

ISS-ABOVE DEVICE

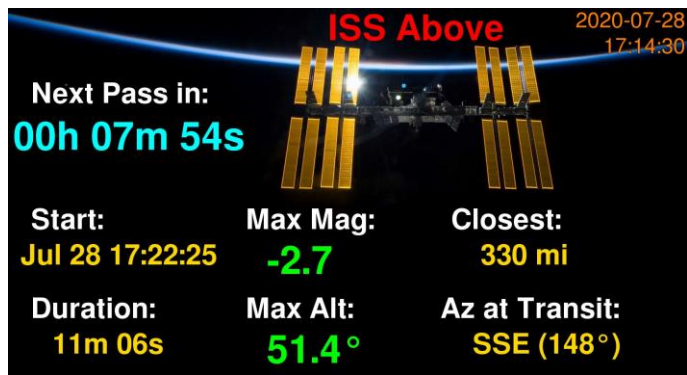
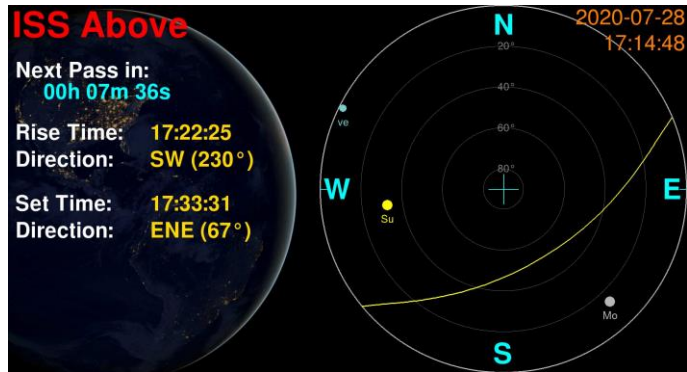


ISS-Above is this little box.
It connects to a TV or
projector via HDMI

It displays:

- Live video from the ISS including Real-time Information about :
ISS-Location / News / Crew / Passes / Visible passes
- Very bright LED indicates when the ISS is above your school (5-8 times every day)
- 3500+ installed worldwide
- 400+ in schools / science centers
- Free Lesson Plans / Activities

ISS-ABOVE INFO SCREENS



ISS-ABOVE WEB PORTAL

Free online resource combining an ISS tracker with both live feeds and other resources/information.

<http://www.issabove.com/iss-web-portal>

ISS Web Portal



The video above is usually from the External High Definition Camera (EHDC). This video will be dark whenever the ISS is in darkness (approx half of each 92 minute orbit). There are also occasional Loss of Signal (LOS) with the ISS sometimes lasting up to 5 minutes. If the EHDC camera is unavailable for an extended period of time NASA may switch in a PRE-RECORDED video instead.

Launch **BIGGER** ISS Tracker



ISS EARTH-VIEWING RESOURCES

Using resources from the ISS and other NASA / NOAA satellites to support student learning opportunities with Earth-Viewing.

External High-Definition Camera (EHDC)



<http://www.ustream.tv/channel/iss-hdev-payload>

ISS Live (SD quality)



