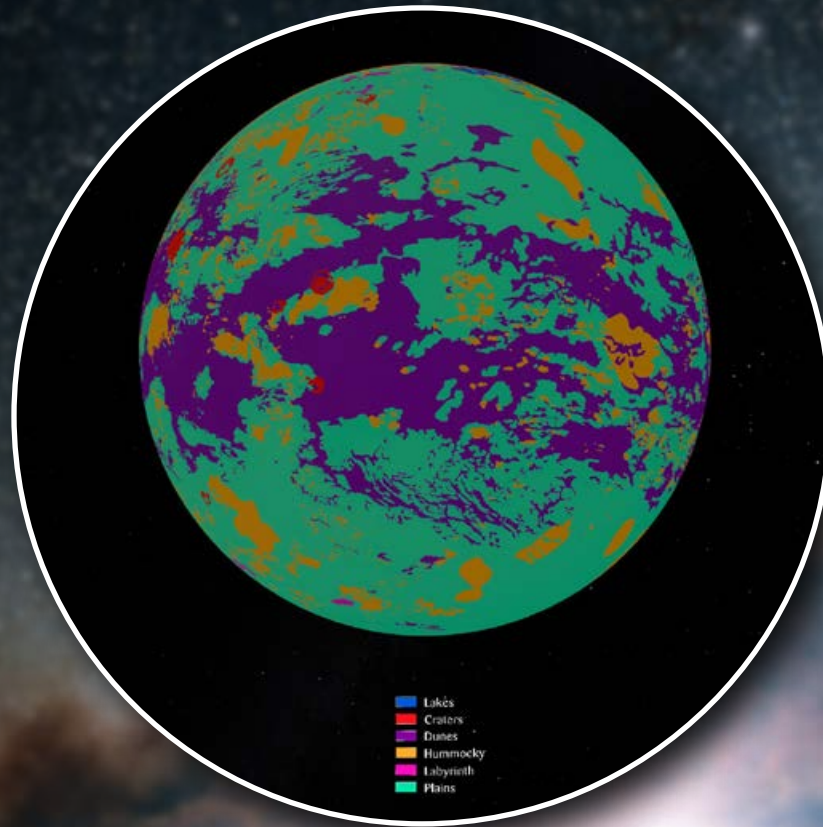
## Mercury Transit SDO Nov 11 2019

SDO solar imagery overlay movie during the Nov 11, 2019 Mercury Transit. Mercury is hard to see, so try slowing down the playback if needed.

Included is a script to remove the video overlay and continue navigation in the solar system.

**Created by Erin Nagelkirk  
U.S. Space & Rocket Center**





## View Titan Geologic Map

This script fades out the existing scene and sets up a scene at Titan that includes the new global geologic map: <https://www.jpl.nasa.gov/spaceimages/details.php?id=PIA23174>

A plain version of the map is called by the script, but a version with a sparse lat/long grid is included in the Cloud download.

Image Credit: NASA/JPL-Caltech/ASU

Simple cylindrical projection of the map prepared by Dr. David Williams, ASU

**Created by Justin Bartel**  
**Science Museum of Virginia**



## Transit of Mercury 2019

A short 10-minute introduction for the transit of Mercury on November 11, 2019 as seen from Heilbronn.

Created by David Muelheims  
Experimenta Heilbronn





## Moon Wobble

From Earth we only see one face of the moon. But it's not always the exact same face. The moon rotates once on its own axis during each 27-day journey around the Earth. But as the moon makes its elliptical orbit, its velocity varies and alters that synchronicity, causing our perspective of the "light side" to appear at slightly different angles throughout any given month.

**Created by Gabriel Stoeckle  
Natural History Museum Vienna**



## Jupiter Saturn Conjunction 2020

A script demonstrating the great Jupiter and Saturn Conjunction in 2020. It starts with an overview of the solar system and then displays a telescope's view of the conjunction.

**Created by John French**  
**Abrams Planetarium**





## Halley's Comet in 2061

The view of Halley's Comet in 2061 as seen in the morning and evening skies.

