NASA LaRC Archive Cayenne 2015

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High Ice Water Content (HIWC) - 2015 Cayenne Campaign

+ High Ice Water Content (HIWC) Research Official Home

Cloud Products
+ GOES-13 8km
+ GOES-13 (Small)
+ MSG (Small)
+ Dual-Satellite IWC
+ G13 OT/HIWC probablity
+ MSG OT/HIWC probablity

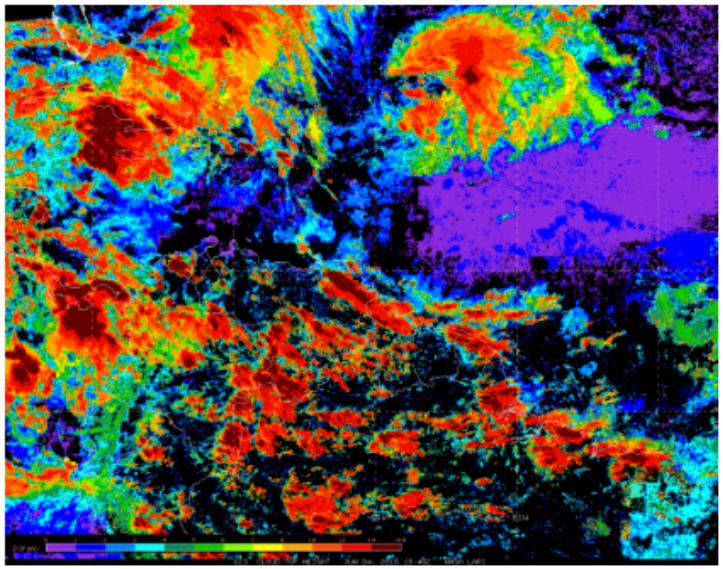
Satellite Imagery
+ GOES-13 (Large)
+ GOES-13 (Small)
+ MSG (Large)
+ MSG (Small)

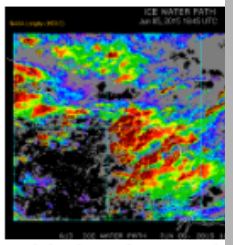
Downloads
+ HIWC 2015 KML Files
+ GOES-13 Cayenne
+ MSG Cayenne
+ Raw Data

Langley Satellite Support for High Ice Water Content (HIWC) 2015 Cayenne Campaign

Latest Satellite Imagery & Products for HIWC-2015 Field Experiment

Puerto Rico Cloud Products (larger domain)





GOES-13 Cayenne Cl
(small)

Quick Links

Cloud Products
+ Cld Top Height
+ Cld Bot Height
+ RGB
+ ICING
+ DEFF
+ REFF
+ TAU
+ IWP
+ LWP

Archive
+ GOES-13 Cloud Products
+ MSG Cloud Products

Satellite Imagery
+ G13/MSG C01
+ G13:C03, MSG:C05

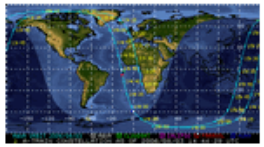
Flight Track Overlay
+ Falcon 20
+ Convair
+ Boeing

Cloud Products Along Track
+ GOES-13

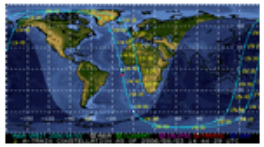
Related Datasets
+ HIWC-2014 Darwin
+ HIWC-2015 Florida

Viewers / Tools
+ Satellite Prediction Tool

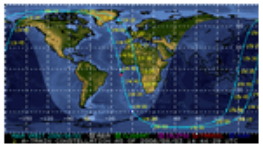
Current Location of A-Train Satellites (updated every 30 sec)