<https://www.ustream.tv/channel/live-iss-stream>

ISS SKYDIVING: STUDENT ACTIVITY

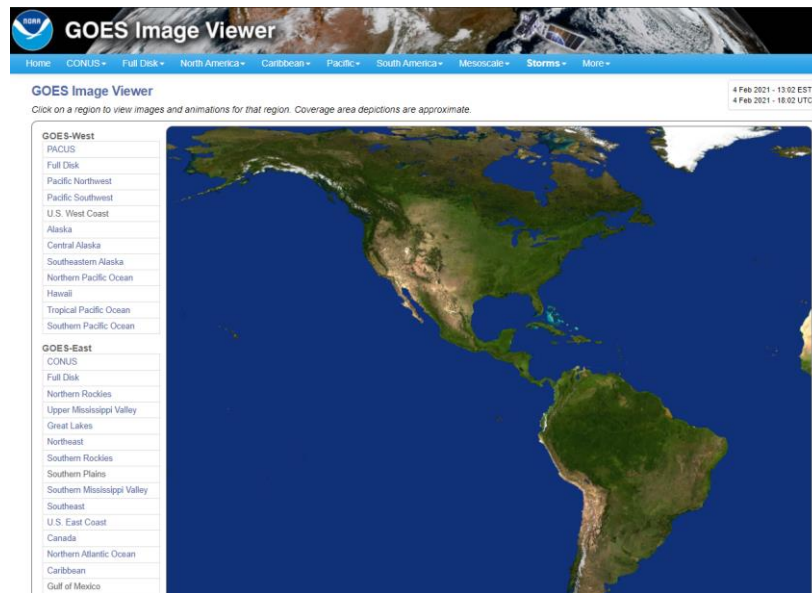
Demo :Using Live Video from the ISS and other NASA/NOAA resources to follow the ISS as it orbits over the earth

- Checking orbital path of the ISS over an area you are interested in
- Using NASA/NOAA Satellite imagery to check for cloud cover
- Using Google Maps to dive down to the ground and follow the track
- Students identify places/ features/ weather/ fires(!)/ Icebergs(!) and conduct further research based on what they see.
- Advanced activity: Capturing the live video feed

OTHER NASA/NOAA EARTH-VIEWING RESOURCES

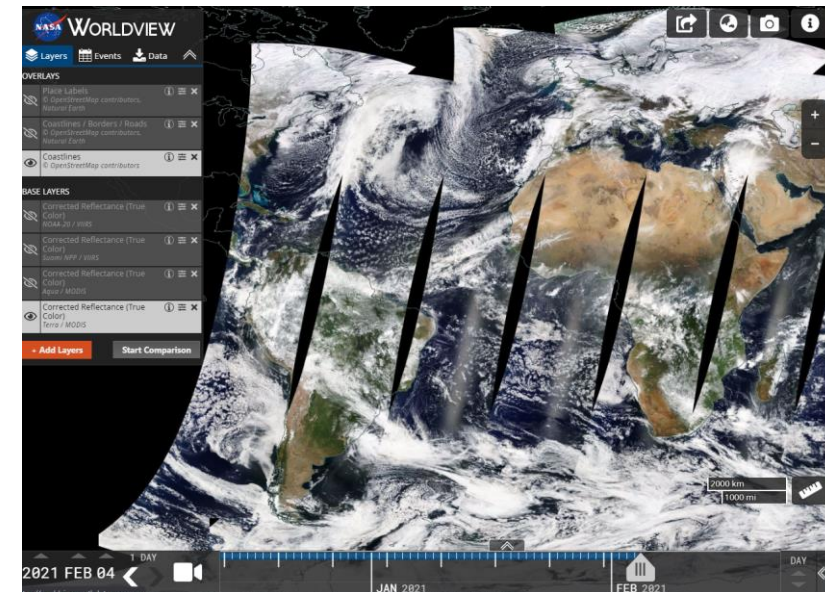
Checking cloud cover across the USA and other places around the world.

GOES EAST/WEST (North America)