Created by John French  
Abrams Planetarium



# Mercury Earth Orbit Nodes Transit

A look at Earth and Mercury during a transit.

Created by John French  
Abrams Planetarium





## Mercury Transit 2019

The Mercury transit seen from earth, in an inset window, as well as a solar system view.

Created by John French  
Abrams Planetarium



# Quintuple Planetary Grouping 2040

Five planets group together in the year 2040

Created by John French  
Abrams Planetarium





## MSU Cyclotron Tour

This is a show all about the Michigan State University Cyclotron.

**Created by John French  
Abrams Planetarium**

**E&S**

**EVANS & SUTHERLAND**

**DIGISTAR**   
Do More





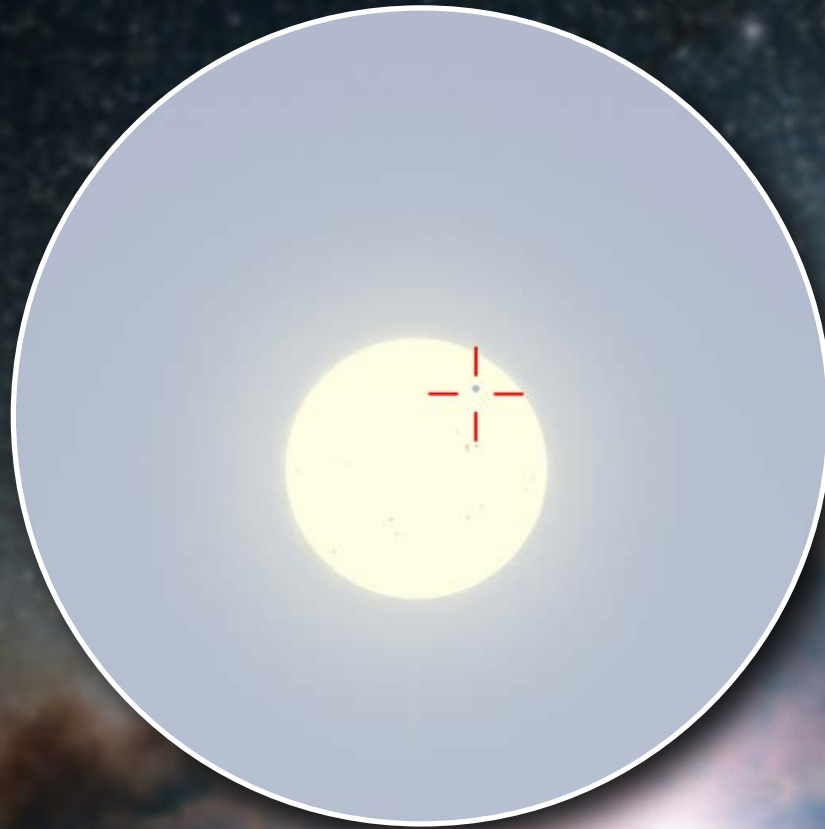
## TESS First Year Image Mosaic

A script that builds up a mosaic of full-frame images from the TESS mission similar to the NASA visualization.

I pulled camera pointing and rotation from the MIT TESS mission website and found their data was a bit inaccurate and incomplete, so there are a few educated guesses involved here, but the results are pretty nice.

**Created by Justin Bartel**  
**Science Museum of Virginia**





## Mercury Transit 11 Nov 2019

A quick and dirty script showing the transit of Mercury on 11 Nov 2019. You might have to modify some timing for your location; start time of script set to just before sunrise in New Jersey.