A-Train



Calipso



CloudSat

http://www-pm.larc.nasa.gov

NASA Langley Satellite

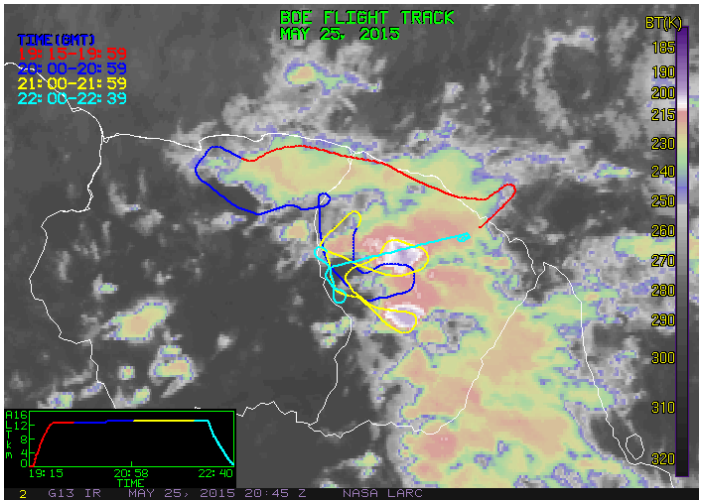
What's Available on LaRC Archive?

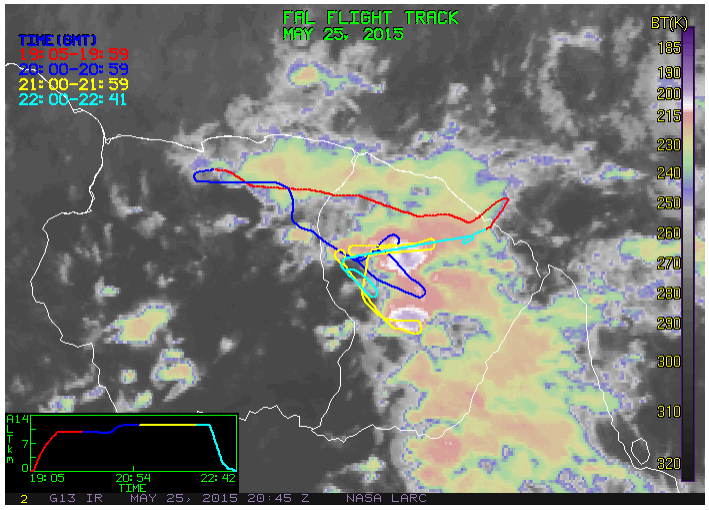
- Raw Satellite Data (acquired form SSEC) *
  - GOES-13: Every 30min was collected
  - MSG: Every 15min was collected
  - McIDAS Areafiles, GIF picture imagery
- Satellite derived Cloud Products (ver 1.0, NetCDF & GIF)
- Cloud Products along flight track ASCII available for G-13
  - uses scanline time and clouds are parallax corrected
  - completed for all 3 aircrafts
- Google Earth KML/KML (with embedded imagery, loops)
- Lightning data *
  - World Wide Lightning Network (WWLLN)
  - available as ASCII and McIDAS MD files

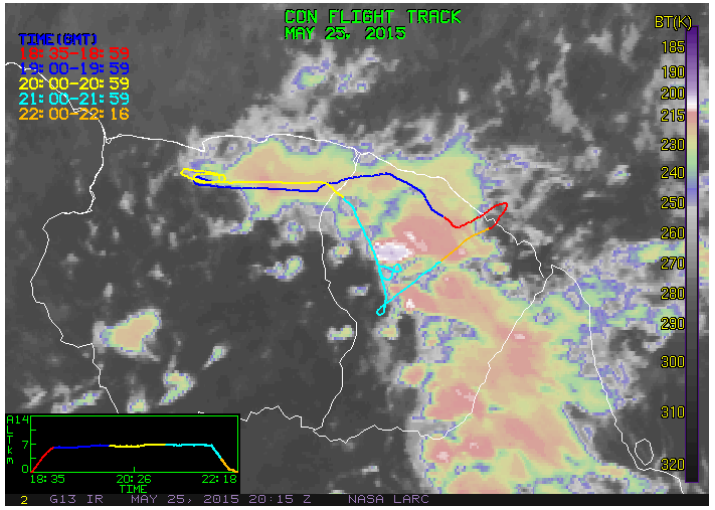
* password required

What's Available on LaRC Archive?