<https://www.star.nesdis.noaa.gov/GOES/index.php>

NASA Worldview

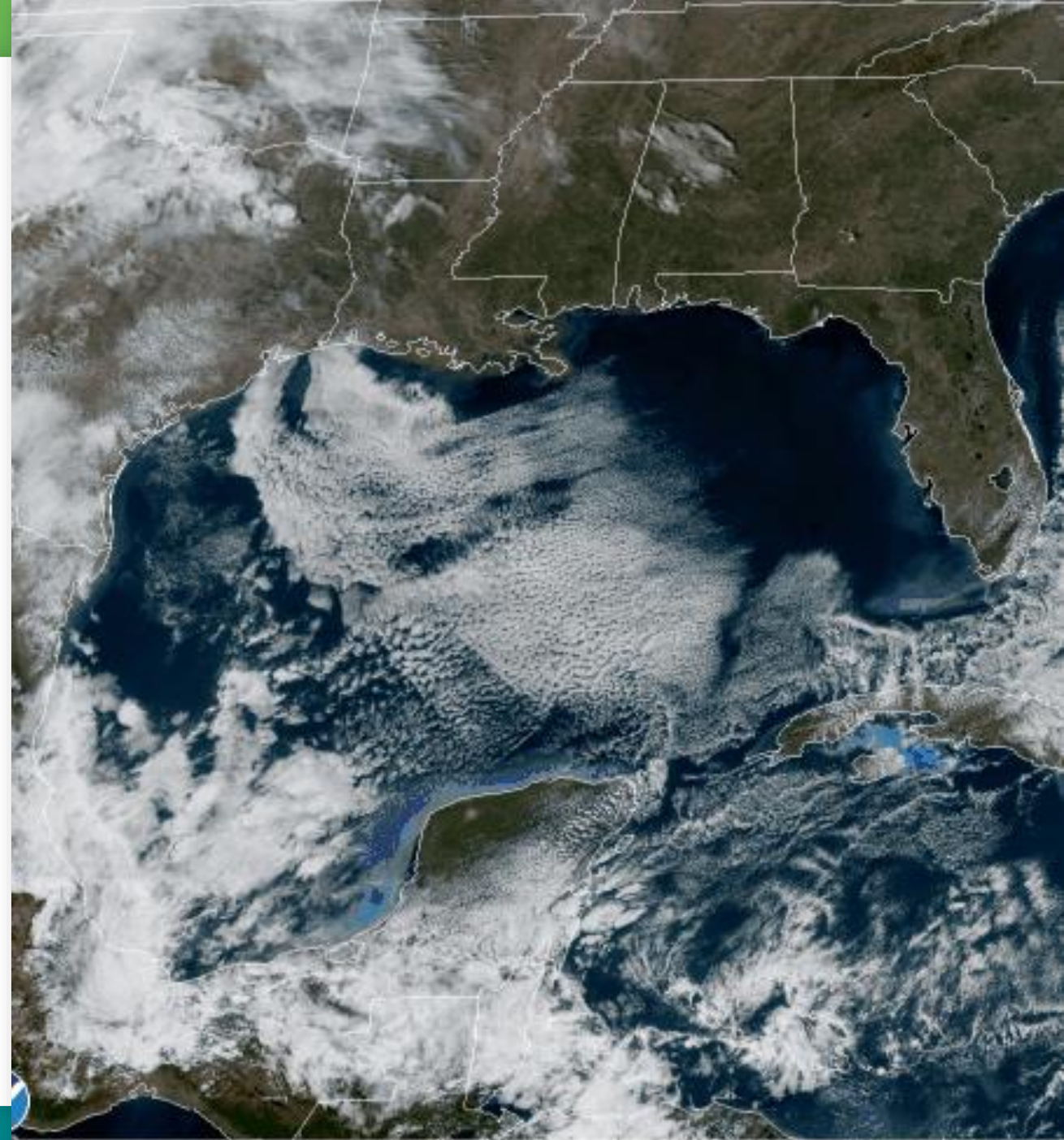


<https://worldview.earthdata.nasa.gov/>

