Collecting the data

June 1, 2024

[1]:
```
!pip3 install beautifulsoup4
!pip3 install requests
```

```
Requirement already satisfied: beautifulsoup4 in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (4.11.1)
Requirement already satisfied: soupsieve>1.2 in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (from
beautifulsoup4) (2.3.2.post1)
Requirement already satisfied: requests in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (2.29.0)
Requirement already satisfied: charset-normalizer<4,>=2 in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (from requests)
(3.1.0)
Requirement already satisfied: idna<4,>=2.5 in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (from requests)
(3.4)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (from requests)
(1.26.15)
Requirement already satisfied: certifi>=2017.4.17 in
/home/jupyterlab/conda/envs/python/lib/python3.7/site-packages (from requests)
(2023.5.7)
```

[2]:
```
# Requests allows us to make HTTP requests which we will use to get data from␣
 ↪an API
import requests
# Pandas is a software library written for the Python programming language for␣
 ↪data manipulation and analysis.
import pandas as pd
# NumPy is a library for the Python programming language, adding support for␣
 ↪large, multi-dimensional arrays and matrices, along with a large collection␣
 ↪of high-level mathematical functions to operate on these arrays
import numpy as np
# Datetime is a library that allows us to represent dates
import datetime

# Setting this option will print all collumns of a dataframe
```

```
pd.set_option('display.max_columns', None)
# Setting this option will print all of the data in a feature
pd.set_option('display.max_colwidth', None)
```

[3]:
```
# Takes the dataset and uses the rocket column to call the API and append the␣
 ↪data to the list
def getBoosterVersion(data):
    for x in data['rocket']:
       if x:
        response = requests.get("https://api.spacexdata.com/v4/rockets/
 ↪"+str(x)).json()
        BoosterVersion.append(response['name'])
```

[4]:
```
# Takes the dataset and uses the launchpad column to call the API and append␣
 ↪the data to the list
def getLaunchSite(data):
    for x in data['launchpad']:
       if x:
         response = requests.get("https://api.spacexdata.com/v4/launchpads/
 ↪"+str(x)).json()
         Longitude.append(response['longitude'])
         Latitude.append(response['latitude'])
         LaunchSite.append(response['name'])
```

[5]:
```
# Takes the dataset and uses the payloads column to call the API and append the␣
 ↪data to the lists
def getPayloadData(data):
    for load in data['payloads']:
       if load:
        response = requests.get("https://api.spacexdata.com/v4/payloads/"+load).
 ↪json()
        PayloadMass.append(response['mass_kg'])
        Orbit.append(response['orbit'])
```

[6]:
```
# Takes the dataset and uses the cores column to call the API and append the␣
 ↪data to the lists
def getCoreData(data):
    for core in data['cores']:
            if core['core'] != None:
                response = requests.get("https://api.spacexdata.com/v4/cores/
 ↪"+core['core']).json()
                Block.append(response['block'])
                ReusedCount.append(response['reuse_count'])
                Serial.append(response['serial'])
            else:
                Block.append(None)
```

```
                ReusedCount.append(None)
                Serial.append(None)
            Outcome.append(str(core['landing_success'])+' '
↪'+str(core['landing_type']))
            Flights.append(core['flight'])
            GridFins.append(core['gridfins'])
            Reused.append(core['reused'])
            Legs.append(core['legs'])
            LandingPad.append(core['landpad'])
```

[7]:
```
spacex_url="https://api.spacexdata.com/v4/launches/past"
```

[8]:
```
response = requests.get(spacex_url)
```

[9]:
```
print(response.content)
```

```
b'[{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships
":[]},"links":{"patch":{"small":"https://images2.imgbox.com/94/f2/NN6Ph45r_o.png
","large":"https://images2.imgbox.com/5b/02/QcxHUb5V_o.png"},"reddit":{"campaign
":null,"launch":null,"media":null,"recovery":null},"flickr":{"small":[],"origina
l":[]},"presskit":null,"webcast":"https://www.youtube.com/watch?v=0a_00nJ_Y88","
youtube_id":"0a_00nJ_Y88","article":"https://www.space.com/2196-spacex-
inaugural-falcon-1-rocket-lost-launch.html","wikipedia":"https://en.wikipedia.or
g/wiki/DemoSat"},"static_fire_date_utc":"2006-03-17T00:00:00.000Z","static_fire_
date_unix":1142553600,"net":false,"window":0,"rocket":"5e9d0d95eda69955f709d1eb"
,"success":false,"failures":[{"time":33,"altitude":null,"reason":"merlin engine
failure"}],"details":"Engine failure at 33 seconds and loss of vehicle","crew":[
],"ships":[],"capsules":[],"payloads":["5eb0e4b5b6c3bb0006eeb1e1"],"launchpad":"
5e9e4502f5090995de566f86","flight_number":1,"name":"FalconSat","date_utc":"2006-
03-24T22:30:00.000Z","date_unix":1143239400,"date_local":"2006-03-25T10:30:00+12
:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289df3591803
3d3b2623","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attem
pt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_upda
te":true,"tbd":false,"launch_library_id":null,"id":"5eb87cd9ffd86e000604b32a"},{
"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]
},"links":{"patch":{"small":"https://images2.imgbox.com/f9/4a/ZboXReNb_o.png","l
arge":"https://images2.imgbox.com/80/a2/bkWotCIS_o.png"},"reddit":{"campaign":nu
ll,"launch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[
]},"presskit":null,"webcast":"https://www.youtube.com/watch?v=Lk4zQ2wP-
Nc","youtube_id":"Lk4zQ2wP-Nc","article":"https://www.space.com/3590-spacex-
falcon-1-rocket-fails-reach-orbit.html","wikipedia":"https://en.wikipedia.org/wi
ki/DemoSat"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":fals
e,"window":0,"rocket":"5e9d0d95eda69955f709d1eb","success":false,"failures":[{"t
ime":301,"altitude":289,"reason":"harmonic oscillation leading to premature
engine shutdown"}],"details":"Successful first stage burn and transition to
second stage, maximum altitude 289 km, Premature engine shutdown at T+7 min 30
s, Failed to reach orbit, Failed to recover first stage","crew":[],"ships":[],"c
```

apsules":[],"payloads":["5eb0e4b6b6c3bb0006eeb1e2"],"launchpad":"5e9e4502f5090995de566f86","flight_number":2,"name":"DemoSat","date_utc":"2007-03-21T01:10:00.000Z","date_unix":1174439400,"date_local":"2007-03-21T13:10:00+12:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ef35918416a3b2624","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cdaffd86e000604b32b"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/6c/cb/na1tzhHs_o.png","large":"https://images2.imgbox.com/4a/80/k1oAkY0k_o.png"},"reddit":{"campaign":null,"launch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://www.youtube.com/watch?v=v0w9p3U8860","youtube_id":"v0w9p3U8860","article":"http://www.spacex.com/news/2013/02/11/falcon-1-flight-3-mission-summary","wikipedia":"https://en.wikipedia.org/wiki/Trailblazer_(satellite)"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":0,"rocket":"5e9d0d95eda69955f709d1eb","success":false,"failures":[{"time":140,"altitude":35,"reason":"residual stage-1 thrust led to collision between stage 1 and stage 2"}],"details":"Residual stage 1 thrust led to collision between stage 1 and stage 2","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4b6b6c3bb0006eeb1e3","5eb0e4b6b6c3bb0006eeb1e4"],"launchpad":"5e9e4502f5090995de566f86","flight_number":3,"name":"Trailblazer","date_utc":"2008-08-03T03:34:00.000Z","date_unix":1217734440,"date_local":"2008-08-03T15:34:00+12:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ef3591814873b2625","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cdbffd86e000604b32c"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/95/39/sRqN7rsv_o.png","large":"https://images2.imgbox.com/a3/99/qswRYzE8_o.png"},"reddit":{"campaign":null,"launch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://www.youtube.com/watch?v=dLQ2tZEH6G0","youtube_id":"dLQ2tZEH6G0","article":"https://en.wikipedia.org/wiki/Ratsat","wikipedia":"https://en.wikipedia.org/wiki/Ratsat"},"static_fire_date_utc":"2008-09-20T00:00:00.000Z","static_fire_date_unix":1221868800,"net":false,"window":0,"rocket":"5e9d0d95eda69955f709d1eb","success":true,"failures":[],"details":"Ratsat was carried to orbit on the first successful orbital launch of any privately funded and developed, liquid-propelled carrier rocket, the\xc2\xa0SpaceX Falcon 1","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4b7b6c3bb0006eeb1e5"],"launchpad":"5e9e4502f5090995de566f86","flight_number":4,"name":"RatSat","date_utc":"2008-09-28T23:15:00.000Z","date_unix":1222643700,"date_local":"2008-09-28T11:15:00+12:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ef3591855dc3b2626","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cdbffd86e000604b32d"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/ab/5a/Pequxd5d_o.png","large":"https://images2.imgbox.com/92/e4/7Cf6MLY0_o.png"},"reddit":{"campaign":null,"launch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":"http:/

/www.spacex.com/press/2012/12/19/spacexs-falcon-1-successfully-delivers-
razaksat-satellite-orbit","webcast":"https://www.youtube.com/watch?v=yTaIDooc8Og
","youtube_id":"yTaIDooc8Og","article":"http://www.spacex.com/news/2013/02/12/fa
lcon-1-flight-5","wikipedia":"https://en.wikipedia.org/wiki/RazakSAT"},"static_f
ire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":0,"rocket":
"5e9d0d95eda69955f709d1eb","success":true,"failures":[],"details":null,"crew":[]
,"ships":[],"capsules":[],"payloads":["5eb0e4b7b6c3bb0006eeb1e6"],"launchpad":"5
e9e4502f5090995de566f86","flight_number":5,"name":"RazakSat","date_utc":"2009-07
-13T03:35:00.000Z","date_unix":1247456100,"date_local":"2009-07-13T15:35:00+12:0
0","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ef359184f10
3b2627","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt
":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update
":true,"tbd":false,"launch_library_id":null,"id":"5eb87cdcffd86e000604b32e"},{"f
airings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"li
nks":{"patch":{"small":"https://images2.imgbox.com/73/7f/u7BKqv2C_o.png","large"
:"https://images2.imgbox.com/66/b4/8KZsjbt4_o.png"},"reddit":{"campaign":null,"l
aunch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"p
resskit":"http://forum.nasaspaceflight.com/index.php?action=dlattach;topic=21869
.0;attach=230821","webcast":"https://www.youtube.com/watch?v=nxSxgBKlYws","youtu
be_id":"nxSxgBKlYws","article":"http://www.spacex.com/news/2013/02/12/falcon-9-f
light-1","wikipedia":"https://en.wikipedia.org/wiki/Dragon_Spacecraft_Qualificat
ion_Unit"},"static_fire_date_utc":"2010-03-13T00:00:00.000Z","static_fire_date_u
nix":1268438400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","succ
ess":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"paylo
ads":["5eb0e4b7b6c3bb0006eeb1e7"],"launchpad":"5e9e4501f509094ba4566f84","flight
_number":6,"name":"Falcon 9 Test Flight","date_utc":"2010-06-04T18:45:00.000Z","
date_unix":1275677100,"date_local":"2010-06-04T14:45:00-04:00","date_precision":
"hour","upcoming":false,"cores":[{"core":"5e9e289ef359185f2b3b2628","flight":1,"
gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_suc
cess":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"
launch_library_id":null,"id":"5eb87cddffd86e000604b32f"},{"fairings":null,"links
":{"patch":{"small":"https://images2.imgbox.com/fa/dc/FOUDQ0Sn_o.png","large":"h
ttps://images2.imgbox.com/04/6e/kniggvWD_o.png"},"reddit":{"campaign":null,"laun
ch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"pres
skit":"http://www.spacex.com/files/downloads/cots1-20101206.pdf","webcast":"http
s://www.youtube.com/watch?v=cdLITgWKe_0","youtube_id":"cdLITgWKe_0","article":"h
ttps://en.wikipedia.org/wiki/SpaceX_COTS_Demo_Flight_1","wikipedia":"https://en.
wikipedia.org/wiki/SpaceX_COTS_Demo_Flight_1"},"static_fire_date_utc":"2010-12-0
4T00:00:00.000Z","static_fire_date_unix":1291420800,"net":false,"window":0,"rock
et":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew
":[],"ships":["5ea6ed2d080df4000697c901"],"capsules":["5e9e2c5bf35918ed873b2664"
],"payloads":["5eb0e4b9b6c3bb0006eeb1e8","5eb0e4b9b6c3bb0006eeb1e9"],"launchpad"
:"5e9e4501f509094ba4566f84","flight_number":7,"name":"COTS 1","date_utc":"2010-1
2-08T15:43:00.000Z","date_unix":1291822980,"date_local":"2010-12-08T11:43:00-04:
00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ef35918187
c3b2629","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attemp
t":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_updat
e":true,"tbd":false,"launch_library_id":null,"id":"5eb87cdeffd86e000604b330"},{"

fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/c5/f4/XfLVgbaO_o.png","large":"https://images2.imgbox.com/94/8d/YnZ1SLsT_o.png"},"reddit":{"campaign":null,"launch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":"https://www.nasa.gov/pdf/649910main_cots2_presskit_051412.pdf","webcast":"https://www.youtube.com/watch?v=tpQzDbAY7yI","youtube_id":"tpQzDbAY7yI","article":"https://en.wikipedia.org/wiki/Dragon_C2%2B","wikipedia":"https://en.wikipedia.org/wiki/Dragon_C2%2B"},"static_fire_date_utc":"2012-04-30T00:00:00.000Z","static_fire_date_unix":1335744000,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Launch was scrubbed on first attempt, second launch attempt was successful","crew":[],"ships":["5ea6ed2d080df4000697c901"],"capsules":["5e9e2c5bf3591882af3b2665"],"payloads":["5eb0e4bab6c3bb0006eeb1ea"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":8,"name":"COTS 2","date_utc":"2012-05-22T07:44:00.000Z","date_unix":1335944640,"date_local":"2012-05-22T03:44:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ef35918f39c3b262a","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cdfffd86e000604b331"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/3e/91/hlGiK49a_o.png","large":"https://images2.imgbox.com/fb/42/0V9JgYQS_o.png"},"reddit":{"campaign":null,"launch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":"https://www.nasa.gov/pdf/694166main_SpaceXCRS-1PressKit.pdf","webcast":"https://www.youtube.com/watch?v=-Vk3hiV_zXU","youtube_id":"-Vk3hiV_zXU","article":"https://www.nasa.gov/mission_pages/station/main/spacex-crs1-target.html","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-1"},"static_fire_date_utc":"2012-09-29T00:00:00.000Z","static_fire_date_unix":1348876800,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"CRS-1 successful, but the secondary payload was inserted into abnormally low orbit and lost due to Falcon 9 boost stage engine failure, ISS visiting vehicle safety rules, and the primary payload owner\'s contractual right to decline a second ignition of the second stage under some conditions.","crew":[],"ships":["5ea6ed2d080df4000697c902"],"capsules":["5e9e2c5bf3591835983b2666"],"payloads":["5eb0e4bab6c3bb0006eeb1eb","5eb0e4bab6c3bb0006eeb1ec"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":9,"name":"CRS-1","date_utc":"2012-10-08T00:35:00.000Z","date_unix":1349656500,"date_local":"2012-10-08T20:35:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ff3591821a73b262b","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87ce0ffd86e000604b332"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/bd/fe/lXUYKL28_o.png","large":"https://images2.imgbox.com/bc/c5/fHN3m8KV_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/space/comments/19gm5f/live_coverage_spacex_crs2_launch_to_the_iss/c8nvah4","media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":"https://www.nasa.gov/sites/default/files/files/Orb2_PRESS_KIT.pdf","webcast":"https://www.youtube.com/watch?v=ik0ElKl5kW4","youtube_id":"ik0ElKl5kW4","article":"https://en.wikipedia.org/wiki/SpaceX_CRS-2","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-2"},"static_fire_date_utc":"2013-02-25T18:30:00.000Z","static_fire_date_unix":1361817000,"net":false,"window":0,"rocket"