- Flight track for all mission overlaid on Satellite Imagery (all 3 aircraft)







Coordinated aircraft flight Cayenne 25 May 2015

PHIWC And OT Product

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Search: Keywords + GO

− Minnis Group Home | + HIWC Home Page | + Cloud Products | + Satellite Imagery | + Viewers / Tools

VISST Cloud Product Page

Domain: HIWC Cayenne Overshooting Tops/HIWC Probability

Download / List Available Dates

Satellite: GOES-13

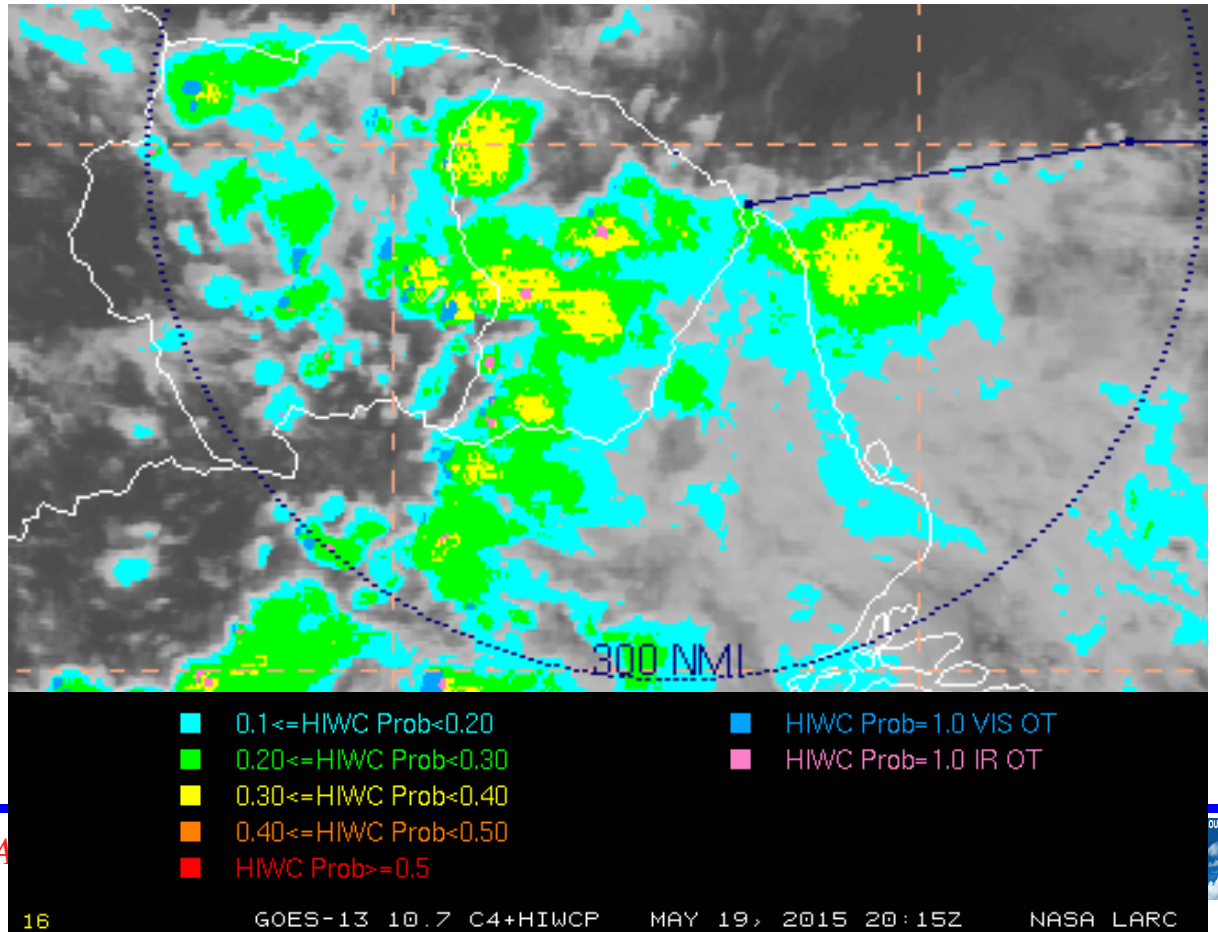
Date: 2015 05 19

Image Time: 20:15 UTC

Image: 10.7μm BT HIWC Prob Overlay

Animate: Frames ---

This page displays a combination of automated Overshooting Cloud Top Detection and High Ice Water Content (HIWC) Probability products.