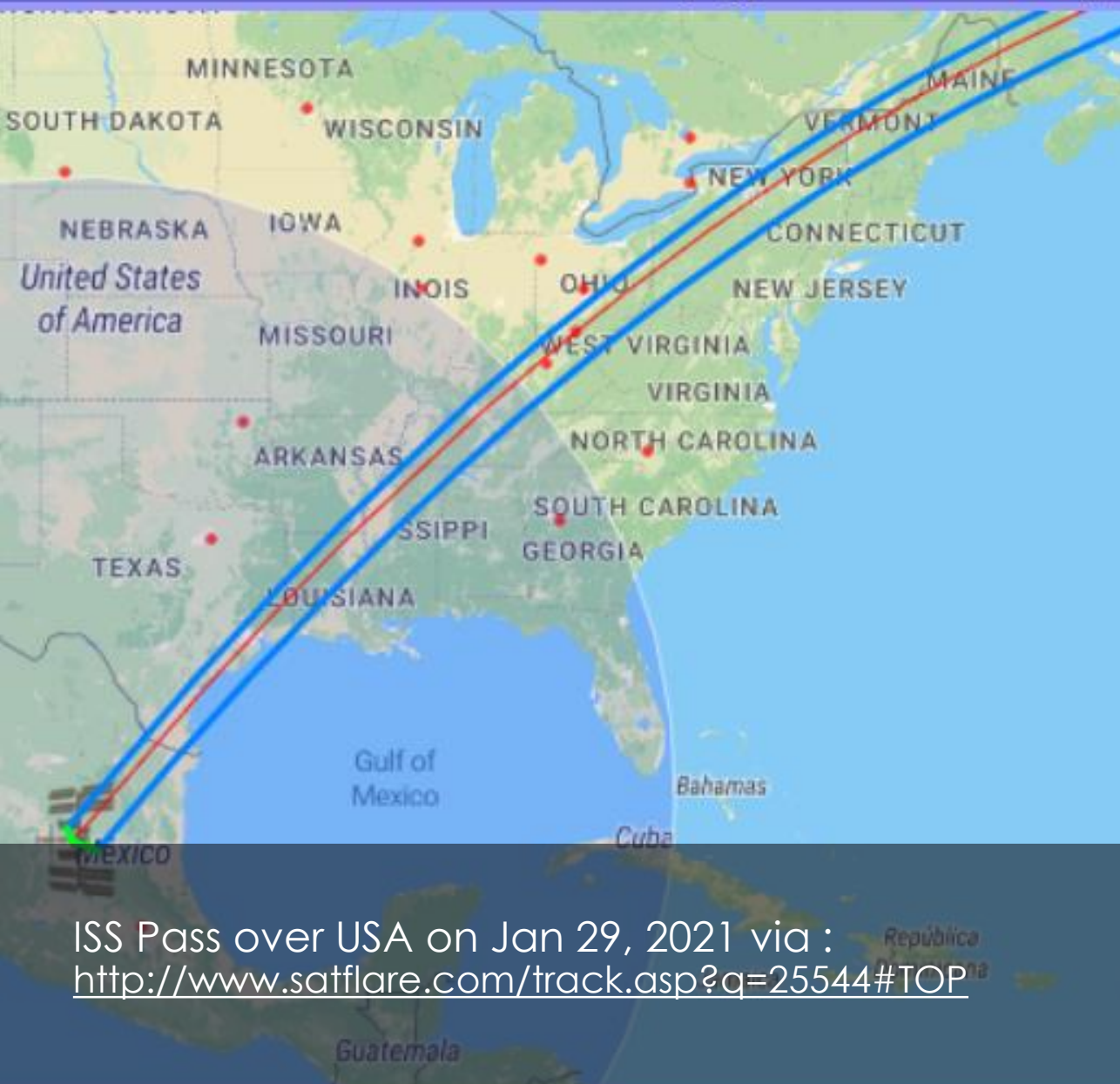
NOAA GOES

Using the GOES-East satellite image viewer to check for cloud cover.