:"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Last launch
of the original Falcon 9 v1.0 launch vehicle","crew":[],"ships":["5ea6ed2d080df4
000697c902"],"capsules":["5e9e2c5bf359189ef23b2667"],"payloads":["5eb0e4bbb6c3bb
0006eeb1ed"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":10,"name":"C
RS-2","date_utc":"2013-03-01T19:10:00.000Z","date_unix":1362165000,"date_local":
"2013-03-01T15:10:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"
core":"5e9e289ff3591884e03b262c","flight":1,"gridfins":false,"legs":false,"reuse
d":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"lan
dpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87
ce1ffd86e000604b333"},{"fairings":{"reused":false,"recovery_attempt":false,"reco
vered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/f
8/27/XwZPEhTJ_o.png","large":"https://images2.imgbox.com/ae/62/D6SZleUG_o.png"},
"reddit":{"campaign":null,"launch":"http://www.reddit.com/r/spacex/comments/1ndl
ay","media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit"
:"https://spaceflightnow.com/falcon9/006/UpgradedF9DemoMission_PressKit.pdf","we
bcast":"https://www.youtube.com/watch?v=uFefasS6bhc","youtube_id":"uFefasS6bhc",
"article":"http://www.parabolicarc.com/2013/09/29/falcon-9-launch-payloads-
orbit-vandenberg/","wikipedia":"https://en.wikipedia.org/wiki/CASSIOPE"},"static
_fire_date_utc":"2013-09-19T00:00:00.000Z","static_fire_date_unix":1379548800,"n
et":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failure
s":[],"details":"Commercial mission and first Falcon 9 v1.1 flight, with
improved 13-tonne to LEO capacity. Following second-stage separation from the
first stage, an attempt was made to perform an ocean touchdown test of the
discarded booster vehicle. The test provided good test data on the experiment-
its primary objective-but as the booster neared the ocean, aerodynamic forces
caused an uncontrollable roll. The center engine, depleted of fuel by
centrifugal force, shut down resulting in the impact and destruction of the vehi
cle.","crew":[],"ships":["5ea6ed2d080df4000697c903"],"capsules":[],"payloads":["
5eb0e4bbb6c3bb0006eeb1ee"],"launchpad":"5e9e4502f509092b78566f87","flight_number
":11,"name":"CASSIOPE","date_utc":"2013-09-29T16:00:00.000Z","date_unix":1380470
400,"date_local":"2013-09-29T09:00:00-07:00","date_precision":"hour","upcoming":
false,"cores":[{"core":"5e9e289ff359180ae23b262d","flight":1,"gridfins":false,"l
egs":false,"reused":false,"landing_attempt":true,"landing_success":false,"landin
g_type":"Ocean","landpad":null}],"auto_update":true,"tbd":false,"launch_library_
id":null,"id":"5eb87ce1ffd86e000604b334"},{"fairings":{"reused":false,"recovery_
attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://
images2.imgbox.com/4e/f8/rqu7XWMF_o.png","large":"https://images2.imgbox.com/41/
b7/H6vprzuB_o.png"},"reddit":{"campaign":null,"launch":"http://www.reddit.com/r/
spacex/comments/1ryy1n","media":null,"recovery":null},"flickr":{"small":[],"orig
inal":[]},"presskit":"http://www.spacex.com/sites/spacex/files/spacex_ses-8launc
h_presskit.pdf","webcast":"https://www.youtube.com/watch?v=aAj5xapImEs","youtube
_id":"aAj5xapImEs","article":"https://www.nasaspaceflight.com/2013/12/spacex-
falcon-9-v1-1-milestone-ses-8-launch/","wikipedia":"https://en.wikipedia.org/wik
i/SES-8"},"static_fire_date_utc":"2013-11-22T06:26:00.000Z","static_fire_date_un
ix":1385101560,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","succe
ss":true,"failures":[],"details":"First GTO launch for Falcon 9","crew":[],"ship
s":[],"capsules":[],"payloads":["5eb0e4bbb6c3bb0006eeb1ef"],"launchpad":"5e9e450
1f509094ba4566f84","flight_number":12,"name":"SES-8","date_utc":"2013-12-03T22:4

1:00.000Z","date_unix":1386110460,"date_local":"2013-12-03T18:41:00-04:00","date
_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ff35918862c3b262e",
"flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,
"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"
tbd":false,"launch_library_id":null,"id":"5eb87ce2ffd86e000604b335"},{"fairings"
:{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":
{"patch":{"small":"https://images2.imgbox.com/5c/20/AsqTXJDC_o.png","large":"htt
ps://images2.imgbox.com/f5/fa/JvLWfNZz_o.png"},"reddit":{"campaign":null,"launch
":"http://www.reddit.com/r/spacex/comments/1ujoc0","media":null,"recovery":null}
,"flickr":{"small":[],"original":["https://farm9.staticflickr.com/8617/167890198
15_f99a165dc5_o.jpg","https://farm8.staticflickr.com/7619/16763151866_35a0a4d8e1
_o.jpg","https://farm9.staticflickr.com/8569/16169086873_4d8829832e_o.png"]},"pr
esskit":"http://www.spacex.com/sites/spacex/files/spacex_thaicom6_presskit.pdf",
"webcast":"https://www.youtube.com/watch?v=AnSNRzMEmCU","youtube_id":"AnSNRzMEmC
U","article":"http://spacenews.com/38959spacex-delivers-thaicom-6-satellite-to-o
rbit/","wikipedia":"https://en.wikipedia.org/wiki/Thaicom_6"},"static_fire_date_
utc":"2013-12-28T00:00:00.000Z","static_fire_date_unix":1388188800,"net":false,"
window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"deta
ils":"Second GTO launch for Falcon 9. The USAF evaluated launch data from this
flight as part of a separate certification program for SpaceX to qualify to fly
U.S. military payloads and found that the Thaicom 6 launch had \\"unacceptable
fuel reserves at engine cutoff of the stage 2 second burnoff\\"","crew":[],"ship
s":[],"capsules":[],"payloads":["5eb0e4bbb6c3bb0006eeb1f0"],"launchpad":"5e9e450
1f509094ba4566f84","flight_number":13,"name":"Thaicom 6","date_utc":"2014-01-06T
18:06:00.000Z","date_unix":1389031560,"date_local":"2014-01-06T14:06:00-04:00","
date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ff3591878603b26
2f","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":fa
lse,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":tr
ue,"tbd":false,"launch_library_id":null,"id":"5eb87ce3ffd86e000604b336"},{"fairi
ngs":null,"links":{"patch":{"small":"https://images2.imgbox.com/ae/3c/yVvE2vVh_o
.png","large":"https://images2.imgbox.com/82/c7/bbs0gt88_o.png"},"reddit":{"camp
aign":null,"launch":"http://www.reddit.com/r/spacex/comments/22zo8c","media":nul
l,"recovery":null},"flickr":{"small":[],"original":["https://farm8.staticflickr.
com/7615/16670240949_8d43db0e36_o.jpg","https://farm9.staticflickr.com/8597/1685
6369125_e97cd30ef7_o.jpg","https://farm8.staticflickr.com/7586/16166732954_9338d
c859c_o.jpg","https://farm8.staticflickr.com/7603/16855223522_462da54e84_o.jpg",
"https://farm8.staticflickr.com/7618/16234010894_e1210ec300_o.jpg","https://farm
8.staticflickr.com/7617/16855338881_69542a2fa9_o.jpg"]},"presskit":"http://www.s
pacex.com/sites/spacex/files/spacexcrs-3_presskit_042014.pdf","webcast":"https:/
/www.youtube.com/watch?v=Od-lON4bTyQ","youtube_id":"Od-
lON4bTyQ","article":"https://newatlas.com/crs-3-launch-spacex/31671/","wikipedia
":"https://en.wikipedia.org/wiki/SpaceX_CRS-3"},"static_fire_date_utc":"2014-03-
08T00:00:00.000Z","static_fire_date_unix":1394236800,"net":false,"window":0,"roc
ket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Followin
g second-stage separation, SpaceX conducted a second controlled-descent test of
the discarded booster vehicle and achieved the first successful controlled ocean
touchdown of a liquid-rocket-engine orbital booster. Following touchdown the
first stage tipped over as expected and was destroyed. This was the first Falcon

9 booster to fly with extensible landing legs and the first Dragon mission with the Falcon 9 v1.1 launch vehicle.","crew":[],"ships":["5ea6ed2d080df4000697c902"],"capsules":["5e9e2c5bf3591859a63b2668"],"payloads":["5eb0e4bbb6c3bb0006eeb1f1"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":14,"name":"CRS-3","date_utc":"2014-04-18T19:25:00.000Z","date_unix":1397849100,"date_local":"2014-04-18T15:25:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e289ff3591829343b2630","flight":1,"gridfins":false,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"Ocean","landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87ce4ffd86e000604b337"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/a4/44/YWAUBkOe_o.png","large":"https://images2.imgbox.com/fd/41/FUnfqHHH_o.png"},"reddit":{"campaign":null,"launch":"http://www.reddit.com/r/spacex/comments/2aany2","media":null,"recovery":null},"flickr":{"small":[],"original":["https://farm8.staticflickr.com/7585/16602893909_1181317089_o.jpg","https://farm9.staticflickr.com/8747/16581738577_83e0690136_o.png","https://farm8.staticflickr.com/7285/16581736047_6fd536ab11_o.jpg","https://farm8.staticflickr.com/7597/16789021675_35f0148f78_o.jpg","https://farm8.staticflickr.com/7631/16236321533_829ae07b42_o.jpg","https://farm9.staticflickr.com/8726/16830422056_26c2265bbc_o.jpg","https://farm9.staticflickr.com/8591/16670149079_33d6cc3631_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/spacex_orbcomm_presskit_final.pdf","webcast":"https://www.youtube.com/watch?v=lbHnSu-DLR4","youtube_id":"lbHnSu-DLR4","article":"https://www.orbcomm.com/en/networks/satellite/orbcomm-og2","wikipedia":"https://en.wikipedia.org/wiki/Falcon_9_flight_10"},"static_fire_date_utc":"2015-12-19T04:57:00.000Z","static_fire_date_unix":1450501020,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Total payload mass was 1,316 kg (2,901 lb) : 6 satellites weighing 172 kg each, plus two 142-kg mass simulators. This was the second Falcon 9 booster equipped with landing legs. Following second-stage separation, SpaceX conducted a controlled-descent test of the first stage, which successfully decelerated from\xc2\xa0hypersonic velocity in the upper atmosphere, made reentry and landing burns, deployed its legs and touched down on the ocean surface. As with the previous mission, the first stage then tipped over as expected and was not recovered.","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4bcb6c3bb0006eeb1f2"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":15,"name":"OG-2 Mission 1","date_utc":"2014-07-14T15:15:00.000Z","date_unix":1405350900,"date_local":"2014-07-14T11:15:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a0f3591870a63b2631","flight":1,"gridfins":false,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"Ocean","landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87ce4ffd86e000604b338"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/dd/4d/szidadu8_o.png","large":"https://images2.imgbox.com/60/3f/hwK01Qce_o.png"},"reddit":{"campaign":null,"launch":"http://www.reddit.com/r/spacex/comments/2fenrv","media":null,"recovery":null},"flickr":{"small":[],"original":["https://farm9.staticflickr.com/8638/16855192031_962f7b1113_o.jpg","https://farm8.staticflickr.com/7603/16648925347_769a6009c7_o.jpg","https://farm9.staticflickr.com/8687/16789027675_cde1bd098a_o.jpg","https://farm8.staticflickr.com/7629/166686381

38_7acf13cfb5_o.jpg","https://farm8.staticflickr.com/7281/16668845950_7680146525
_o.jpg","https://farm8.staticflickr.com/7626/16233865484_10d9925b5d_o.jpg"]},"pr
esskit":"https://spaceflightnow.com/falcon9/011/presskit.pdf","webcast":"https:/
/www.youtube.com/watch?v=essrkMGlw5s","youtube_id":"essrkMGlw5s","article":"http
://spacenews.com/41497spacex-launches-first-of-two-satellites-for-asiasat/","wik
ipedia":"https://en.wikipedia.org/wiki/AsiaSat_8"},"static_fire_date_utc":"2014-
07-31T23:35:15.000Z","static_fire_date_unix":1406849715,"net":false,"window":0,"
rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"
crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4bcb6c3bb0006eeb1f3"],"launc
hpad":"5e9e4501f509094ba4566f84","flight_number":16,"name":"AsiaSat 8","date_utc
":"2014-08-05T08:00:00.000Z","date_unix":1407225600,"date_local":"2014-08-05T04:
00:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a0
f359186e2e3b2632","flight":1,"gridfins":false,"legs":false,"reused":false,"landi
ng_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"a
uto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87ce5ffd86e000604
b339"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"s
hips":[]},"links":{"patch":{"small":"https://images2.imgbox.com/d4/ea/jdJqr6He_o
.png","large":"https://images2.imgbox.com/5a/f0/b3TgnmVr_o.png"},"reddit":{"camp
aign":null,"launch":"http://www.reddit.com/r/spacex/comments/2fenrv","media":nul
l,"recovery":null},"flickr":{"small":[],"original":["https://farm8.staticflickr.
com/7604/16169087563_0e3559ab5b_o.jpg","https://farm9.staticflickr.com/8742/1623
3828644_96738200b2_o.jpg","https://farm8.staticflickr.com/7645/16601443698_e7031
5d1ed_o.jpg","https://farm9.staticflickr.com/8730/16830335046_5f017c17be_o.jpg",
"https://farm9.staticflickr.com/8637/16855040322_57671ab8eb_o.jpg"]},"presskit":
"https://www.spaceflightnow.com/falcon9/012/presskit.pdf","webcast":"https://www
.youtube.com/watch?v=39ninsyTRk8","youtube_id":"39ninsyTRk8","article":"https://
www.space.com/27052-spacex-launches-asiasat6-satellite.html","wikipedia":"https:
//en.wikipedia.org/wiki/AsiaSat_6"},"static_fire_date_utc":"2014-08-22T23:51:18.
000Z","static_fire_date_unix":1408751478,"net":false,"window":7200,"rocket":"5e9
d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"sh
ips":[],"capsules":[],"payloads":["5eb0e4bcb6c3bb0006eeb1f4"],"launchpad":"5e9e4
501f509094ba4566f84","flight_number":17,"name":"AsiaSat 6","date_utc":"2014-09-0
7T05:00:00.000Z","date_unix":1410066000,"date_local":"2014-09-07T01:00:00-04:00"
,"date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a0f35918b1bc3b
2633","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":
false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":
true,"tbd":false,"launch_library_id":null,"id":"5eb87ce6ffd86e000604b33a"},{"fai
rings":null,"links":{"patch":{"small":"https://images2.imgbox.com/7b/fb/Mm0LdwGY
_o.png","large":"https://images2.imgbox.com/21/13/ps1yJZFD_o.png"},"reddit":{"ca
mpaign":null,"launch":"http://www.reddit.com/r/spacex/comments/2grxer","media":n
ull,"recovery":null},"flickr":{"small":[],"original":["https://farm8.staticflick
r.com/7608/16661753958_9f61f777e7_o.jpg","https://farm9.staticflickr.com/8593/16
763199166_38ba2cafc8_o.jpg","https://farm9.staticflickr.com/8655/16789074175_ba0
3989359_o.png","https://farm9.staticflickr.com/8659/16166761954_ebc2a72b2a_o.jpg
","https://farm9.staticflickr.com/8620/16642025217_a6852b9499_o.jpg"]},"presskit
":"https://www.nasa.gov/sites/default/files/files/SpaceX_NASA_CRS-4_PressKit.pdf
","webcast":"https://www.youtube.com/watch?v=7YkCh7uOw1Y","youtube_id":"7YkCh7uO
w1Y","article":"https://www.nasa.gov/press/2014/september/nasa-cargo-launches-

to-space-station-aboard-spacex-resupply-mission-0","wikipedia":"https://en.wikip
edia.org/wiki/SpaceX_CRS-4"},"static_fire_date_utc":"2014-09-17T00:00:00.000Z","
static_fire_date_unix":1410912000,"net":false,"window":0,"rocket":"5e9d0d95eda69
973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":["5ea
6ed2d080df4000697c902"],"capsules":["5e9e2c5bf3591880643b2669"],"payloads":["5eb
0e4bcb6c3bb0006eeb1f5"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":1
8,"name":"CRS-4","date_utc":"2014-09-21T05:52:00.000Z","date_unix":1411278720,"d
ate_local":"2014-09-21T01:52:00-04:00","date_precision":"hour","upcoming":false,
"cores":[{"core":"5e9e28a0f359184a683b2634","flight":1,"gridfins":false,"legs":f
alse,"reused":false,"landing_attempt":true,"landing_success":false,"landing_type
":"Ocean","landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":nu
ll,"id":"5eb87ce7ffd86e000604b33b"},{"fairings":null,"links":{"patch":{"small":"
https://images2.imgbox.com/df/53/3Ik1KR2O_o.png","large":"https://images2.imgbox
.com/ed/f3/MdEzr8rE_o.png"},"reddit":{"campaign":null,"launch":"http://www.reddi
t.com/r/spacex/comments/2rrdha","media":null,"recovery":null},"flickr":{"small":
[],"original":["https://farm9.staticflickr.com/8666/16511391418_bb5cdbbd71_o.jpg
","https://farm9.staticflickr.com/8612/16848173281_035bdc6009_o.jpg","https://fa
rm9.staticflickr.com/8571/16699496805_bf39747618_o.jpg","https://farm9.staticfli
ckr.com/8650/16699496705_187e4e53fd_o.jpg","https://farm9.staticflickr.com/8663/
16077174554_370937efbe_o.jpg","https://farm9.staticflickr.com/8638/16512101410_8
3763eb9ea_o.jpg","https://farm9.staticflickr.com/8653/16077173984_17885d4bea_o.j
pg","https://farm8.staticflickr.com/7635/16848159582_40c0f9d25f_o.jpg"]},"pressk
it":"http://www.spacex.com/sites/spacex/files/spacex_nasa_crs-5_presskit.pdf","w
ebcast":"https://www.youtube.com/watch?v=p7x-SumbynI","youtube_id":"p7x-SumbynI"
,"article":"https://spaceflightnow.com/2015/01/10/dragon-successfully-launched-
rocket-recovery-demo-crash-lands/","wikipedia":"https://en.wikipedia.org/wiki/Sp
aceX_CRS-5"},"static_fire_date_utc":"2014-12-19T00:00:00.000Z","static_fire_date
_unix":1418947200,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","su
ccess":true,"failures":[],"details":"Following second stage separation, SpaceX
performed a test flight which attempted to return the first stage of the Falcon
9 through the atmosphere and land it on an approximately 90-by-50-meter (300 ft
x 160 ft) floating platform-called the autonomous spaceport drone ship. Many of
the test objectives were achieved, including precision control of the rocket\'s
descent to land on the platform at a specific point in the Atlantic ocean, and a
large amount of test data was obtained from the first use of grid fin control
surfaces used for more precise reentry positioning. The grid fin control system
ran out of hydraulic fluid a minute before landing and the landing itself
resulted in a crash.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080
df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed2f080df4000697c90f","5ea6ed3008
0df4000697c912"],"capsules":["5e9e2c5bf35918165f3b266a"],"payloads":["5eb0e4bdb6
c3bb0006eeb1f6"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":19,"name
":"CRS-5","date_utc":"2015-01-10T09:47:00.000Z","date_unix":1420883220,"date_loc
al":"2015-01-10T05:47:00-04:00","date_precision":"hour","upcoming":false,"cores"
:[{"core":"5e9e28a0f359187a3c3b2635","flight":1,"gridfins":true,"legs":true,"reu
sed":false,"landing_attempt":true,"landing_success":false,"landing_type":"ASDS",
"landpad":"5e9e3032383ecb761634e7cb"}],"auto_update":true,"tbd":false,"launch_li
brary_id":null,"id":"5eb87ce8ffd86e000604b33c"},{"fairings":{"reused":false,"rec
overy_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"ht