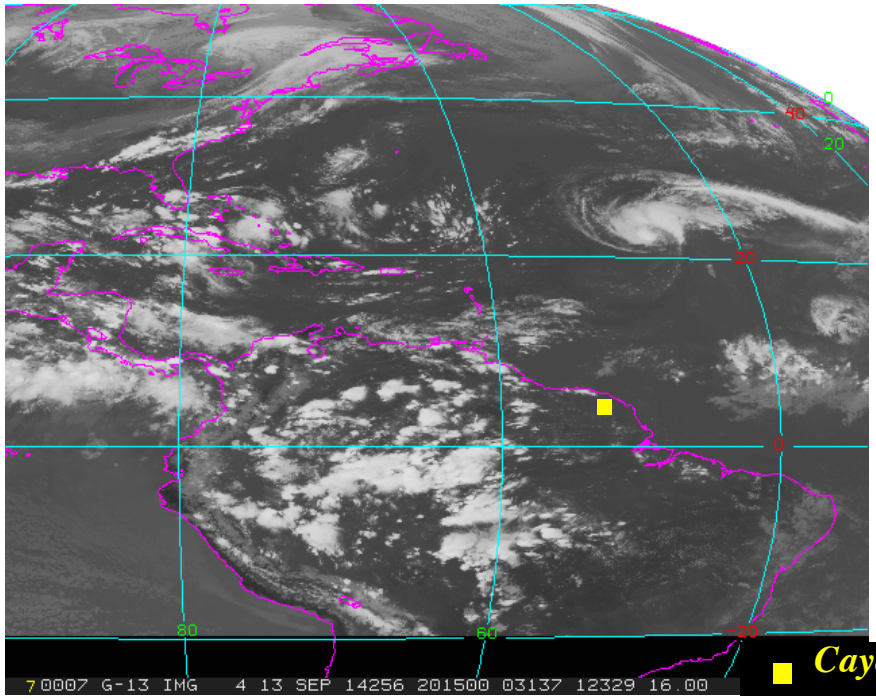


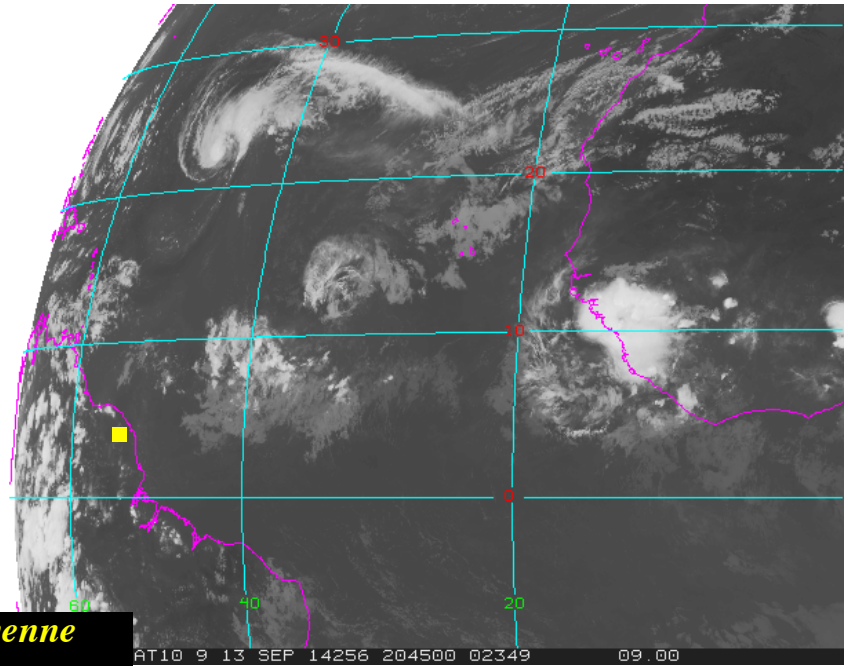
Satellite Data Timestamps

- McIDAS nominal image timestamp uses 1st scanline time
- Cayenne time offset from nominal image time
  - GOES-13: +12min for FD scan 02:45, 05:45, 08:45, etc
    +9.5min for all NH scan times
  - MSG: take 12min FD scan S to N, +7min for all images
    - Eumetsat timestamp images at N pole
    - Mcidas MSG 12:00 img = Eumetsat MSG 12:12 img
- All LaRC satellite filenames (binary & gifs) use nominal image time