**Created by Ben West  
Edelman Planetarium**



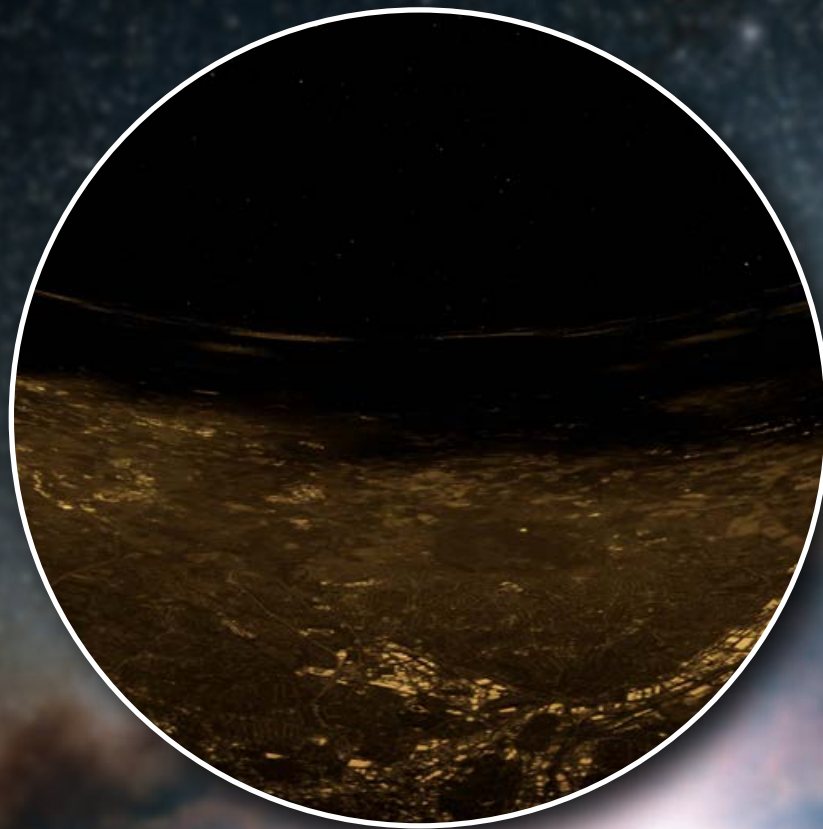
## Mercury Transit 2019-11-11 Inset Demo

This is a demo of an effect that we created for the Transit of Mercury on 2019-11-11. I wanted to be able to illustrate this daytime event without brightening up the whole planetarium dome, so it runs in an inset. I also did not want the background stars to be affected while the effect runs, and since Digistar can only do one scene date at a time, my approach was to capture the current dome image, and swap the eye with that image, run the inset, then swap back.

This effect has some hard-coded values which are specific to Grand Rapids, Michigan, USA. To use this for your site, there are several script changes you will need to make.