tps://images2.imgbox.com/bc/a6/uDYvXvql_o.png","large":"https://images2.imgbox.com/30/47/WmtGcjW8_o.png"},"reddit":{"campaign":null,"launch":"http://www.reddit.com/r/spacex/comments/2vjm9e","media":null,"recovery":null},"flickr":{"small":[],"original":["https://farm9.staticflickr.com/8619/16511407538_9a25c5d8c6_o.jpg","https://farm9.staticflickr.com/8665/16697946612_1284e952b0_o.jpg","https://farm9.staticflickr.com/8570/16698990475_16524a93de_o.jpg","https://farm9.staticflickr.com/8681/16512864259_e849e496b1_o.jpg","https://farm9.staticflickr.com/8637/16079045013_1f0fab9b54_o.jpg","https://farm9.staticflickr.com/8601/16512864369_2bb896c344_o.jpg","https://farm9.staticflickr.com/8646/16697693861_a038331e0a_o.jpg","https://farm9.staticflickr.com/8680/16511407248_093635a243_o.jpg","https://farm9.staticflickr.com/8654/16511594820_451f194d53_o.jpg","https://farm9.staticflickr.com/8603/16673054016_472fb42a20_o.jpg"]},"presskit":"http://www.spacex.com/press/2015/02/11/dscovr-launch-update","webcast":"https://www.youtube.com/watch?v=OvHJSIKPOHg","youtube_id":"OvHJSIKPOHg","article":"https://spaceflightnow.com/2015/02/12/space-weather-observatory-blasts-off-after-17-year-wait/","wikipedia":"https://en.wikipedia.org/wiki/Deep_Space_Climate_Observatory"},"static_fire_date_utc":"2015-01-31T00:00:00.000Z","static_fire_date_unix":1422662400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"First launch under USAF\'s OSP 3 launch contract. First SpaceX launch to put a satellite to an orbit with an orbital altitude many times the distance to the Moon: Sun-Earth libration point L1. The first stage made a test flight descent to an over-ocean landing within 10 m (33 ft) of its intended target.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90c"],"capsules":[],"payloads":["5eb0e4bdb6c3bb0006eeb1f7"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":20,"name":"DSCOVR","date_utc":"2015-02-11T23:03:00.000Z","date_unix":1423695780,"date_local":"2015-02-11T19:03:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a0f3591885be3b2636","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"Ocean","landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87ceaffd86e000604b33d"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/2b/65/8Hd65fHz_o.png","large":"https://images2.imgbox.com/3f/c9/ZczpJ97M_o.png"},"reddit":{"campaign":null,"launch":"http://www.reddit.com/r/spacex/comments/2x81fc","media":"https://www.reddit.com/r/spacex/comments/2xmumx","recovery":null},"flickr":{"small":[],"original":["https://farm9.staticflickr.com/8749/16788442562_ed460c2d9e_o.jpg","https://farm9.staticflickr.com/8586/16510243060_48d6a9b1f6_o.jpg","https://farm9.staticflickr.com/8641/16490359747_c043b8c61a_o.jpg","https://farm9.staticflickr.com/8636/16510241270_ca83157509_o.jpg","https://farm8.staticflickr.com/7618/16601658850_13b826e705_o.jpg","https://farm9.staticflickr.com/8617/16510041628_883af57512_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/abs-eutelsatfactsheet.pdf","webcast":"https://www.youtube.com/watch?v=mN7lyaCBzT8","youtube_id":"mN7lyaCBzT8","article":"https://www.space.com/28702-spacex-rocket-launches-satellites-video.html","wikipedia":"https://en.wikipedia.org/wiki/ABS-3A"},"static_fire_date_utc":"2015-02-25T19:10:00.000Z","static_fire_date_unix":1424891400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"The launch was Boeing\'s first-ever conjoined launch of a lighter-weight dual-commsat stack that was specifically designed to take

advantage of the lower-cost SpaceX Falcon 9 launch vehicle. Per satellite, launch costs were less than $30 million. The ABS satellite reached its final destination ahead of schedule and started operations on September 10.","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4bdb6c3bb0006eeb1f8","5eb0e4bdb6c3bb0006eeb1f9"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":21,"name":"ABS-3A / Eutelsat 115W B","date_utc":"2015-03-02T03:50:00.000Z","date_unix":1425268200,"date_local":"2015-03-02T23:50:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a0f35918c0893b2637","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87ceaffd86e000604b33e"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/75/39/TJU6xWM5_o.png","large":"https://images2.imgbox.com/c7/02/2XvCh1yD_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/32jnyd","media":"https://www.reddit.com/r/spacex/comments/32lw5y","recovery":null},"flickr":{"small":[],"original":["https://farm8.staticflickr.com/7624/17170624642_e5949d160e_o.jpg","https://farm8.staticflickr.com/7708/17170624402_f6de506461_o.jpg","https://farm8.staticflickr.com/7658/17170624462_2efc977fee_o.jpg","https://farm8.staticflickr.com/7611/17171659711_42597fefed_o.jpg","https://farm9.staticflickr.com/8774/17170624412_7091dbd04a_o.jpg"]},"presskit":"https://www.nasa.gov/sites/default/files/files/SpaceX_NASA_CRS-6_PressKit.pdf","webcast":"https://www.youtube.com/watch?v=csVpa25iqH0","youtube_id":"csVpa25iqH0","article":"https://spaceflightnow.com/2015/04/14/falcon-9-successfully-launches-descends-to-off-balance-landing/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-6"},"static_fire_date_utc":"2015-04-11T00:00:00.000Z","static_fire_date_unix":1428710400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Following the first-stage boost, SpaceX attempted a controlled-descent test of the first stage. The first stage contacted the ship, but soon tipped over due to excess lateral velocity caused by a stuck throttle valve resulting in a later-than-intended downthrottle.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed2f080df4000697c90f","5ea6ed30080df4000697c912"],"capsules":["5e9e2c5cf359188bfb3b266b"],"payloads":["5eb0e4bdb6c3bb0006eeb1fa"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":22,"name":"CRS-6","date_utc":"2015-04-14T20:10:00.000Z","date_unix":1429042200,"date_local":"2015-04-14T16:10:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a1f359186d533b2638","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":false,"landing_type":"ASDS","landpad":"5e9e3032383ecb761634e7cb"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cecffd86e000604b33f"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/a6/9b/IzWT1pYC_o.png","large":"https://images2.imgbox.com/a1/dc/grsyEfA5_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/33xqcj","media":"https://www.reddit.com/r/spacex/comments/3439s3","recovery":null},"flickr":{"small":[],"original":["https://farm8.staticflickr.com/7695/17138865668_18dcce7072_o.jpg","https://farm8.staticflickr.com/7677/16706406093_61a8f9c2f8_o.jpg","https://farm8.staticflickr.com/7691/17324793792_2dd13ea3f3_o.jpg","https://farm8.staticflickr.com/7691/17139094400_b94ce1ff56_o.jpg","https://farm9.staticflickr.com/8739/17140415959_38b5ee8bc6_o.jpg","https://farm8.staticflic

kr.com/7735/16704192574_e3a0a6fac2_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/spacexthalesfactsheet_final.pdf","webcast":"https://www.youtube.com/watch?v=nBwAYT_ogj4","youtube_id":"nBwAYT_ogj4","article":"https://spaceflightnow.com/2015/04/28/falcon-9-rocket-powers-into-space-with-satellite-for-turkmenistan/","wikipedia":"https://en.wikipedia.org/wiki/T%C3%BCrkmen%C3%84lem_52%C2%B0E_/_MonacoSAT"},"static_fire_date_utc":"2015-04-22T11:11:00.000Z","static_fire_date_unix":1429701060,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4beb6c3bb0006eeb1fb"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":23,"name":"T\xc3\xbcrkmen\xc3\x84lem 52\xc2\xb0E / MonacoSAT","date_utc":"2015-04-27T23:03:00.000Z","date_unix":1430175780,"date_local":"2015-04-27T19:03:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a1f35918233f3b2639","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cedffd86e000604b340"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/53/12/gFtcOQuX_o.png","large":"https://images2.imgbox.com/7a/51/NfgiMpar_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/3b27hk","media":"https://www.reddit.com/r/spacex/comments/3berj3","recovery":null},"flickr":{"small":[],"original":["https://farm1.staticflickr.com/344/19045370790_f20f29cd8d_o.jpg","https://farm1.staticflickr.com/287/18999110808_6e153fed64_o.jpg"]},"presskit":"https://www.nasa.gov/sites/default/files/atoms/files/spacex_nasa_crs-7_presskit.pdf","webcast":"https://www.youtube.com/watch?v=PuNymhcTtSQ","youtube_id":"PuNymhcTtSQ","article":"https://spaceflightnow.com/2015/06/28/falcon-9-rocket-destroyed-in-launch-mishap/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-7"},"static_fire_date_utc":"2015-06-26T05:00:00.000Z","static_fire_date_unix":1435294800,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":false,"failures":[{"time":139,"altitude":40,"reason":"helium tank overpressure lead to the second stage LOX tank explosion"}],"details":"Launch performance was nominal until an overpressure incident in the second-stage LOX tank, leading to vehicle breakup at T+150 seconds. The Dragon capsule survived the explosion but was lost upon splashdown because its software did not contain provisions for parachute deployment on launch vehicle failure.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90c"],"capsules":["5e9e2c5cf35918407d3b266c"],"payloads":["5eb0e4beb6c3bb0006eeb1fc"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":24,"name":"CRS-7","date_utc":"2015-06-28T14:21:00.000Z","date_unix":1435501260,"date_local":"2015-06-28T10:21:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a1f35918683c3b263a","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":null,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87ceeffd86e000604b341"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/6a/7e/J7IQfBqg_o.png","large":"https://images2.imgbox.com/99/d4/0aIlpFpw_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/3xgxh5","media":"https://www.reddit.com/r/spacex/comments/3xm83h/","recovery":null},"flickr":{"small":[],"original":["https://farm2.staticflickr.com/1648/23827554109_837b21739e_o.jpg","http

s://farm1.staticflickr.com/597/23802553412_d41e4dcc64_o.jpg","https://farm6.staticflickr.com/5806/23802550622_9ff8c90098_o.jpg","https://farm1.staticflickr.com/571/23604164970_2a1a2366e4_o.jpg","https://farm6.staticflickr.com/5773/23271687254_5e64d726ba_o.jpg","https://farm6.staticflickr.com/5766/23526044959_5bfe74bc88_o.jpg","https://farm6.staticflickr.com/5723/23785609832_83038751d1_o.jpg","https://farm1.staticflickr.com/715/23833499336_d3fde6a25a_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/spacex_orbcomm_press_kit_final2.pdf","webcast":"https://www.youtube.com/watch?v=O5bTbVbe4e4","youtube_id":"O5bTbVbe4e4","article":"https://spaceflightnow.com/2015/12/22/round-trip-rocket-flight-gives-spacex-a-trifecta-of-successes/","wikipedia":"https://en.wikipedia.org/wiki/Falcon_9_flight_20"},"static_fire_date_utc":"2015-12-19T00:09:00.000Z","static_fire_date_unix":1450483740,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Total payload mass was 2,034 kg (4,484 lb) : 11 satellites weighing 172 kg each, plus a 142-kg mass simulator. This was the first launch of the upgraded v1.1 variant (later called Falcon 9 Full Thrust), with a 30 percent power increase. Orbcomm had originally agreed to be the third flight of the enhanced-thrust rocket, but the change to the maiden flight position was announced in October 2015. SpaceX received a permit from the FAA to land the booster on solid ground at Cape Canaveral, and succeeded.","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4beb6c3bb0006eeb1fd"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":25,"name":"OG-2 Mission 2","date_utc":"2015-12-22T01:29:00.000Z","date_unix":1450747740,"date_local":"2015-12-22T21:29:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a1f3591867753b263b","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cefffd86e000604b342"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/8a/44/PSksEBjD_o.png","large":"https://images2.imgbox.com/d9/c9/57ioWDgW_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/417weg","media":"https://www.reddit.com/r/spacex/comments/41cvdm","recovery":null},"flickr":{"small":[],"original":["https://farm2.staticflickr.com/1460/24382360351_9b1f2fcabc_o.jpg","https://farm2.staticflickr.com/1669/24423604506_27d3c4548b_o.jpg","https://farm2.staticflickr.com/1618/24151425850_1cb6040569_o.jpg","https://farm2.staticflickr.com/1622/24127012370_07edc62046_o.jpg","https://farm2.staticflickr.com/1508/24127011190_92ef932c96_o.jpg","https://farm2.staticflickr.com/1591/23778325594_08231286fc_o.jpg","https://farm2.staticflickr.com/1542/24038722499_34c10216a3_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/spacex_jason3_press_kit.pdf","webcast":"https://www.youtube.com/watch?v=ivdKRJzl6y0","youtube_id":"ivdKRJzl6y0","article":"https://spaceflightnow.com/2016/01/18/satellite-launched-to-measure-motions-of-the-oceans/","wikipedia":"https://en.wikipedia.org/wiki/Jason-3"},"static_fire_date_utc":"2016-01-11T18:42:00.000Z","static_fire_date_unix":1452537720,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"First launch of NASA and NOAA joint science mission under the NLS II launch contract (not related to NASA CRS or USAF OSP3 contracts). Last launch of the original Falcon 9 v1.1 launch vehicle. The Jason-3 satellite was successfully deployed to target orbit. SpaceX again attempted a recovery of the first stage booster by landing on an

autonomous drone ship; this time located in the Pacific Ocean. The first stage did achieve a soft-landing on the ship, but a lockout on one of the landing legs failed to latch, so that the booster fell over and exploded.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed30080df4000697c912","5ea6ed30080df4000697c914"],"capsules":[],"payloads":["5eb0e4beb6c3bb0006eeb1fe"],"launchpad":"5e9e4502f509092b78566f87","flight_number":26,"name":"Jason 3","date_utc":"2016-01-17T15:42:00.000Z","date_unix":1453045320,"date_local":"2016-01-17T08:42:00-07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a1f3591842fa3b263c","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":false,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cf0ffd86e000604b343"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/7f/15/rjv54Es5_o.png","large":"https://images2.imgbox.com/c9/7f/EQ1g4Iv2_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/48u4yq","media":"https://www.reddit.com/r/spacex/comments/472k8c","recovery":null},"flickr":{"small":[],"original":["https://farm2.staticflickr.com/1623/25395662282_942fd68ba3_o.jpg","https://farm2.staticflickr.com/1458/25395661442_bfd783f18a_o.jpg","https://farm2.staticflickr.com/1641/25421381351_38390bcb8e_o.jpg","https://farm2.staticflickr.com/1616/25514167315_b19b0a4365_o.jpg","https://farm2.staticflickr.com/1482/24883160354_b03cefd416_o.jpg","https://farm2.staticflickr.com/1653/25420915781_8fc648b4a4_o.jpg","https://farm2.staticflickr.com/1610/25486858116_9c06dfea59_o.jpg","https://farm2.staticflickr.com/1617/25168697841_00dfff89bb_o.jpg","https://farm2.staticflickr.com/1533/24631230904_83b1624807_o.jpg","https://farm2.staticflickr.com/1627/25145624551_1b8743116f_o.jpg","https://farm2.staticflickr.com/1622/25120540712_7fc1a5ed72_o.jpg","https://farm2.staticflickr.com/1550/24585667074_aa712b13a8_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/spacex_ses9_press_kit_final.pdf","webcast":"https://www.youtube.com/watch?v=muDPSyO7-A0","youtube_id":"muDPSyO7-A0","article":"https://spaceflightnow.com/2016/03/05/tv-broadcasting-satellite-finally-launched-on-falcon-9/","wikipedia":"https://en.wikipedia.org/wiki/SES-9"},"static_fire_date_utc":"2016-10-02T14:11:00.000Z","static_fire_date_unix":1475417460,"net":false,"window":5400,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Second launch of the enhanced Falcon 9 Full Thrust launch vehicle. Following the launch, SpaceX attempted an experimental landing test to a drone ship, although a successful landing was not expected because launch mass exceeded previously indicated limit for a GTO there was little fuel left. As predicted, booster recovery failed: the spent first stage \\"landed hard\\", but the controlled-descent, atmospheric re-entry and navigation to the drone ship were successful and returned significant test data on bringing back high-energy Falcon 9s.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed30080df4000697c913"],"capsules":[],"payloads":["5eb0e4beb6c3bb0006eeb1ff"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":27,"name":"SES-9","date_utc":"2016-03-04T23:35:00.000Z","date_unix":1457134500,"date_local":"2016-03-04T19:35:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a1f359188def3b263d","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":false,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb