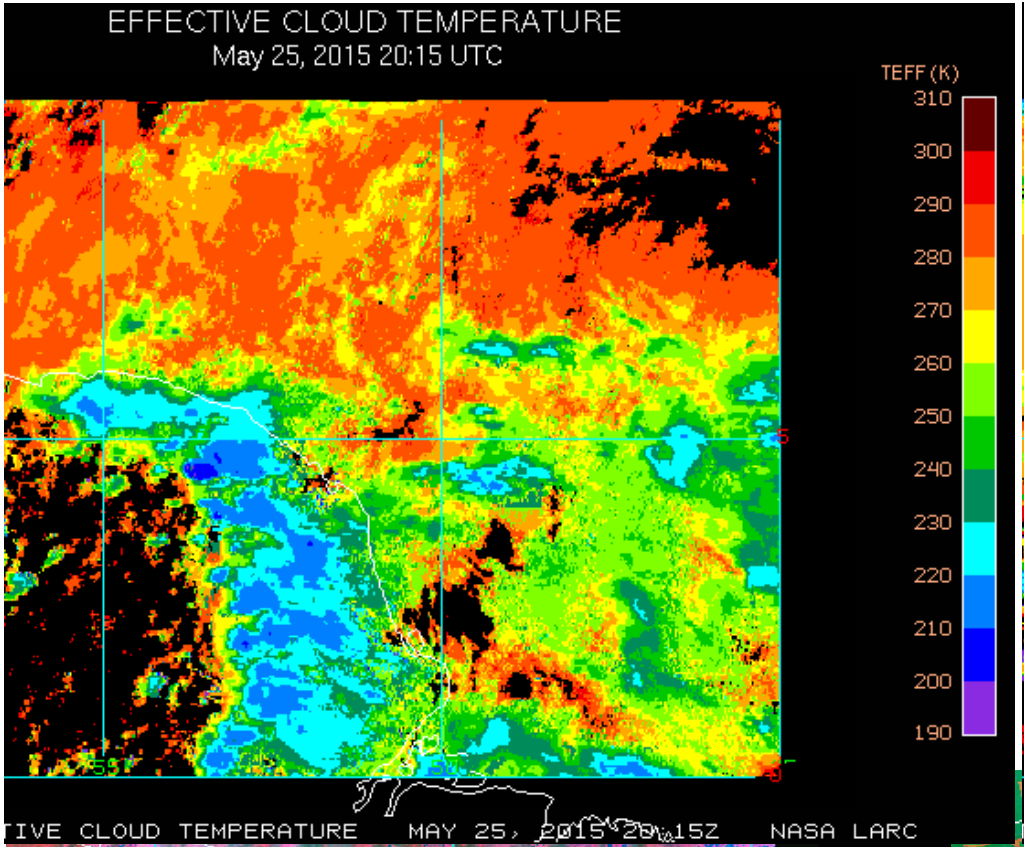
Parallax Error

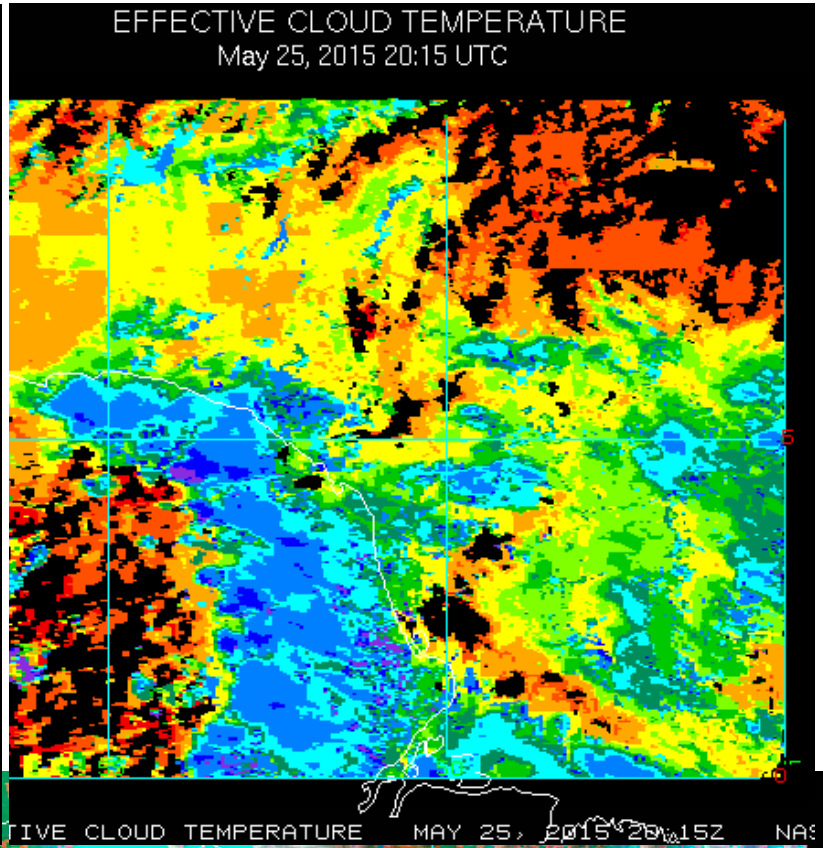
- G-13 at 23vza, cloud obs need to be shifted ~0.5*h west
- MSG at 61vza, cloud obs need to be shifted ~2*h east