<https://www.star.nesdis.noaa.gov/GOES/index.php>



Latitude [deg]	23	Altitude [km]	420.1	DEC J2000 [d]
Longitude [deg]	-101.79	Azimuth [deg]	109	RA J2000 [h]
2459244.33072	JD	Elevation [deg]	-16.4	Magnit



ISS Pass over USA on Jan 29, 2021 via :
<http://www.satflare.com/track.asp?q=25544#TOP>

TEXAS TO NEWFOUNDLAND



GOOGLE MAPS

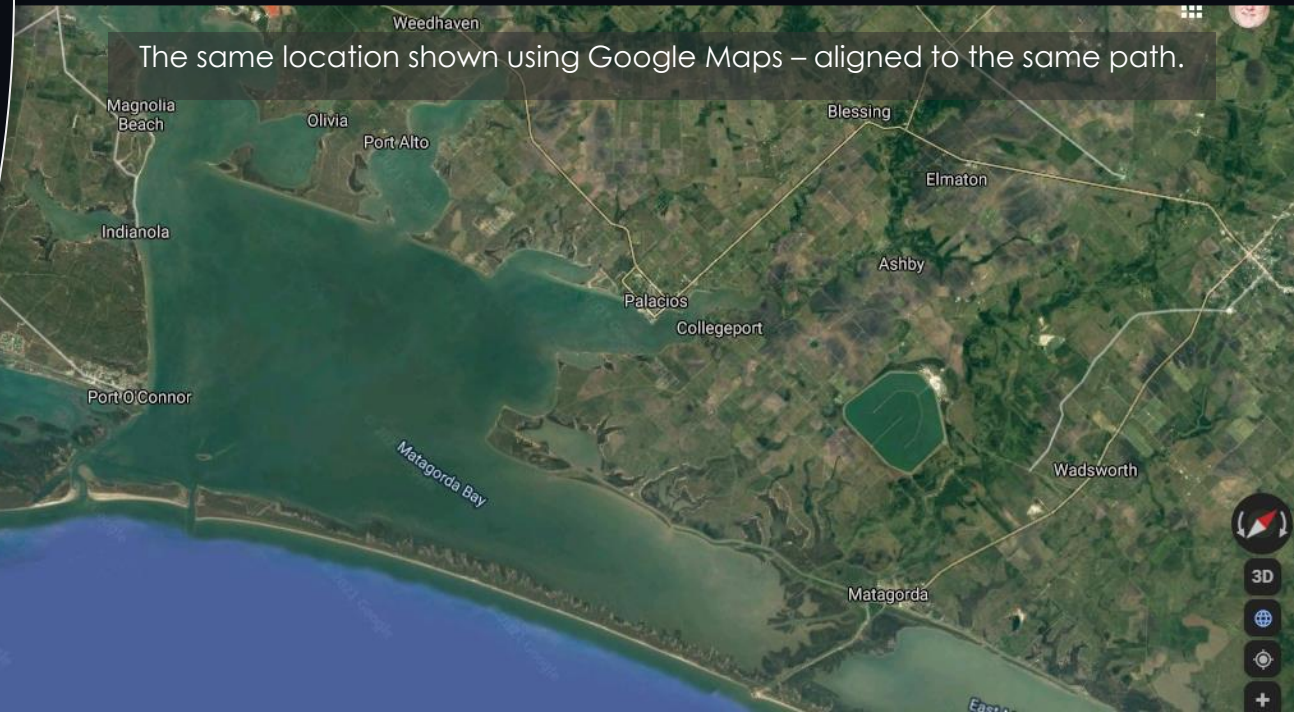
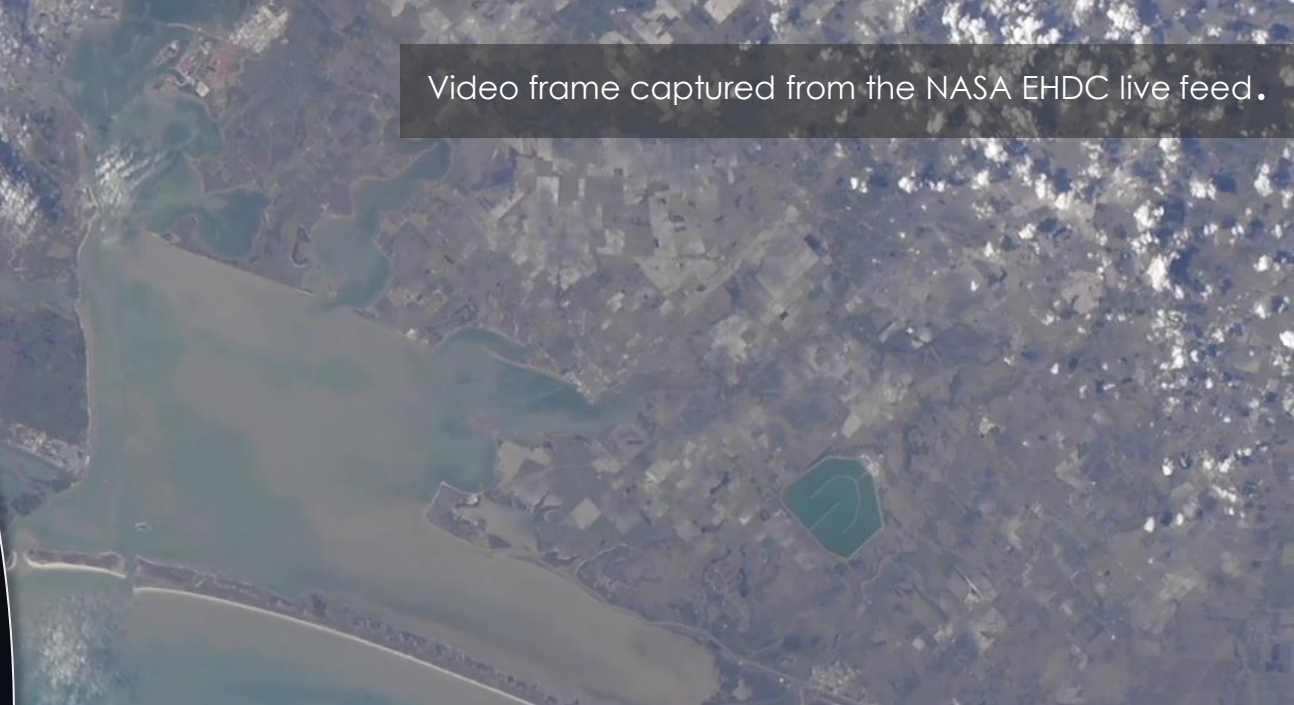
Using Google maps (in 3D mode) you can dive down (skydive) to the same area the live feed is showing.