87cf2ffd86e000604b344"},{"fairings":null,"links":{"patch":{"small":"https://imag
es2.imgbox.com/72/1e/mA23xHqe_o.png","large":"https://images2.imgbox.com/36/d8/R
yPKsTpC_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spa
cex/comments/4dtoly","media":"https://www.reddit.com/r/spacex/comments/4dtpxn/",
"recovery":"https://www.reddit.com/r/spacex/comments/4ee2zy"},"flickr":{"small":
[],"original":["https://farm2.staticflickr.com/1633/25788014884_6a3f9ae183_o.jpg
","https://farm2.staticflickr.com/1650/26300505022_8b8b9035e8_o.jpg","https://fa
rm2.staticflickr.com/1486/25787998624_3ca213be1e_o.jpg","https://farm2.staticfli
ckr.com/1450/26326628031_e1b08ec0b3_o.jpg","https://farm2.staticflickr.com/1670/
26239020092_05e5e4c538_o.jpg","https://farm2.staticflickr.com/1709/26305479266_7
6b4d01caf_o.jpg","https://farm2.staticflickr.com/1645/26239017922_28c7ac50e0_o.j
pg","https://farm2.staticflickr.com/1559/26288402056_6c5997ce66_o.jpg","https://
farm2.staticflickr.com/1449/25709481274_60f8c77358_o.jpg","https://farm2.staticf
lickr.com/1671/26217360302_b66c3e384e_o.jpg","https://farm2.staticflickr.com/170
4/26283822056_838c1103b9_o.jpg","https://farm2.staticflickr.com/1508/26217345472
_118767c608_o.jpg","https://farm2.staticflickr.com/1495/25916886442_821a152917_o
.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/spacex_crs8_press_k
it.pdf","webcast":"https://www.youtube.com/watch?v=7pUAydjne5M","youtube_id":"7p
UAydjne5M","article":"https://spaceflightnow.com/2016/04/08/spacex-lands-rocket-
on-floating-platform-after-station-resupply-launch/","wikipedia":"https://en.wik
ipedia.org/wiki/SpaceX_CRS-8"},"static_fire_date_utc":"2016-04-05T00:00:00.000Z"
,"static_fire_date_unix":1459814400,"net":false,"window":0,"rocket":"5e9d0d95eda
69973a809d1ec","success":true,"failures":[],"details":"Dragon carried over 1500
kg of supplies and delivered (stowed in its trunk) the inflatable Bigelow
Expandable Activity Module (BEAM) to the ISS for two years of in-orbit tests.
The rocket\'s first stage landed smoothly on SpaceX\'s autonomous spaceport
drone ship 9 minutes after liftoff, making this the first ever successful
landing of a rocket booster on a ship at sea as part of an orbital launch. The
first stage B1021 was later also the first orbital booster to be used again,
when launching SES-10 on March 30, 2017.","crew":[],"ships":["5ea6ed2e080df40006
97c906","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed30080df4000
697c912","5ea6ed30080df4000697c913"],"capsules":["5e9e2c5cf3591885d43b266d"],"pa
yloads":["5eb0e4bfb6c3bb0006eeb200"],"launchpad":"5e9e4501f509094ba4566f84","fli
ght_number":28,"name":"CRS-8","date_utc":"2016-04-08T20:43:00.000Z","date_unix":
1460148180,"date_local":"2016-04-08T16:43:00-04:00","date_precision":"hour","upc
oming":false,"cores":[{"core":"5e9e28a2f359182d0b3b263e","flight":1,"gridfins":t
rue,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"la
nding_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tb
d":false,"launch_library_id":null,"id":"5eb87cf3ffd86e000604b345"},{"fairings":{
"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"
patch":{"small":"https://images2.imgbox.com/7a/90/Zdo2mijx_o.png","large":"https
://images2.imgbox.com/2a/47/az2sxGIB_o.png"},"reddit":{"campaign":"https://www.r
eddit.com/r/spacex/comments/4gyh8z","launch":"https://www.reddit.com/r/spacex/co
mments/4htenu","media":"https://www.reddit.com/r/spacex/comments/4htg2g","recove
ry":"https://www.reddit.com/r/spacex/comments/4ihp1p"},"flickr":{"small":[],"ori
ginal":["https://farm8.staticflickr.com/7340/27044931232_7b755276ec_o.jpg","http
s://farm8.staticflickr.com/7444/27028105566_1d3413daa7_o.jpg","https://farm8.sta
ticflickr.com/7597/26778141961_e3bd237942_o.jpg","https://farm8.staticflickr.com

/7079/26778141661_559b48ac80_o.jpg","https://farm8.staticflickr.com/7682/2677814
1401_c437b04b74_o.jpg","https://farm8.staticflickr.com/7706/26751237322_ceb6d562
35_o.jpg","https://farm8.staticflickr.com/7677/26809210466_fc55835f3c_o.jpg","ht
tps://farm8.staticflickr.com/7085/26809208046_d77bd31fd0_o.jpg","https://farm8.s
taticflickr.com/7103/26809207316_cdc7d582e6_o.jpg"]},"presskit":"http://www.spac
ex.com/sites/spacex/files/spacex_jcsat_press_kit_final.pdf","webcast":"https://w
ww.youtube.com/watch?v=L0bMeDj76ig","youtube_id":"L0bMeDj76ig","article":"https:
//spaceflightnow.com/2016/05/06/falcon-9-succeeds-in-middle-of-the-night-launch/
","wikipedia":"https://en.wikipedia.org/wiki/JCSAT-2B"},"static_fire_date_utc":"
2016-05-01T21:32:00.000Z","static_fire_date_unix":1462138320,"net":false,"window
":7200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details
":"Launched the JCSAT 14 communications satellite for Tokyo-based SKY Perfect
JSAT Corp. JCSAT 14 will support data networks, television broadcasters and
mobile communications users in Japan, East Asia, Russia, Oceania, Hawaii and
other Pacific islands. This was the first time a booster successfully landed
after a GTO mission.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080
df4000697c90b","5ea6ed2f080df4000697c90c"],"capsules":[],"payloads":["5eb0e4bfb6
c3bb0006eeb201"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":29,"name
":"JCSAT-2B","date_utc":"2016-05-06T05:21:00.000Z","date_unix":1462512060,"date_
local":"2016-05-06T01:21:00-04:00","date_precision":"hour","upcoming":false,"cor
es":[{"core":"5e9e28a2f35918077b3b263f","flight":1,"gridfins":true,"legs":true,"
reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS
","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_
library_id":null,"id":"5eb87cf5ffd86e000604b346"},{"fairings":{"reused":false,"r
ecovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"
https://images2.imgbox.com/fa/f2/iR1eKXrX_o.png","large":"https://images2.imgbox
.com/84/dc/Qp0wk7j1_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/space
x/comments/4hjz4k","launch":"https://www.reddit.com/r/spacex/comments/4l9uou","m
edia":"https://www.reddit.com/r/spacex/comments/4l4af1","recovery":"https://www.
reddit.com/r/spacex/comments/4lz2y6"},"flickr":{"small":[],"original":["https://
farm8.staticflickr.com/7420/26814484893_13059e4b39_o.jpg","https://farm8.staticf
lickr.com/7321/26812794884_bf91665325_o.jpg","https://farm8.staticflickr.com/733
7/26812792104_9323121f0b_o.jpg","https://farm8.staticflickr.com/7376/27421461715
_5640d2b87a_o.jpg","https://farm8.staticflickr.com/7717/26812758364_74569b4327_o
.jpg","https://farm8.staticflickr.com/7742/27294263035_9b43bd141c_o.jpg","https:
//farm8.staticflickr.com/7252/27294262435_c534cc4351_o.jpg","https://farm8.stati
cflickr.com/7698/27294261525_82c4b7e604_o.jpg","https://farm8.staticflickr.com/7
045/27259828166_9e32061cc9_o.jpg","https://farm8.staticflickr.com/7013/272598273
16_c2f7507b3d_o.jpg","https://farm8.staticflickr.com/7211/27182485331_ed2414a947
_o.jpg","https://farm8.staticflickr.com/7740/27182481921_0d7a759736_o.jpg","http
s://farm8.staticflickr.com/7315/26645036414_39736db559_o.jpg"]},"presskit":"http
://www.spacex.com/sites/spacex/files/spacex_thaicom_8_press_kit.pdf","webcast":"
https://www.youtube.com/watch?v=zBYC4f79iXc","youtube_id":"zBYC4f79iXc","article
":"https://spaceflightnow.com/2016/05/27/spacex-logs-successful-late-afternoon-
launch-for-thaicom/","wikipedia":"https://en.wikipedia.org/wiki/Thaicom_8"},"sta
tic_fire_date_utc":"2016-05-25T00:00:00.000Z","static_fire_date_unix":1464134400
,"net":false,"window":7200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"f
ailures":[],"details":"Manufactured by Orbital ATK, the 3,100-kilogram (6,800

lb) Thaicom 8 communications satellite will serve Thailand, India and Africa
from the 78.5\xc2\xb0 East geostationary location. It is equipped with 24 active
Ku-band transponders.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f08
0df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed30080df4000697c913"],"capsules
":[],"payloads":["5eb0e4bfb6c3bb0006eeb202"],"launchpad":"5e9e4501f509094ba4566f
84","flight_number":30,"name":"Thaicom 8","date_utc":"2016-05-27T21:39:00.000Z",
"date_unix":1464385140,"date_local":"2016-05-27T17:39:00-04:00","date_precision"
:"hour","upcoming":false,"cores":[{"core":"5e9e28a2f3591845c73b2640","flight":1,
"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_succe
ss":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_upda
te":true,"tbd":false,"launch_library_id":null,"id":"5eb87cf6ffd86e000604b347"},{
"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]
},"links":{"patch":{"small":"https://images2.imgbox.com/36/a4/J5gJWxuC_o.png","l
arge":"https://images2.imgbox.com/c6/d2/MIC8sIE4_o.png"},"reddit":{"campaign":"h
ttps://www.reddit.com/r/spacex/comments/4ksdy3","launch":"https://www.reddit.com
/r/spacex/comments/4o5u6r","media":"https://www.reddit.com/r/spacex/comments/4o5
j6o","recovery":"https://www.reddit.com/r/spacex/comments/4on75l"},"flickr":{"sm
all":[],"original":["https://farm8.staticflickr.com/7088/27661326426_ce3c3f320d_
o.jpg","https://farm8.staticflickr.com/7698/27661325446_affb08be24_o.jpg","https
://farm8.staticflickr.com/7733/27661322976_073466e80c_o.jpg","https://farm8.stat
icflickr.com/7218/27661320706_4c16f3b76b_o.jpg","https://farm8.staticflickr.com/
7340/27661315686_6dcb2ce6f9_o.jpg","https://farm8.staticflickr.com/7656/27661313
956_e1ac9650b9_o.jpg","https://farm8.staticflickr.com/7616/27661312516_640764f8f
d_o.jpg","https://farm8.staticflickr.com/7413/27078893234_0142dd80f0_o.jpg","htt
ps://farm8.staticflickr.com/7334/27078889924_8819fd55ea_o.jpg"]},"presskit":"htt
ps://drive.google.com/open?id=0BwA3a65ef1OvMGpJSlpDNHhjelU","webcast":"https://w
ww.youtube.com/watch?v=gLNmtUEvI5A","youtube_id":"gLNmtUEvI5A","article":"https:
//spaceflightnow.com/2016/06/15/spacex-successfully-fires-satellites-into-orbit-
but-loses-booster-on-landing/","wikipedia":"https://en.wikipedia.org/wiki/ABS_(s
atellite_operator)"},"static_fire_date_utc":"2016-06-13T15:03:00.000Z","static_f
ire_date_unix":1465830180,"net":false,"window":2700,"rocket":"5e9d0d95eda69973a8
09d1ec","success":true,"failures":[],"details":"One year after pioneering this
technique on flight 16, Falcon again launched two Boeing 702SP gridded ion
thruster satellites in a dual-stack configuration, with the two customers
sharing the rocket and mission costs. First stage landing attempt on drone ship
failed on landing due to low thrust on one of the three landing engines.","crew"
:[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90b","5ea6ed2f080d
f4000697c90c","5ea6ed30080df4000697c913"],"capsules":[],"payloads":["5eb0e4bfb6c
3bb0006eeb203","5eb0e4bfb6c3bb0006eeb204"],"launchpad":"5e9e4501f509094ba4566f84
","flight_number":31,"name":"ABS-2A / Eutelsat 117W B","date_utc":"2016-06-15T14
:29:00.000Z","date_unix":1466000940,"date_local":"2016-06-15T10:29:00-04:00","da
te_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a2f359184f403b2641
","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"
landing_success":false,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca
"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cf8ffd86e
000604b348"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.
com/bb/0d/aLsm9QDC_o.png","large":"https://images2.imgbox.com/56/af/b7fNzZGo_o.p
ng"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/4ksedl","lau

nch":"https://www.reddit.com/r/spacex/comments/4t2umd/","media":"https://www.red
dit.com/r/spacex/comments/4tayth","recovery":"https://www.reddit.com/r/spacex/co
mments/4znsvo"},"flickr":{"small":[],"original":["https://farm9.staticflickr.com
/8819/27776240293_fcbf8c4a0a_o.jpg","https://farm8.staticflickr.com/7720/2777623
7513_038971797c_o.jpg","https://farm8.staticflickr.com/7594/27776235133_d794ce01
f4_o.jpg","https://farm8.staticflickr.com/7759/27776229243_a0674e590f_o.jpg","ht
tps://farm8.staticflickr.com/7512/27776228443_6652c6baea_o.jpg","https://farm9.s
taticflickr.com/8038/27776218453_34112abbc1_o.jpg","https://farm8.staticflickr.c
om/7636/27776215913_3f9f1b05df_o.jpg","https://farm8.staticflickr.com/7740/28358
960896_9785456101_o.jpg","https://farm8.staticflickr.com/7488/27776206663_262526
ba5f_o.jpg","https://farm8.staticflickr.com/7656/28358955546_ce55d65e16_o.jpg","
https://farm8.staticflickr.com/7467/27776204693_68b4ed82c9_o.jpg","https://farm8
.staticflickr.com/7693/28348649546_0a54b1aa44_o.jpg","https://farm8.staticflickr
.com/7540/28291786662_5e2e874576_o.jpg"]},"presskit":"https://drive.google.com/o
pen?id=0BwA3a65ef1OvM0JpSXdDUUJMRVk","webcast":"https://www.youtube.com/watch?v=
ThIdCuSsJh8","youtube_id":"ThIdCuSsJh8","article":"https://spaceflightnow.com/20
16/07/18/spacex-sends-supplies-to-space-station-lands-another-falcon-rocket/","w
ikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-9"},"static_fire_date_utc":"
2016-07-16T02:31:47.000Z","static_fire_date_unix":1468636307,"net":false,"window
":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"
Among other cargo, an International Docking Adapter (IDA-2) was carried to the
ISS. This mission had a successful first-stage landing at Cape
Canaveral.*Including the reusable Dragon Capsule, total payload to orbit was
6457 kg.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90
b","5ea6ed2f080df4000697c90c","5ea6ed30080df4000697c912"],"capsules":["5e9e2c5cf
359183bb73b266e"],"payloads":["5eb0e4c0b6c3bb0006eeb205"],"launchpad":"5e9e4501f
509094ba4566f84","flight_number":32,"name":"CRS-9","date_utc":"2016-07-18T04:45:
00.000Z","date_unix":1468817100,"date_local":"2016-07-18T00:45:00-04:00","date_p
recision":"hour","upcoming":false,"cores":[{"core":"5e9e28a2f359187f273b2642","f
light":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"land
ing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"
auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cf9ffd86e00060
4b349"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"
ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/22/cc/DjPcsMhb_
o.png","large":"https://images2.imgbox.com/0b/3e/aQpLZQHt_o.png"},"reddit":{"cam
paign":"https://www.reddit.com/r/spacex/comments/4pv6ws","launch":"https://www.r
eddit.com/r/spacex/comments/4xi7uq","media":"https://www.reddit.com/r/spacex/com
ments/4xkdfj","recovery":"https://www.reddit.com/r/spacex/comments/4y5xd1"},"fli
ckr":{"small":[],"original":["https://farm9.staticflickr.com/8699/28965678292_17
533229f3_o.jpg","https://farm9.staticflickr.com/8173/28453337463_b9d11eeb4c_o.jp
g","https://farm8.staticflickr.com/7793/28453335533_3f5a0a5760_o.jpg","https://f
arm9.staticflickr.com/8784/28938085496_74b3fd0527_o.jpg","https://farm9.staticfl
ickr.com/8337/28969742675_15f78369a1_o.jpg","https://farm9.staticflickr.com/8691
/28353012603_ab83b6f5aa_o.jpg","https://farm9.staticflickr.com/8078/28351782813_
58ca783e51_o.jpg"]},"presskit":"https://drive.google.com/open?id=0BwA3a65ef1Ovb0
FkYnE5dElZRlU","webcast":"https://www.youtube.com/watch?v=QZTCEO0gvLo","youtube_
id":"QZTCEO0gvLo","article":"https://spaceflightnow.com/2016/08/14/falcon-9-rock
et-launches-japanese-satellite-then-nails-bullseye-landing/","wikipedia":"https:

//en.wikipedia.org/wiki/JCSAT-16"},"static_fire_date_utc":"2016-08-11T04:01:00.0
00Z","static_fire_date_unix":1470888060,"net":false,"window":7200,"rocket":"5e9d
0d95eda69973a809d1ec","success":true,"failures":[],"details":"First attempt to
touch down from a ballistic trajectory using a single-engine landing burn. All
previous landings from a ballistic trajectory had fired three engines on the
landing-burn, which provided more braking force, but subjected the vehicle to
greater structural stresses. The single-engine landing burn takes more time and
fuel, but puts less stress on the vehicle.","crew":[],"ships":["5ea6ed2e080df400
0697c906","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed30080df40
00697c913"],"capsules":[],"payloads":["5eb0e4c1b6c3bb0006eeb206"],"launchpad":"5
e9e4501f509094ba4566f84","flight_number":33,"name":"JCSAT-16","date_utc":"2016-0
8-14T05:26:00.000Z","date_unix":1471152360,"date_local":"2016-08-14T01:26:00-04:
00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a2f35918b82
43b2643","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt"
:true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb2
34e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cfa
ffd86e000604b34a"},{"fairings":{"reused":false,"recovery_attempt":false,"recover
ed":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/0d/5
b/8X01C3ov_o.png","large":"https://images2.imgbox.com/ff/19/KCI4DVla_o.png"},"re
ddit":{"campaign":"https://www.reddit.com/r/spacex/comments/4pv7jl","launch":nul
l,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":n
ull,"webcast":"https://www.youtube.com/watch?v=_BgJEXQkjNQ","youtube_id":"_BgJEX
QkjNQ","article":"https://spaceflightnow.com/2016/09/01/spacex-rocket-and-
israeli-satellite-destroyed-in-launch-pad-explosion/","wikipedia":"https://en.wi
kipedia.org/wiki/Amos-6"},"static_fire_date_utc":"2016-09-01T13:07:00.000Z","sta
tic_fire_date_unix":1472735220,"net":false,"window":null,"rocket":"5e9d0d95eda69
973a809d1ec","success":false,"failures":[{"time":-165180,"altitude":0,"reason":"
buckled liner in several of the COPV tanks, causing perforations that allowed
liquid and/or solid oxygen to accumulate underneath the lining, which was
ignited by friction."}],"details":"The rocket and Amos-6 payload were lost in a
launch pad explosion on September 1, 2016 during propellant fill prior to a
static fire test. The pad was clear of personnel and there were no injuries.","c
rew":[],"ships":[],"capsules":[],"payloads":["5eb0e4c1b6c3bb0006eeb207"],"launch
pad":"5e9e4501f509094ba4566f84","flight_number":34,"name":"Amos-6","date_utc":"2
016-09-01T13:07:00.000Z","date_unix":1472735220,"date_local":"2016-09-01T09:07:0
0-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a2f359
187ee83b2644","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_att
empt":true,"landing_success":null,"landing_type":"ASDS","landpad":"5e9e3032383ec
b6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb
87cfbffd86e000604b34b"},{"fairings":{"reused":false,"recovery_attempt":false,"re
covered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com
/89/2a/bkI6LN0R_o.png","large":"https://images2.imgbox.com/24/c3/9MKjvOdD_o.png"
},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/5dii6z","launch
":"https://www.reddit.com/r/spacex/comments/5nsaqm","media":"https://www.reddit.
com/r/spacex/comments/5nsico","recovery":"https://www.reddit.com/r/spacex/commen
ts/5oe9kk"},"flickr":{"small":[],"original":["https://farm1.staticflickr.com/658
/32394688795_55a9873ea7_o.jpg","https://farm1.staticflickr.com/506/32394688095_a
3339f3c6d_o.jpg","https://farm1.staticflickr.com/745/32394687645_63ae2b4740_o.jp

g","https://farm1.staticflickr.com/318/31548291014_e3a30abca8_o.jpg","https://farm1.staticflickr.com/670/32351549066_e9cffe8d2b_o.jpg","https://farm6.staticflickr.com/5518/31579784413_83aeac560a_o.jpg","https://farm6.staticflickr.com/5556/32312421135_22c197c156_o.jpg","https://farm1.staticflickr.com/529/32312420015_5d2403a847_o.jpg","https://farm1.staticflickr.com/435/32312417695_19c0e50c4b_o.jpg","https://farm1.staticflickr.com/735/32312416415_b90892af0a_o.jpg","https://farm1.staticflickr.com/293/32312415025_cae16d1994_o.jpg","https://farm1.staticflickr.com/738/31467130724_92e02c9524_o.jpg","https://farm1.staticflickr.com/464/31467130374_9f7a7d380e_o.jpg","https://farm1.staticflickr.com/581/31467129424_bac77d594a_o.jpg","https://farm1.staticflickr.com/380/32308163845_c1731a4b1f_o.jpg","https://farm1.staticflickr.com/447/31450835954_72ed10a19e_o.jpg","https://farm1.staticflickr.com/507/31450834974_b8a3f4aca5_o.jpg"]},"presskit":"https://drive.google.com/open?id=0BwA3a65ef1OvZC1aU3FuMlQzalE","webcast":"https://www.youtube.com/watch?v=7WimRhydggo","youtube_id":"7WimRhydggo","article":"https://spaceflightnow.com/2017/01/14/spacex-resumes-flights-with-on-target-launch-for-iridium/","wikipedia":"https://en.wikipedia.org/wiki/Iridium_satellite_constellation#Next-generation_constellation"},"static_fire_date_utc":"2017-01-05T19:40:00.000Z","static_fire_date_unix":1483645200,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Return-to-flight mission after the loss of Amos-6 in September 2016. Iridium NEXT will replace the original Iridium constellation, launched in the late 1990s. Each Falcon mission will carry 10 satellites, with a goal to complete deployment of the 66 plus 9 spare satellite constellation by mid 2018. The first two Iridium qualification units were supposed to ride a Dnepr rocket in April 2016 but were delayed, so Iridium decided to qualify the first batch of 10 satellites instead.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed30080df4000697c912","5ea6ed30080df4000697c915"],"capsules":[],"payloads":["5eb0e4c2b6c3bb0006eeb208"],"launchpad":"5e9e4502f509092b78566f87","flight_number":35,"name":"Iridium NEXT Mission 1","date_utc":"2017-01-14T17:54:00.000Z","date_unix":1484416440,"date_local":"2017-01-14T10:54:00-07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f359189e3a3b2645","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cfdffd86e000604b34c"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/11/eb/qqrhHFhv_o.png","large":"https://images2.imgbox.com/ea/43/D4tA0WaM_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/5n2eqx","launch":"https://www.reddit.com/r/spacex/comments/5uw4bh","media":"https://www.reddit.com/r/spacex/comments/5uoy8o","recovery":"https://www.reddit.com/r/spacex/comments/609aq4"},"flickr":{"small":[],"original":["https://farm3.staticflickr.com/2815/32761844973_d2e8d76e9c_o.jpg","https://farm4.staticflickr.com/3878/32761843663_8e366494f4_o.jpg","https://farm3.staticflickr.com/2790/32852846842_6f1f7b26b9_o.jpg","https://farm3.staticflickr.com/2295/32852845662_e7ae0daf4a_o.jpg","https://farm4.staticflickr.com/3888/33000639155_2a6e2bb23d_o.jpg","https://farm1.staticflickr.com/405/33000638185_b4ec7c7b93_o.jpg","https://farm1.staticflickr.com/574/32874779241_9f463de901_o.jpg","https://farm4.staticflickr.com/3710/32153433074_96337a54db_o.jpg","https://farm1.staticflickr.com/327/32153432924_09dd1482d8_o.jpg","https://farm3.staticflickr.com/2881/32183025803_36bf976b9e_o.jpg","https://farm3.staticflickr.com/2362/32183025493_2a37b4e22c_o.jpg","https:

//farm1.staticflickr.com/504/32178458813_ff47f61bb9_o.jpg","https://farm1.staticflickr.com/265/32176806823_879ccc5da0_o.jpg","https://farm1.staticflickr.com/401/32866357531_69c6d289ed_o.jpg","https://farm3.staticflickr.com/2105/32945170805_553d45ca56_o.jpg","https://farm4.staticflickr.com/3865/32945170225_58129f00dc_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/crs10presskitfinal.pdf","webcast":"https://www.youtube.com/watch?v=giNhaEzv_PI","youtube_id":"giNhaEzv_PI","article":"https://spaceflightnow.com/2017/02/19/historic-launch-pad-back-in-service-with-thundering-blastoff-by-spacex/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-10"},"static_fire_date_utc":"2017-02-12T21:30:00.000Z","static_fire_date_unix":1486935000,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"First Falcon 9 flight from the historic LC-39A launchpad at Kennedy Space Center, carrying supplies and materials to support dozens of science and research investigations scheduled during ISS Expeditions 50 and 51. The first stage returned to launch site and landed at LZ-1.","crew":[],"ships":["5ea6ed30080df4000697c912"],"capsules":["5e9e2c5cf359185d753b266f"],"payloads":["5eb0e4c3b6c3bb0006eeb209"],"launchpad":"5e9e4502f509094188566f88","flight_number":36,"name":"CRS-10","date_utc":"2017-02-19T14:39:00.000Z","date_unix":1487515140,"date_local":"2017-02-19T10:39:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f3591829dc3b2646","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87cfeffd86e000604b34d"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/56/9d/gvzAqLFg_o.png","large":"https://images2.imgbox.com/52/a0/z8Dwflcz_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/5n2e10/echostar_23_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/5z8dkm/welcome_to_the_rspacex_echostar23_official_launch/","media":"https://www.reddit.com/r/spacex/comments/5z8if6/rspacex_echostar_23_media_thread_videos_images/","recovery":null},"flickr":{"small":[],"original":["https://farm4.staticflickr.com/3819/33094074350_ae56bd5c73_o.jpg","https://farm3.staticflickr.com/2935/33094073720_92234ddaee_o.jpg","https://farm1.staticflickr.com/768/33094072690_31a85e82ba_o.jpg","https://farm3.staticflickr.com/2876/33094072100_546090a4f3_o.jpg","https://farm3.staticflickr.com/2860/32626053254_d702922d87_o.jpg","https://farm3.staticflickr.com/2904/32654666113_ba833971e0_o.jpg","https://farm1.staticflickr.com/677/32654665263_751d29ded1_o.jpg","https://farm3.staticflickr.com/2936/33299697331_09313ac49d_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/echostarxxiiifinal.pdf","webcast":"https://www.youtube.com/watch?v=lZmqbL-hz7U","youtube_id":"lZmqbL-hz7U","article":"http://spacenews.com/spacex-launches-echostar-23/","wikipedia":"https://en.wikipedia.org/wiki/EchoStar#Satellite_fleet"},"static_fire_date_utc":"2017-03-09T23:00:00.000Z","static_fire_date_unix":1489100400,"net":false,"window":9000,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Communications satellite for EchoStar Corp. EchoStar XXIII, based on a spare platform from the cancelled CMBStar 1 satellite program, will provide direct-to-home television broadcast services over Brazil. There was no attempt at a first-stage recovery so this rocket did not have landing legs or grid fins.","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4c3b6c3bb0006eeb20a"],"launchpad":"5e9e4502f509094188566f88","flight_n

umber":37,"name":"EchoStar 23","date_utc":"2017-03-16T06:00:00.000Z","date_unix"
:1489644000,"date_local":"2017-03-16T02:00:00-04:00","date_precision":"hour","up
coming":false,"cores":[{"core":"5e9e28a3f3591878473b2647","flight":1,"gridfins":
false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null
,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_lib
rary_id":null,"id":"5eb87cfeffd86e000604b34e"},{"fairings":{"reused":false,"reco
very_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"htt
ps://images2.imgbox.com/d0/c4/DFQ5TdPz_o.png","large":"https://images2.imgbox.co
m/9c/cf/tRe9z6t8_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/c
omments/5sjrzj/ses10_launch_campaign_thread/","launch":"https://www.reddit.com/r
/spacex/comments/62aqi7/rspacex_ses10_official_launch_discussion_updates/","medi
a":"https://www.reddit.com/r/spacex/comments/62aqad/rspacex_ses10_media_thread_v
ideos_images_gifs/","recovery":"https://www.reddit.com/r/spacex/comments/634gmr/
b1021ses10_recovery_thread/"},"flickr":{"small":[],"original":["https://farm1.st
aticflickr.com/601/33026465643_462ef7a2cb_o.jpg","https://farm3.staticflickr.com
/2850/32996438264_b79ca3664b_o.jpg","https://farm4.staticflickr.com/3956/3299643
7434_4dab1ae8e3_o.jpg","https://farm4.staticflickr.com/3831/32996435084_6c5662ca
ca_o.jpg","https://farm4.staticflickr.com/3775/32915200224_b6ecfabd7e_o.jpg","ht
tps://farm4.staticflickr.com/3886/32915199874_b826eac153_o.jpg","https://farm3.s
taticflickr.com/2842/32915199514_6c44178e87_o.jpg","https://farm4.staticflickr.c
om/3771/32915198904_2df85aed05_o.jpg","https://farm4.staticflickr.com/3668/32915
198334_d2fa2f16ab_o.jpg","https://farm4.staticflickr.com/3955/32915197674_24d6e2
7cf5_o.jpg","https://farm4.staticflickr.com/3830/33616913981_f04b6e2351_o.jpg","
https://farm4.staticflickr.com/3819/33616913111_e699b48d66_o.jpg","https://farm4
.staticflickr.com/3835/33361035860_c57ed61239_o.jpg","https://farm4.staticflickr
.com/3783/33361035200_bfb797d38f_o.jpg","https://farm4.staticflickr.com/3698/336
11796351_54d5a6d65a_o.jpg","https://farm3.staticflickr.com/2857/33611795531_82cc
2d8789_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/finalses10p
resskit.pdf","webcast":"https://www.youtube.com/watch?v=xsZSXav4wI8","youtube_id
":"xsZSXav4wI8","article":"https://spaceflightnow.com/2017/03/31/spacex-flies-
rocket-for-second-time-in-historic-test-of-cost-cutting-technology/","wikipedia"
:"https://en.wikipedia.org/wiki/SES-10"},"static_fire_date_utc":"2017-03-27T18:0
0:00.000Z","static_fire_date_unix":1490637600,"net":false,"window":9000,"rocket"
:"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"First
payload to fly on a reused first stage, B1021, previously launched with CRS-8,
which also landed a second time. In what is also a first, the payload fairing
remained intact after a successful splashdown achieved with thrusters and a
steerable parachute.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080
df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed30080df4000697c913"],"capsules"
:[],"payloads":["5eb0e4c3b6c3bb0006eeb20b"],"launchpad":"5e9e4502f509094188566f8
8","flight_number":38,"name":"SES-10","date_utc":"2017-03-30T22:27:00.000Z","dat
e_unix":1490912820,"date_local":"2017-03-30T18:27:00-04:00","date_precision":"ho
ur","upcoming":false,"cores":[{"core":"5e9e28a2f359182d0b3b263e","flight":2,"gri
dfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":t
rue,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":t
rue,"tbd":false,"launch_library_id":null,"id":"5eb87d00ffd86e000604b34f"},{"fair
ings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"li
nks":{"patch":{"small":"https://images2.imgbox.com/e5/2d/IZB4g6Ra_o.png","large"