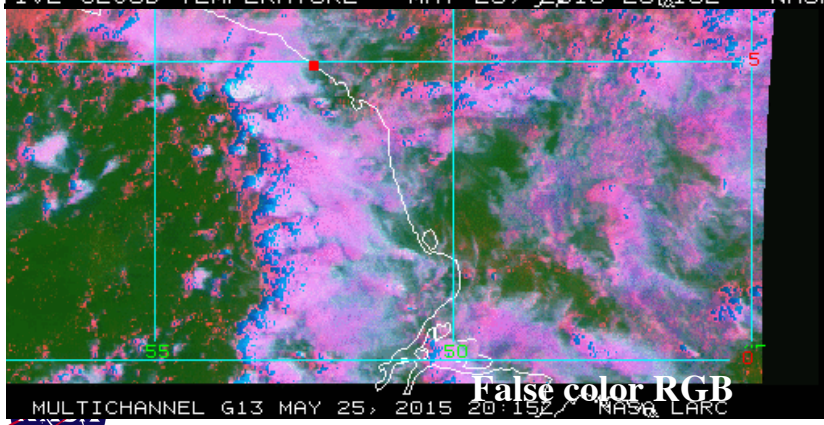




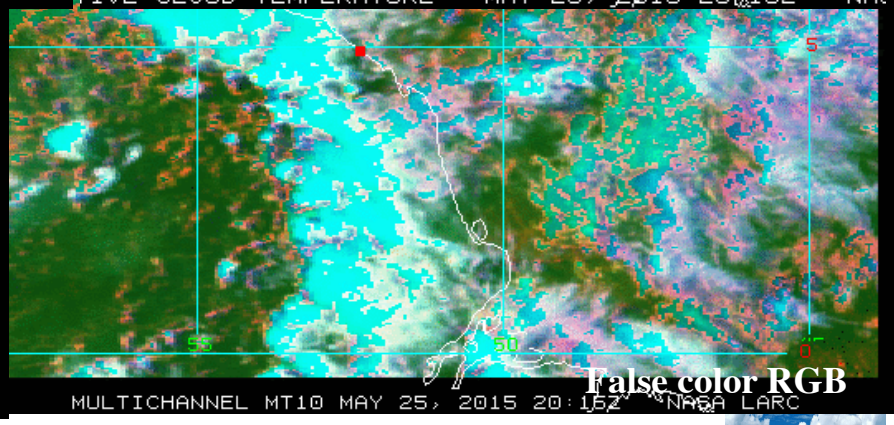
Comparison GOES and MSG







False color RGB



False color RGB

Trade off: GOES see more detail, MSG temporal coverage

Summary

- Website: www-pm.larc.nasa.gov
- GOES and MSG Cloud Product binary available
- GOES Product ascii data available
- OT and HIWC probability product on GIF archive
- Google Earth kml/kmz available
- Filenames have nominal image time stamps

Available within a 2 weeks:

- Flight tracks overlays on flight satellite cloud products
- Ascii matched data along aircrafts from MSG products

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