**Created by John Foerch**  
**Roger B. Chaffee Planetarium**



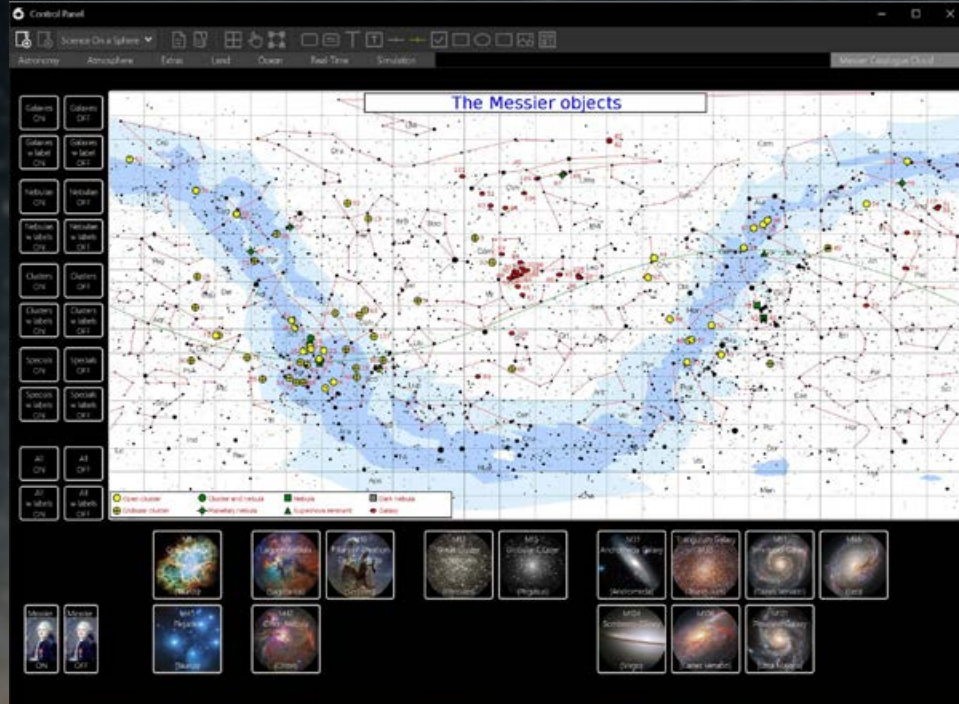


## Tenerife Flyby

Flight from Birmingham to Tenerife, landing at the observatories.

Created by Colin Hutcheson  
Thinktank Planetarium





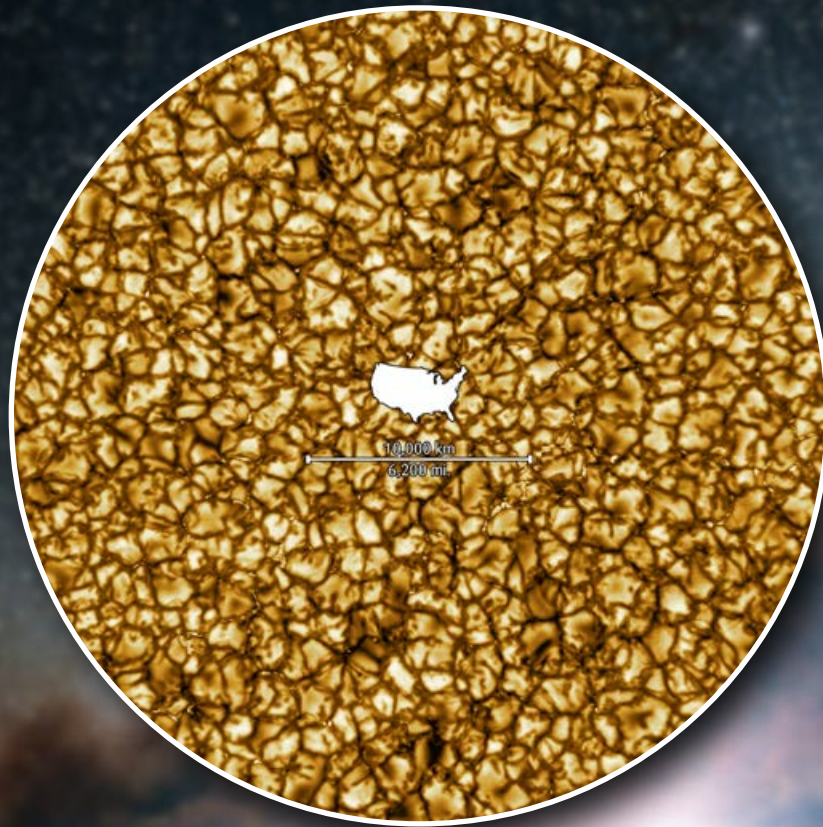
## The Messier Objects Control Panel Page

A control panel page to show the Messier objects in the northern sky. Included are e.g. Zoom ins to high resolution images and markers for the different types of objects.

This is a work in progress and intended for live presentations.

**Created by Eliane Dubois & Marc Horat  
Planetarium Verkehrshaus der Schweiz  
(Swiss Museum of Transport)**





## Inouye Solar Telescope First Light

The first light images from the Daniel K. Inouye Solar Telescope were recently released, and presented here in full-dome format in case you haven't already prepared them for your dome.

The main script in the download plays a sequence that displays the still image first, then adds a scale bar overlay, then fades up the video on a loop behind the scale bar. Separate scripts are included that allow you to pick and choose which version to display.

**Created by Justin Bartel  
Science Museum of Virginia**