:"https://images2.imgbox.com/9d/76/kMetaHqz_o.png"},"reddit":{"campaign":"https:
//www.reddit.com/r/spacex/comments/601ykx","launch":"https://www.reddit.com/r/sp
acex/comments/68bn8y/","media":"https://www.reddit.com/r/spacex/comments/68bpii"
,"recovery":null},"flickr":{"small":[],"original":["https://farm3.staticflickr.c
om/2922/33578359423_4169ac8f98_o.jpg","https://farm3.staticflickr.com/2900/33578
357343_85c247ebce_o.jpg","https://farm5.staticflickr.com/4166/34006001860_8c45f2
8e69_o.jpg","https://farm5.staticflickr.com/4166/34005999880_77684dba4b_o.jpg","
https://farm3.staticflickr.com/2934/34005998140_c77076b6fb_o.jpg","https://farm5
.staticflickr.com/4191/34005996220_fe9e4342d3_o.jpg","https://farm3.staticflickr
.com/2883/33575654563_699c544776_o.jpg","https://farm3.staticflickr.com/2902/335
75652913_0dece34db4_o.jpg","https://farm5.staticflickr.com/4163/33575651063_24e0
5826c5_o.jpg","https://farm3.staticflickr.com/2876/33994851620_fabd14770f_o.jpg"
,"https://farm3.staticflickr.com/2832/33973172140_b370b79c51_o.jpg","https://far
m3.staticflickr.com/2874/34357262105_11b417bea2_o.jpg","https://farm5.staticflic
kr.com/4158/34357260545_16870a94ba_o.jpg"]},"presskit":"http://www.spacex.com/si
tes/spacex/files/nrol76presskit.pdf","webcast":"https://www.youtube.com/watch?v=
EzQpkQ1etdA","youtube_id":"EzQpkQ1etdA","article":"https://techcrunch.com/2017/0
5/01/spacex-successfully-launches-nrol-76-u-s-military-satellite/","wikipedia":"
https://en.wikipedia.org/wiki/List_of_NRO_launches"},"static_fire_date_utc":"201
7-04-25T19:02:00.000Z","static_fire_date_unix":1493146920,"net":false,"window":7
200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"
First launch under SpaceX\'s certification for national security space missions,
which allows SpaceX to contract launch services for classified payloads. Second-
stage speed and altitude telemetry were omitted from the launch webcast, which
displayed first-stage telemetry instead, with continuous tracking of the booster
from liftoff to landing for the first time.","crew":[],"ships":["5ea6ed2f080df40
00697c90c"],"capsules":[],"payloads":["5eb0e4c3b6c3bb0006eeb20c"],"launchpad":"5
e9e4502f509094188566f88","flight_number":39,"name":"NROL-76","date_utc":"2017-05
-01T11:15:00.000Z","date_unix":1493637300,"date_local":"2017-05-01T07:15:00-04:0
0","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f3591811f8
3b2648","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":
true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a3
4e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d01f
fd86e000604b350"},{"fairings":{"reused":false,"recovery_attempt":false,"recovere
d":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/ab/8d
/fUpriAbI_o.png","large":"https://images2.imgbox.com/5b/f7/30l0xVXG_o.png"},"red
dit":{"campaign":"https://www.reddit.com/r/spacex/comments/64kguj/","launch":"ht
tps://www.reddit.com/r/spacex/comments/6b88hz/","media":"https://www.reddit.com/
r/spacex/comments/6bcf8j/","recovery":null},"flickr":{"small":[],"original":["ht
tps://farm5.staticflickr.com/4174/33859521334_d75fa367d5_o.jpg","https://farm5.s
taticflickr.com/4158/33859520764_5bb7a7daf6_o.jpg","https://farm5.staticflickr.c
om/4182/33859520404_a9c78c971d_o.jpg","https://farm5.staticflickr.com/4157/34556
140711_f404943340_o.jpg","https://farm5.staticflickr.com/4179/34556139821_b2d625
5e07_o.jpg","https://farm5.staticflickr.com/4187/34684981395_2f93965492_o.jpg","
https://farm5.staticflickr.com/4155/34684980875_77b745158a_o.jpg","https://farm5
.staticflickr.com/4183/34296430820_8d3a42c0d7_o.jpg"]},"presskit":"https://www.s
pacex.com/sites/spacex/files/inmarsat5f4presskit_final.pdf","webcast":"https://w
ww.youtube.com/watch?v=ynMYE64IEKs","youtube_id":"ynMYE64IEKs","article":"https:

//www.space.com/36852-spacex-launches-inmarsat-5-f4-satellite.html","wikipedia":
"https://en.wikipedia.org/wiki/Inmarsat#Satellites"},"static_fire_date_utc":"201
7-05-11T16:45:00.000Z","static_fire_date_unix":1494521100,"net":false,"window":2
940,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"
At 6,070 kg this was the heaviest payload launched to GTO by a Falcon 9 rocket.
The launch was originally scheduled for the Falcon Heavy, but performance
improvements allowed the mission to be carried out by an expendable Falcon 9 ins
tead.","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4c3b6c3bb0006eeb20d"
],"launchpad":"5e9e4502f509094188566f88","flight_number":40,"name":"Inmarsat-5 F
4","date_utc":"2017-05-15T23:21:00.000Z","date_unix":1494890460,"date_local":"20
17-05-15T19:21:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"cor
e":"5e9e28a3f359186f3f3b2649","flight":1,"gridfins":false,"legs":false,"reused":
false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpa
d":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d01
ffd86e000604b351"},{"fairings":null,"links":{"patch":{"small":"https://images2.i
mgbox.com/54/45/VoihQAY3_o.png","large":"https://images2.imgbox.com/2d/39/EAkUxx
Pk_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/68ul58
/","launch":"https://www.reddit.com/r/spacex/comments/6ektkt/","media":"https://
www.reddit.com/r/spacex/comments/6emlzr/","recovery":null},"flickr":{"small":[],
"original":["https://farm5.staticflickr.com/4210/34696326760_cee662ef1f_o.jpg","
https://farm5.staticflickr.com/4279/34239858024_64795724c9_o.jpg","https://farm5
.staticflickr.com/4250/35043398436_3ceaa0098a_o.jpg","https://farm5.staticflickr
.com/4223/34272083563_f52e5bfffe_o.jpg","https://farm5.staticflickr.com/4219/349
18571502_7cf66854f7_o.jpg","https://farm5.staticflickr.com/4252/34918568732_4efe
0885de_o.jpg","https://farm5.staticflickr.com/4264/34272065153_cfd8899f3e_o.jpg"
,"https://farm5.staticflickr.com/4284/34948230531_e76b7560c9_o.jpg","https://far
m5.staticflickr.com/4280/35078830875_afbd41c675_o.jpg","https://farm5.staticflic
kr.com/4280/34268361083_71fc70ff1a_o.jpg","https://farm5.staticflickr.com/4199/3
5038651646_93d0339269_o.jpg","https://farm5.staticflickr.com/4227/34223076793_4a
be7e74d6_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/crs11pres
skit.pdf","webcast":"https://www.youtube.com/watch?v=JuZBOUMsYws","youtube_id":"
JuZBOUMsYws","article":"https://spaceflightnow.com/2017/06/03/reused-dragon-
cargo-capsule-launched-on-journey-to-space-station/","wikipedia":"https://en.wik
ipedia.org/wiki/SpaceX_CRS-11"},"static_fire_date_utc":"2017-05-28T16:00:00.000Z
","static_fire_date_unix":1495987200,"net":false,"window":0,"rocket":"5e9d0d95ed
a69973a809d1ec","success":true,"failures":[],"details":"This mission delivered
the Neutron Star Interior Composition Explorer (NICER) to the ISS, along with
the MUSES Earth imaging platform and ROSA solar array. For the first time, this
mission launched a refurbished Dragon capsule, serial number C106 which first
flew in September 2014 on the CRS-4 mission. Originally scheduled to launch on
June 1, but was scrubbed due to inclement weather.","crew":[],"ships":["5ea6ed30
080df4000697c912"],"capsules":["5e9e2c5bf3591880643b2669"],"payloads":["5eb0e4c4
b6c3bb0006eeb20e"],"launchpad":"5e9e4502f509094188566f88","flight_number":41,"na
me":"CRS-11","date_utc":"2017-06-03T21:07:00.000Z","date_unix":1496524020,"date_
local":"2017-06-03T17:07:00-04:00","date_precision":"hour","upcoming":false,"cor
es":[{"core":"5e9e28a3f3591856803b264a","flight":1,"gridfins":true,"legs":true,"
reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS
","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_

library_id":null,"id":"5eb87d03ffd86e000604b352"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/fa/1b/3vvXwAf9_o.png","large":"https://images2.imgbox.com/e2/f3/RZJ7ET73_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/69hhkm/bulgariasat1_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/6isph2/welcome_to_the_rspacex_bulgariasat1_official/","media":"https://www.reddit.com/r/spacex/comments/6iuj1z/rspacex_bulgariasat1_media_thread_videos_images/","recovery":"https://www.reddit.com/r/spacex/comments/6k3kop/b10292_bulgariasat_1_recovery_thread/"},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4216/35496028185_ac5456195f_o.jpg","https://farm5.staticflickr.com/4278/35496027525_9ab9d90417_o.jpg","https://farm5.staticflickr.com/4277/35496026875_fd25c46934_o.jpg","https://farm5.staticflickr.com/4257/35496026065_02fe65754b_o.jpg","https://farm5.staticflickr.com/4289/35491530485_5a4d0f39ae_o.jpg","https://farm5.staticflickr.com/4279/35491529875_1e35ee0a1e_o.jpg","https://farm5.staticflickr.com/4230/34681559323_53f05581ca_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/bulgariasat1presskit.pdf","webcast":"https://www.youtube.com/watch?v=Y8mLi-rRTh8","youtube_id":"Y8mLi-rRTh8","article":"https://en.wikipedia.org/wiki/BulgariaSat-1","wikipedia":"https://en.wikipedia.org/wiki/BulgariaSat-1"},"static_fire_date_utc":"2017-06-15T22:25:00.000Z","static_fire_date_unix":1497565500,"net":false,"window":7200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Second time a booster will be reused: Second flight of B1029 after the Iridium mission of January 2017. The satellite will be the first commercial Bulgarian-owned communications satellite and it will provide television broadcasts and other communications services over southeast Europe.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed30080df4000697c913"],"capsules":[],"payloads":["5eb0e4c4b6c3bb0006eeb20f"],"launchpad":"5e9e4502f509094188566f88","flight_number":42,"name":"BulgariaSat-1","date_utc":"2017-06-23T19:10:00.000Z","date_unix":1498245000,"date_local":"2017-06-23T15:10:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f359189e3a3b2645","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d04ffd86e000604b353"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/dc/51/LrdAbm5y_o.png","large":"https://images2.imgbox.com/84/18/ahmKQNIj_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/6bp4fj/","launch":"https://www.reddit.com/r/spacex/comments/6j67ti/","media":"https://www.reddit.com/r/spacex/comments/6j7va6/","recovery":"https://www.reddit.com/r/spacex/comments/6k16ho/"},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4162/34868729603_c75aa126b5_o.jpg","https://farm5.staticflickr.com/4256/35618496935_5049a27240_o.jpg","https://farm5.staticflickr.com/4138/35231792310_377477e626_o.jpg","https://farm5.staticflickr.com/4005/35231791780_dd15335d5e_o.jpg","https://farm5.staticflickr.com/4289/35371450262_bb9c682ace_o.jpg","https://farm5.staticflickr.com/4263/35499710806_f9179bea0e_o.jpg","https://farm5.staticflickr.com/4256/35533873795_eb04895a60_o.jpg","https://farm5.staticflickr.com/4217/35533872755_900b3e8977_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/iridium2presskit.pdf","webcast":"https://www.youtube.com/watch?v=7tIwZg8F9b8","youtube_id":"

7tIwZg8F9b8","article":"https://www.space.com/37304-liftoff-spacex-second-launch-three-days.html","wikipedia":"https://en.wikipedia.org/wiki/Iridium_satellite_constellation"},"static_fire_date_utc":"2017-06-20T22:10:00.000Z","static_fire_date_unix":1497996600,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"First flight with titanium grid fins to improve control authority and better cope with heat during re-entry.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed2f080df4000697c911","5ea6ed30080df4000697c912"],"capsules":[],"payloads":["5eb0e4c4b6c3bb0006eeb210"],"launchpad":"5e9e4502f509092b78566f87","flight_number":43,"name":"Iridium NEXT Mission 2","date_utc":"2017-06-25T20:25:00.000Z","date_unix":1498422300,"date_local":"2017-06-25T13:25:00-07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f3591801cf3b264b","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d05ffd86e000604b354"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/8f/a2/46UURVaD_o.png","large":"https://images2.imgbox.com/14/bd/jSZymxYh_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/6fw4yy/","launch":"https://www.reddit.com/r/spacex/comments/6kt2re/","media":"https://www.reddit.com/r/spacex/comments/6kt3fe/","recovery":null},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4063/35758875505_a8559a6226_o.jpg","https://farm5.staticflickr.com/4025/35758874355_5075298440_o.jpg","https://farm5.staticflickr.com/4235/35359372730_df7c79797b_o.jpg","https://farm5.staticflickr.com/4014/35359371840_239a658872_o.jpg","https://farm5.staticflickr.com/4002/35577536822_679c68862d_o.jpg","https://farm5.staticflickr.com/4259/34868730393_b778d81a71_o.jpg","https://farm5.staticflickr.com/4162/34868729603_c75aa126b5_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/intelsat35epresskit.pdf","webcast":"https://www.youtube.com/watch?v=MIHVPCj25Z0","youtube_id":"MIHVPCj25Z0","article":"https://spaceflightnow.com/2017/07/06/spacex-delivers-for-intelsat-on-heavyweight-falcon-9-mission/","wikipedia":"https://en.wikipedia.org/wiki/Intelsat_35e"},"static_fire_date_utc":"2017-06-29T00:30:00.000Z","static_fire_date_unix":1498696200,"net":false,"window":3480,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Due to the constraints of sending a heavy satellite (~6,000 kg) to GTO, the rocket will fly in its expendable configuration and the first-stage booster will not be recovered.","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4c4b6c3bb0006eeb211"],"launchpad":"5e9e4502f509094188566f88","flight_number":44,"name":"Intelsat 35e","date_utc":"2017-07-05T23:35:00.000Z","date_unix":1499297700,"date_local":"2017-07-05T19:35:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a4f3591850cc3b264c","flight":1,"gridfins":false,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d06ffd86e000604b355"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/ee/85/dtsbOs0E_o.png","large":"https://images2.imgbox.com/9c/f7/BNIV5kBE_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/6mrga2/crs12_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/6tfcio/welcome_to_the_rspacex_crs12_official_launch/","media":"https://www.reddit.com/r/spacex/comments/6th2nf/rspacex_crs12_media_thread_videos_images_gifs/","recovery