Top image is a video frame from the beginning of the pass

Bottom image shows the google map view of the same area

<http://bit.ly/skydiveISS1>

Video frame captured from the NASA EHDC live feed.



ADVANCED: CAPTURING EHDC LIVE VIDEO FEED

The live video feed from the EHDC camera is archived every few hours here:
<http://www.ustream.tv/channel/iss-hdev-payload>

You may want to actively capture the live feed to your own computer.

The way I do that is using a tool called STREAMLINK

You can install this for Windows / Mac or Linux here:

<https://streamlink.github.io/install.html>

Capture from a command prompt like this:

```
streamlink http://www.ustream.tv/channel/iss-hdev-payload best -o ehdc.mp4
```


ACKNOWLEDGEMENTS

The term **ISS skydiving** was first coined by ISS-Above customer **Kevin McLeod**. Check out his article here:

<https://deafscribe.medium.com/iss-skydiving-8800bdc763a>

For **EOSDIS Worldview**:

"We acknowledge the use of imagery from the NASA Worldview application (<https://worldview.earthdata.nasa.gov>), part of the NASA Earth Observing System Data and Information System (EOSDIS)."

CONNECTING YOUR ISS-ABOVE TO YOUR COMPUTER AS A WEBCAM

During my presentation I was asked about how to connect the ISS-Above up to Zoom. I do this using a bit of a fancy external hardware switcher – but you can do it using a simpler inexpensive HDMI to USB adaptor.

<https://amzn.to/3rtDgcV>

just \$30 from Amazon



ISS-ABOVE

INSPIRING WONDER FOR HUMAN SPACEFLIGHT



Liam Kennedy
Founder and Inventor
liam@issabove.com