":null},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4352/36438808381_733603843d_o.jpg","https://farm5.staticflickr.com/4434/35760634184_f75457493b_o.jpg","https://farm5.staticflickr.com/4418/35741466074_327e9d0a80_o.jpg","https://farm5.staticflickr.com/4414/35741465934_db82541cf3_o.jpg","https://farm5.staticflickr.com/4384/35741465854_e264864537_o.jpg","https://farm5.staticflickr.com/4333/35741465714_d0a8800533_o.jpg","https://farm5.staticflickr.com/4397/35741465464_1d49cc1cae_o.jpg","https://farm5.staticflickr.com/4354/35762350653_d94b2b5b07_o.jpg","https://farm5.staticflickr.com/4353/36571921725_2a0be4ec58_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/crs12presskit.pdf","webcast":"https://www.youtube.com/watch?v=vLxWsYx8dbo","youtube_id":"vLxWsYx8dbo","article":"https://spaceflightnow.com/2017/08/17/photos-falcon-9-rocket-soars-into-space-lands-back-at-cape-canaveral/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-12"},"static_fire_date_utc":"2017-08-10T13:10:00.000Z","static_fire_date_unix":1502370600,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Dragon is expected to carry 2,349 kg (5,179 lb) of pressurized mass and 961 kg (2,119 lb) unpressurized. The external payload manifested for this flight is the CREAM cosmic-ray detector. First flight of the Falcon 9 Block 4 upgrade. Last flight of a newly-built Dragon capsule; further missions will use refurbished spacecraft.","crew":[],"ships":["5ea6ed30080df4000697c912"],"capsules":["5e9e2c5cf3591869b63b2670"],"payloads":["5eb0e4c4b6c3bb0006eeb212"],"launchpad":"5e9e4502f509094188566f88","flight_number":45,"name":"CRS-12","date_utc":"2017-08-14T16:31:00.000Z","date_unix":1502728260,"date_local":"2017-08-14T12:31:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a4f3591884ee3b264d","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d07ffd86e000604b356"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/fd/09/Z1wlUv4U_o.png","large":"https://images2.imgbox.com/5e/95/HLIEaJlQ_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/6o98st","launch":"https://www.reddit.com/r/spacex/comments/6vihsl/welcome_to_the_rspacex_formosat5_official_launch/","media":"https://www.reddit.com/r/spacex/comments/6vhwi1/rspacex_formosat5_media_thread_videos_images_gifs/","recovery":"https://www.reddit.com/r/spacex/comments/6wk653/b1038_recovery_thread/"},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4434/36075361533_54b3b937dd_o.jpg","https://farm5.staticflickr.com/4428/36884090115_ced8a80f14_o.jpg","https://farm5.staticflickr.com/4393/36073897213_6746d2a8b2_o.jpg","https://farm5.staticflickr.com/4341/36073878143_45c3ef0b93_o.jpg","https://farm5.staticflickr.com/4369/35978284213_e12e5743ab_o.jpg","https://farm5.staticflickr.com/4394/35978283413_145ba2ca2f_o.jpg","https://farm5.staticflickr.com/4340/35978282703_5dff70fb19_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/formosat5presskit.pdf","webcast":"https://www.youtube.com/watch?v=J4u3ZN2g_MI","youtube_id":"J4u3ZN2g_MI","article":"https://spaceflightnow.com/2017/08/25/taiwanese-satellite-rides-spacex-rocket-into-orbit/","wikipedia":"https://en.wikipedia.org/wiki/Formosat-5"},"static_fire_date_utc":"2017-08-24T18:50:00.000Z","static_fire_date_unix":1503600600,"net":false,"window":2520,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Formosat-5 is an Earth observation satellite of the Taiwanese space agency. The SHERPA space

tug by Spaceflight Industries was removed from the cargo manifest of this mission. The satellite has a mass of only 475 kg.","crew":[],"ships":["5ea6ed2e080df4000697c905","5ea6ed2f080df4000697c910"],"capsules":[],"payloads":["5eb0e4c4b6c3bb0006eeb213"],"launchpad":"5e9e4502f509092b78566f87","flight_number":46,"name":"FormoSat-5","date_utc":"2017-08-24T18:50:00.000Z","date_unix":1503600600,"date_local":"2017-08-24T11:50:00-07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a4f359182d843b264e","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d08ffd86e000604b357"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/12/7c/p8btH0CD_o.png","large":"https://images2.imgbox.com/32/61/cX8ZlEJQ_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/6u6q1t/x37b_otv5_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/6ygmf1/rspacex_x37b_otv5_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/6yih4g/rspacex_x37b_otv5_media_thread_videos_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4411/37087809715_08a6d9904d_o.jpg","https://farm5.staticflickr.com/4384/37087808315_4dc9575d1b_o.jpg","https://farm5.staticflickr.com/4363/36251815974_8b996dbbfb_o.jpg","https://farm5.staticflickr.com/4374/36251814644_1a469f63ee_o.jpg","https://farm5.staticflickr.com/4388/36251812554_006501315f_o.jpg","https://farm5.staticflickr.com/4355/36250895284_8c24cb4232_o.jpg","https://farm5.staticflickr.com/4342/36689886890_99709e6934_o.jpg","https://farm5.staticflickr.com/4364/36689885100_c3c427c6bf_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/otv5_presskit.pdf","webcast":"https://www.youtube.com/watch?v=9M6Zvi-fFv4","youtube_id":"9M6Zvi-fFv4","article":"https://spaceflightnow.com/2017/09/07/spacex-beats-hurricane-with-smooth-launch-of-militarys-x-37b-spaceplane/","wikipedia":"https://en.wikipedia.org/wiki/Boeing_X-37"},"static_fire_date_utc":"2017-08-31T20:30:00.000Z","static_fire_date_unix":1504211400,"net":false,"window":18300,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Notable because Boeing is the primary contractor of the X-37B, which has until now been launched by ULA, a SpaceX competitor and Boeing partnership. Second flight of the Falcon 9 Block 4 upgrade.","crew":[],"ships":["5ea6ed2e080df4000697c906","5ea6ed2f080df4000697c90b"],"capsules":[],"payloads":["5eb0e4c5b6c3bb0006eeb214"],"launchpad":"5e9e4502f509094188566f88","flight_number":47,"name":"Boeing X-37B OTV-5","date_utc":"2017-09-07T13:50:00.000Z","date_unix":1504792200,"date_local":"2017-09-07T09:50:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a4f3591845123b264f","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d09ffd86e000604b358"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/fb/5b/LNVLRITr_o.png","large":"https://images2.imgbox.com/48/d4/MKsibD8N_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/6ygwxw/iridium_next_constellation_mission_3_launch/","launch":"https://www.reddit.com/r/spacex/comments/753e0m/iridium_next_mission_3_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/755m2z/rspacex_iridium3_media_thread_

videos_images_gifs/","recovery":"https://www.reddit.com/r/spacex/comments/75z823
/b10411_recovery_thread/"},"flickr":{"small":[],"original":["https://farm5.stati
cflickr.com/4509/37610550066_b56bc5d743_o.jpg","https://farm5.staticflickr.com/4
487/37610548356_1b7d30001e_o.jpg","https://farm5.staticflickr.com/4514/376105476
96_9114038d60_o.jpg","https://farm5.staticflickr.com/4483/37610547226_01d19395a3
_o.jpg","https://farm5.staticflickr.com/4504/36984625383_d7707548ec_o.jpg","http
s://farm5.staticflickr.com/4505/36984623903_7bb6643649_o.jpg","https://farm5.sta
ticflickr.com/4445/36984622463_6f9b21929c_o.jpg","https://farm5.staticflickr.com
/4471/36944884234_92ddc7fb39_o.jpg"]},"presskit":"http://www.spacex.com/sites/sp
acex/files/iridium3presskit.pdf","webcast":"https://www.youtube.com/watch?v=SB4N
4xF2B2w&feature=youtu.be","youtube_id":"SB4N4xF2B2w","article":"https://spacefli
ghtnow.com/2017/10/09/spacex-launch-adds-another-10-satellites-to-iridium-next-f
leet/","wikipedia":"https://en.wikipedia.org/wiki/Iridium_satellite_constellatio
n#Next-generation_constellation"},"static_fire_date_utc":"2017-10-05T13:31:00.00
0Z","static_fire_date_unix":1507210260,"net":false,"window":0,"rocket":"5e9d0d95
eda69973a809d1ec","success":true,"failures":[],"details":"Third of eight
missions to launch Iridium\'s second generation constellation from VAFB","crew":
[],"ships":["5ea6ed2e080df4000697c905","5ea6ed2f080df4000697c910"],"capsules":[]
,"payloads":["5eb0e4c5b6c3bb0006eeb215"],"launchpad":"5e9e4502f509092b78566f87",
"flight_number":48,"name":"Iridium NEXT Mission 3","date_utc":"2017-10-09T12:37:
00.000Z","date_unix":1507552620,"date_local":"2017-10-09T05:37:00-07:00","date_p
recision":"hour","upcoming":false,"cores":[{"core":"5e9e28a4f3591843103b2650","f
light":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"land
ing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"
auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d0affd86e00060
4b359"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"
ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/bc/d3/Yd5qpPd9_
o.png","large":"https://images2.imgbox.com/dd/c6/Qns2WYDQ_o.png"},"reddit":{"cam
paign":"https://www.reddit.com/r/spacex/comments/6yvn64/ses11echostar_105_launch
_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/75bw7p/ses
11echostar105_official_launch_discussions/","media":"https://www.reddit.com/r/sp
acex/comments/75pgu5/rspacex_ses11_media_thread_videos_images_gifs/","recovery":
"https://www.reddit.com/r/spacex/comments/76fqz1/b10312_recovery_thread/"},"flic
kr":{"small":[],"original":["https://farm5.staticflickr.com/4471/37388002420_b86
680c3af_o.jpg","https://farm5.staticflickr.com/4497/37388002170_a267280534_o.jpg
","https://farm5.staticflickr.com/4455/37388001730_0869279a8d_o.jpg","https://fa
rm5.staticflickr.com/4465/36975195443_b98ed0fb24_o.jpg","https://farm5.staticfli
ckr.com/4499/36975194993_8548a53c60_o.jpg","https://farm5.staticflickr.com/4482/
36975194613_15bb109059_o.jpg","https://farm5.staticflickr.com/4453/36975194233_5
f8f45c686_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/echostar
105ses11presskit.pdf","webcast":"https://www.youtube.com/watch?v=iv1zeGSvhIw","y
outube_id":"iv1zeGSvhIw","article":"https://spaceflightnow.com/2017/10/12/video-
falcon-9-rocket-lifts-off-with-joint-satellite-for-ses-echostar/","wikipedia":"h
ttps://en.wikipedia.org/wiki/List_of_SES_satellites"},"static_fire_date_utc":"20
17-10-02T20:30:00.000Z","static_fire_date_unix":1506976200,"net":false,"window":
7200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":
"Nineteenth comsat to GTO, also the fourth satellite launched for SES and second
for Echostar. Third time a first stage booster will be reused.","crew":[],"ships

":["5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90d","5ea6ed30080df4000697c9
13"],"capsules":[],"payloads":["5eb0e4c5b6c3bb0006eeb216"],"launchpad":"5e9e4502
f509094188566f88","flight_number":49,"name":"SES-11 / Echostar 105","date_utc":"
2017-10-11T22:53:00.000Z","date_unix":1507762380,"date_local":"2017-10-11T18:53:
00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f35
91829dc3b2646","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_att
empt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ec
b6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb
87d0cffd86e000604b35a"},{"fairings":{"reused":false,"recovery_attempt":true,"rec
overed":false,"ships":["5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"h
ttps://images2.imgbox.com/bb/fa/vNIBtlSn_o.png","large":"https://images2.imgbox.
com/d6/8d/iv3VDTkX_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex
/comments/73ttkd/koreasat_5a_launch_campaign_thread/","launch":"https://www.redd
it.com/r/spacex/comments/79iuvb/rspacex_koreasat_5a_official_launch_discussion/"
,"media":"https://www.reddit.com/r/spacex/comments/79lmdu/rspacex_koreasat5a_med
ia_thread_videos_images/","recovery":null},"flickr":{"small":[],"original":["htt
ps://farm5.staticflickr.com/4477/38056454431_a5f40f9fd7_o.jpg","https://farm5.st
aticflickr.com/4455/26280153979_b8016a829f_o.jpg","https://farm5.staticflickr.co
m/4459/38056455051_79ef2b949a_o.jpg","https://farm5.staticflickr.com/4466/262801
53539_ecbc2b3fa9_o.jpg","https://farm5.staticflickr.com/4482/26280154209_bf08d76
361_o.jpg","https://farm5.staticflickr.com/4493/38056455211_a4565a9cee_o.jpg"]},
"presskit":"http://www.spacex.com/sites/spacex/files/koreasat5apresskit.pdf","we
bcast":"https://www.youtube.com/watch?v=RUjH14vhLxA","youtube_id":"RUjH14vhLxA",
"article":"https://spaceflightnow.com/2017/10/30/spacex-launches-and-lands-
third-rocket-in-three-weeks/","wikipedia":"https://en.wikipedia.org/wiki/Koreasa
t_5A"},"static_fire_date_utc":"2017-10-26T16:00:00.000Z","static_fire_date_unix"
:1509033600,"net":false,"window":8640,"rocket":"5e9d0d95eda69973a809d1ec","succe
ss":true,"failures":[],"details":"KoreaSat 5A is a Ku-band satellite capable of
providing communication services from East Africa and Central Asia to southern
India, Southeast Asia, the Philippines, Guam, Korea, and Japan. The satellite
will be placed in GEO at 113\xc3\x82\xc2\xb0 East Longitude, and will provide
services ranging from broadband internet to broadcasting services and maritime c
ommunications.","crew":[],"ships":["5ea6ed2f080df4000697c90d","5ea6ed2e080df4000
697c908","5ea6ed30080df4000697c913"],"capsules":[],"payloads":["5eb0e4c5b6c3bb00
06eeb217"],"launchpad":"5e9e4502f509094188566f88","flight_number":50,"name":"Kor
eaSat 5A","date_utc":"2017-10-30T19:34:00.000Z","date_unix":1509392040,"date_loc
al":"2017-10-30T15:34:00-04:00","date_precision":"hour","upcoming":false,"cores"
:[{"core":"5e9e28a4f359185cc03b2651","flight":1,"gridfins":true,"legs":true,"reu
sed":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","
landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_lib
rary_id":null,"id":"5eb87d0dffd86e000604b35b"},{"fairings":null,"links":{"patch"
:{"small":"https://images2.imgbox.com/84/42/Ejb9KhGR_o.png","large":"https://ima
ges2.imgbox.com/54/4f/CeMcU6RG_o.png"},"reddit":{"campaign":"https://www.reddit.
com/r/spacex/comments/7bxg5a/crs13_launch_campaign_thread/","launch":"https://ww
w.reddit.com/r/spacex/comments/7j725w/rspacex_crs13_official_launch_discussion_u
pdates/","media":"https://www.reddit.com/r/spacex/comments/7j6oxz/rspacex_crs13_
media_thread_videos_images_gifs/","recovery":null},"flickr":{"small":[],"origina
l":["https://farm5.staticflickr.com/4591/38372264594_8140bd943d_o.png","https://

farm5.staticflickr.com/4546/39051469552_13703e6b2e_o.jpg","https://farm5.staticflickr.com/4682/39051469662_55c55150c0_o.jpg","https://farm5.staticflickr.com/4565/25215551218_2597838c1a_o.jpg","https://farm5.staticflickr.com/4680/39051469812_b6f802fc9d_o.jpg","https://farm5.staticflickr.com/4517/27304331429_59b9d6c1d4_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/crs13presskit12_11.pdf","webcast":"https://www.youtube.com/watch?v=OPHbqY9LHCs","youtube_id":"OPHbqY9LHCs","article":"https://spaceflightnow.com/2017/12/15/spacexs-50th-falcon-rocket-launch-kicks-off-station-resupply-mission/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-13"},"static_fire_date_utc":"2017-12-06T20:00:00.000Z","static_fire_date_unix":1512590400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Will reuse the Dragon capsule previously flown on CRS-6 and will reuse the booster from CRS-11.","crew":[],"ships":["5ea6ed30080df4000697c912"],"capsules":["5e9e2c5cf359188bfb3b266b"],"payloads":["5eb0e4c5b6c3bb0006eeb218"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":51,"name":"CRS-13","date_utc":"2017-12-15T15:36:00.000Z","date_unix":1513352160,"date_local":"2017-12-15T10:36:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f3591856803b264a","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d0effd86e000604b35c"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/85/43/6VSgldkO_o.png","large":"https://images2.imgbox.com/5f/d4/wAoAmyxK_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/7cgts7/iridium_next_constellation_mission_4_launch/","launch":"https://www.reddit.com/r/spacex/comments/7li8y2/rspacex_iridium_next_4_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/7litv2/rspacex_iridium4_media_thread_videos_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4695/25557986177_2d315f4c11_o.jpg","https://farm5.staticflickr.com/4735/25377631178_d28e0a9141_o.jpg","https://farm5.staticflickr.com/4733/25377628928_a79bb43a31_o.jpg","https://farm5.staticflickr.com/4732/25377628288_361f551d34_o.jpg","https://farm5.staticflickr.com/4598/39244105581_eeb76c8ed2_o.jpg","https://farm5.staticflickr.com/4728/24381830217_a49ae2100f_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/iridium4presskit.pdf","webcast":"https://www.youtube.com/watch?v=wtdjCwo6d3Q","youtube_id":"wtdjCwo6d3Q","article":"https://spaceflightnow.com/2017/12/23/spacex-launch-dazzles-delivering-10-more-satellites-for-iridium/","wikipedia":"https://en.wikipedia.org/wiki/Iridium_satellite_constellation#Next-generation_constellation"},"static_fire_date_utc":"2017-12-17T21:00:00.000Z","static_fire_date_unix":1513544400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Reusing the booster first used on Iridium-2, but will be flying expendable.","crew":[],"ships":["5ea6ed2e080df4000697c908"],"capsules":[],"payloads":["5eb0e4c6b6c3bb0006eeb219"],"launchpad":"5e9e4502f509092b78566f87","flight_number":52,"name":"Iridium NEXT Mission 4","date_utc":"2017-12-23T01:27:23.000Z","date_unix":1513992443,"date_local":"2017-12-22T17:27:23-08:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f3591801cf3b264b","flight":2,"gridfins":true,"legs":false,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"Ocean","landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d0fffd86e000

604b35d"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false
,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/dc/7b/8HuZoJQ
U_o.png","large":"https://images2.imgbox.com/4f/0d/UudW8zZK_o.png"},"reddit":{"c
ampaign":"https://www.reddit.com/r/spacex/comments/7895bo/zuma_launch_campaign_t
hread/","launch":"https://www.reddit.com/r/spacex/comments/7oqjf0/rspacex_zuma_o
fficial_launch_discussion_updates/","media":"https://www.reddit.com/r/spacex/com
ments/7orksl/rspacex_zuma_media_thread_videos_images_gifs/","recovery":null},"fl
ickr":{"small":[],"original":["https://farm5.staticflickr.com/4751/39557026242_3
84d287045_o.jpg","https://farm5.staticflickr.com/4674/39556549372_810396618d_o.j
pg","https://farm5.staticflickr.com/4661/39556548902_f66c7be90d_o.jpg","https://
farm5.staticflickr.com/4607/39585580001_8b21846eab_o.jpg","https://farm5.staticf
lickr.com/4754/39585578201_a67ab9b9a8_o.jpg","https://farm5.staticflickr.com/460
3/39585575631_216cc035f4_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex
/files/zumapresskit.pdf","webcast":"https://www.youtube.com/watch?v=0PWu3BRxn60"
,"youtube_id":"0PWu3BRxn60","article":"https://spaceflightnow.com/2018/01/08/spa
cex-kicks-off-ambitious-2018-schedule-with-launch-for-u-s-government/","wikipedi
a":"https://en.wikipedia.org/wiki/Zuma_(satellite)"},"static_fire_date_utc":"201
7-11-11T23:00:00.000Z","static_fire_date_unix":1510441200,"net":false,"window":7
200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"
Originally planned for mid-November 2017, the mission was delayed due to test
results from the fairing of another customer. First-stage booster will attempt
landing at LZ-1","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4c6b6c3bb0
006eeb21a"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":53,"name":"ZU
MA","date_utc":"2018-01-08T01:00:00.000Z","date_unix":1515373200,"date_local":"2
018-01-07T20:00:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"co
re":"5e9e28a4f35918345e3b2652","flight":1,"gridfins":true,"legs":true,"reused":f
alse,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpa
d":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_i
d":null,"id":"5eb87d10ffd86e000604b35e"},{"fairings":{"reused":false,"recovery_a
ttempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://i
mages2.imgbox.com/e0/b5/G8QLLURl_o.png","large":"https://images2.imgbox.com/3b/6
b/ovK7nExS_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comment
s/7olw86/govsat1_ses16_launch_campaign_thread/","launch":"https://www.reddit.com
/r/spacex/comments/7tvtbh/rspacex_govsat1_official_launch_discussion/","media":"
https://www.reddit.com/r/spacex/comments/7tzzwy/rspacex_govsat1_media_thread_vid
eos_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://far
m5.staticflickr.com/4721/40026315981_f16a7cd32a_o.jpg","https://farm5.staticflic
kr.com/4708/40026316291_0b3aef9d8d_o.jpg","https://farm5.staticflickr.com/4652/3
9128355655_3eefa0d583_o.jpg","https://farm5.staticflickr.com/4741/39128355825_7c
4166dbbe_o.jpg","https://farm5.staticflickr.com/4609/39128355355_17381fc00e_o.jp
g"]},"presskit":"http://www.spacex.com/sites/spacex/files/govsat1presskit.pdf","
webcast":"https://www.youtube.com/watch?v=ScYUA51-POQ","youtube_id":"ScYUA51-POQ
","article":"https://spaceflightnow.com/2018/01/31/spacex-rocket-flies-on-60th-
anniversary-of-first-u-s-satellite-launch/","wikipedia":"https://en.wikipedia.or
g/wiki/List_of_SES_satellites#SES_Fleet"},"static_fire_date_utc":"2018-01-26T15:
27:00.000Z","static_fire_date_unix":1516980420,"net":false,"window":8460,"rocket
":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Reused
booster from the classified NROL-76 mission in May 2017. Following a successful

experimental ocean landing that used three engines, the booster unexpectedly remained intact; Elon Musk stated in a tweet that SpaceX will attempt to tow the booster to shore.","crew":[],"ships":["5ea6ed2f080df4000697c90b"],"capsules":[],"payloads":["5eb0e4c6b6c3bb0006eeb21b"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":54,"name":"SES-16 / GovSat-1","date_utc":"2018-01-31T21:25:00.000Z","date_unix":1517433900,"date_local":"2018-01-31T16:25:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a3f3591811f83b2648","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"Ocean","landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d11ffd86e000604b35f"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/cd/48/NVrODg2G_o.png","large":"https://images2.imgbox.com/97/11/mjn87zBs_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/7hjp03/falcon_heavy_demo_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/7vg63x/rspacex_falcon_heavy_test_flight_official_launch/","media":"https://www.reddit.com/r/spacex/comments/7vimtm/rspacex_falcon_heavy_test_flight_media_thread/","recovery":null},"flickr":{"small":[],"original":["https://farm5.staticflickr.com/4745/40110304192_b0165b7785_o.jpg","https://farm5.staticflickr.com/4676/40110297852_6173e5cae6_o.jpg","https://farm5.staticflickr.com/4615/40143096241_0324643b5e_o.jpg","https://farm5.staticflickr.com/4702/40110298232_4e9c412936_o.jpg","https://farm5.staticflickr.com/4610/39337245575_41d760caef_o.jpg","https://farm5.staticflickr.com/4654/25254688767_59603ff06c_o.jpg","https://farm5.staticflickr.com/4627/40126462801_d54b4f00be_o.jpg","https://farm5.staticflickr.com/4760/40126462231_cdf00ef431_o.jpg","https://farm5.staticflickr.com/4655/40202121122_5d29cfe2ac_o.jpg","https://farm5.staticflickr.com/4631/39337245145_5f5630a66a_o.jpg","https://farm5.staticflickr.com/4650/40126461851_14b93ec9d7_o.jpg","https://farm5.staticflickr.com/4711/40126461411_b1ed283d45_o.jpg","https://farm5.staticflickr.com/4696/40126460511_7b5cc64871_o.jpg","https://farm5.staticflickr.com/4589/38583831555_9ae89f5c10_o.jpg","https://farm5.staticflickr.com/4682/38583829815_e01509d1a7_o.jpg","https://farm5.staticflickr.com/4731/39225582801_80594d5d91_o.jpg","https://farm5.staticflickr.com/4641/39225582421_7aa0c65851_o.jpg","https://farm5.staticflickr.com/4643/27449864329_d2424bc280_o.jpg","https://farm5.staticflickr.com/4681/39225582171_137a4c75e7_o.jpg","https://farm5.staticflickr.com/4644/39225582351_ac6aba2533_o.jpg","https://farm5.staticflickr.com/4587/27449863849_709e135a98_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/falconheavypresskit_v1.pdf","webcast":"https://www.youtube.com/watch?v=wbSwFU6tY1c","youtube_id":"wbSwFU6tY1c","article":"https://spaceflightnow.com/2018/02/07/spacex-debuts-worlds-most-powerful-rocket-sends-tesla-toward-the-asteroid-belt/","wikipedia":"https://en.wikipedia.org/wiki/Elon_Musk%27s_Tesla_Roadster"},"static_fire_date_utc":"2018-01-24T17:30:00.000Z","static_fire_date_unix":1516815000,"net":false,"window":9000,"rocket":"5e9d0d95eda69974db09d1ed","success":true,"failures":[],"details":"The launch was a success, and the side boosters landed simultaneously at adjacent ground pads. Drone ship landing of the central core failed. Final burn to heliocentric mars-earth orbit was successful after the second stage and payload passed through the Van Allen belts.","crew":[],"ships":["5ea6ed2f080df4000697c90c","5ea6ed2f080df4000697c90d","5ea6ed30080df4000697c913"],"capsules":[],"payloads":["5eb0e4c6b6c3bb0006eeb21c"],"launchpad":"5e9e4502f509094188566f88","flight_number":55,"name":"F

alcon Heavy Test Flight","date_utc":"2018-02-06T20:45:00.000Z","date_unix":15179
49900,"date_local":"2018-02-06T15:45:00-05:00","date_precision":"hour","upcoming
":false,"cores":[{"core":"5e9e28a5f359187f703b2653","flight":1,"gridfins":true,"
legs":true,"reused":false,"landing_attempt":true,"landing_success":false,"landin
g_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"},{"core":"5e9e28a2f359187f27
3b2642","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":t
rue,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb90a834
e7c8"},{"core":"5e9e28a2f3591845c73b2640","flight":2,"gridfins":true,"legs":true
,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTL
S","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch
_library_id":null,"id":"5eb87d13ffd86e000604b360"},{"fairings":{"reused":false,"
recovery_attempt":true,"recovered":false,"ships":["5ea6ed2e080df4000697c908"]},"
links":{"patch":{"small":"https://images2.imgbox.com/a4/ac/cC7w8EJz_o.png","larg
e":"https://images2.imgbox.com/c9/fa/61ZcEua3_o.png"},"reddit":{"campaign":"http
s://www.reddit.com/r/spacex/comments/7qnflk/paz_microsat2a_2b_launch_campaign_th
read/","launch":"https://www.reddit.com/r/spacex/comments/7y0grt/rspacex_paz_off
icial_launch_discussion_updates/","media":"https://www.reddit.com/r/spacex/comme
nts/7zdvop/rspacex_paz_media_thread_videos_images_gifs/","recovery":null},"flick
r":{"small":[],"original":["https://farm5.staticflickr.com/4768/25557986627_f3cc
243afb_o.jpg","https://farm5.staticflickr.com/4631/25557986367_6339dd8f1d_o.jpg"
,"https://farm5.staticflickr.com/4650/25557987937_585c15c34d_o.jpg","https://far
m5.staticflickr.com/4695/39718494114_6523797470_o.jpg","https://farm5.staticflic
kr.com/4655/39533211685_5e0ceb78ef_o.jpg"]},"presskit":"http://www.spacex.com/si
tes/spacex/files/paz_press_kit_2.21.pdf","webcast":"https://www.youtube.com/watc
h?v=-p-PToD2URA","youtube_id":"-p-PToD2URA","article":"https://spaceflightnow.co
m/2018/02/22/recycled-spacex-rocket-boosts-paz-radar-satellite-first-starlink-
testbeds-into-orbit/","wikipedia":"https://en.wikipedia.org/wiki/Paz_(satellite)
"},"static_fire_date_utc":"2018-02-11T18:23:00.000Z","static_fire_date_unix":151
8373380,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":tru
e,"failures":[],"details":"First flight with fairing 2.0. Will also carry two
SpaceX test satellites for the upcoming Starlink constellation.","crew":[],"ship
s":["5ea6ed2e080df4000697c908"],"capsules":[],"payloads":["5eb0e4c6b6c3bb0006eeb
21d","5eb0e4c6b6c3bb0006eeb21e"],"launchpad":"5e9e4502f509092b78566f87","flight_
number":56,"name":"Paz / Starlink Demo","date_utc":"2018-02-22T14:17:00.000Z","d
ate_unix":1519309020,"date_local":"2018-02-22T06:17:00-08:00","date_precision":"
hour","upcoming":false,"cores":[{"core":"5e9e28a4f359182d843b264e","flight":2,"g
ridfins":true,"legs":false,"reused":true,"landing_attempt":false,"landing_succes
s":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"lau
nch_library_id":null,"id":"5eb87d14ffd86e000604b361"},{"fairings":{"reused":fals
e,"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"smal
l":"https://images2.imgbox.com/53/b7/HHAy8Wkp_o.png","large":"https://images2.im
gbox.com/66/4e/eQQSQrXp_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/s
pacex/comments/7r5pyn/hispasat_30w6_launch_campaign_thread/","launch":"https://w
ww.reddit.com/r/spacex/comments/7r5pyn/hispasat_30w6_launch_campaign_thread/","m
edia":"https://www.reddit.com/r/spacex/comments/825asx/rspacex_hispasat_30w6_med
ia_thread_videos_images/","recovery":null},"flickr":{"small":[],"original":["htt
ps://farm5.staticflickr.com/4753/25790223907_36e7b59efa_o.jpg","https://farm5.st
aticflickr.com/4666/38850799080_e17426795c_o.jpg","https://farm5.staticflickr.co

m/4758/40660917561_daa8efea04_o.jpg","https://farm5.staticflickr.com/4622/399510
85264_b5deeed6c9_o.jpg","https://farm5.staticflickr.com/4772/39951085474_77be77c
227_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/hispasat30w6_p
resskit.pdf","webcast":"https://www.youtube.com/watch?v=Kpfrp-
GMKKM","youtube_id":"Kpfrp-
GMKKM","article":"https://spaceflightnow.com/2018/03/06/hefty-hispasat-
satellite-rides-spacex-rocket-into-orbit/","wikipedia":"https://en.wikipedia.org
/wiki/Hispasat_30W-6"},"static_fire_date_utc":"2018-02-21T03:46:00.000Z","static
_fire_date_unix":1519184760,"net":false,"window":7200,"rocket":"5e9d0d95eda69973
a809d1ec","success":true,"failures":[],"details":"Launched with landing legs and
titanium grid fins. Did not attempt a landing due to \'unfavorable weather
conditions in the recovery area\'.","crew":[],"ships":[],"capsules":[],"payloads
":["5eb0e4c7b6c3bb0006eeb21f"],"launchpad":"5e9e4501f509094ba4566f84","flight_nu
mber":57,"name":"Hispasat 30W-6","date_utc":"2018-03-06T05:33:00.000Z","date_uni
x":1520314380,"date_local":"2018-03-06T00:33:00-05:00","date_precision":"hour","
upcoming":false,"cores":[{"core":"5e9e28a5f359186cb73b2654","flight":1,"gridfins
":true,"legs":true,"reused":false,"landing_attempt":false,"landing_success":null
,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_lib
rary_id":null,"id":"5eb87d15ffd86e000604b362"},{"fairings":{"reused":false,"reco
very_attempt":true,"recovered":false,"ships":["5ea6ed2e080df4000697c908"]},"link
s":{"patch":{"small":"https://images2.imgbox.com/55/c6/8sNQh2b6_o.png","large":"
https://images2.imgbox.com/23/bc/mq595O2o_o.png"},"reddit":{"campaign":"https://
www.reddit.com/r/spacex/comments/82njj5/iridium_next_constellation_mission_5_lau
nch/","launch":"https://www.reddit.com/r/spacex/comments/88184i/rspacex_iridium_
next_5_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/com
ments/88114l/rspacex_iridium5_media_thread_videos_images_gifs/","recovery":null}
,"flickr":{"small":[],"original":["https://farm1.staticflickr.com/791/4022711351
5_da97986607_o.jpg","https://farm1.staticflickr.com/788/27248936158_2eaf1a98b3_o
.jpg","https://farm1.staticflickr.com/864/40227112595_c34a1cf8d1_o.jpg","https:/
/farm1.staticflickr.com/806/41121608121_8f0b886f9d_o.jpg","https://farm1.staticf
lickr.com/809/41121608541_cdfec6a849_o.jpg","https://farm1.staticflickr.com/822/
40227112875_ec3c5df585_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/
files/iridium-5_press_kit_2018.pdf","webcast":"https://www.youtube.com/watch?v=m
p0TW8vkCLg","youtube_id":"mp0TW8vkCLg","article":"https://spaceflightnow.com/201
8/03/30/iridium-messaging-network-gets-another-boost-from-spacex/","wikipedia":"
https://en.wikipedia.org/wiki/Iridium_satellite_constellation#Next-generation_co
nstellation"},"static_fire_date_utc":"2018-03-25T12:23:00.000Z","static_fire_dat
e_unix":1521980580,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","s
uccess":true,"failures":[],"details":"Fifth Iridium NEXT mission to deploy ten
Iridium NEXT satellites. Reused booster from third Iridium flight, and although
controlled descent was performed, the booster was expended into the ocean.
SpaceX planned a second recovery attempt of one half of the fairing using the
specially modified boat Mr. Steven. However, the fairing\'s parafoil twisted
during the recovery, which led to water impact at high speed","crew":[],"ships":
["5ea6ed2e080df4000697c908"],"capsules":[],"payloads":["5eb0e4c7b6c3bb0006eeb220
"],"launchpad":"5e9e4502f509092b78566f87","flight_number":58,"name":"Iridium
NEXT Mission 5","date_utc":"2018-03-30T14:13:51.000Z","date_unix":1522419231,"da
te_local":"2018-03-30T07:13:51-08:00","date_precision":"hour","upcoming":false,"

cores":[{"core":"5e9e28a4f3591843103b2650","flight":2,"gridfins":true,"legs":tru
e,"reused":true,"landing_attempt":false,"landing_success":null,"landing_type":nu
ll,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id"
:"5eb87d16ffd86e000604b363"},{"fairings":null,"links":{"patch":{"small":"https:/
/images2.imgbox.com/49/e8/6Tmdhwlq_o.png","large":"https://images2.imgbox.com/28
/c4/dc3rQbGy_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comme
nts/82op7a/crs14_launch_campaign_thread/","launch":"https://www.reddit.com/r/spa
cex/comments/88s8a7/rspacex_crs14_official_launch_discussion_updates/","media":"
https://www.reddit.com/r/spacex/comments/88l52i/rspacex_crs14_media_thread_video
s_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://farm1
.staticflickr.com/819/26326005987_c3aec29db5_o.jpg","https://farm1.staticflickr.
com/791/40303273215_4926c917c4_o.jpg","https://farm1.staticflickr.com/867/263260
07227_39e71e6775_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/c
rs-14presskit2018.pdf","webcast":"https://www.youtube.com/watch?v=BPQHG-
LevZM","youtube_id":"BPQHG-
LevZM","article":"https://spaceflightnow.com/2018/04/02/spacex-supply-ship-
departs-cape-canaveral-for-space-station/","wikipedia":"https://en.wikipedia.org
/wiki/SpaceX_CRS-14"},"static_fire_date_utc":"2018-03-28T15:52:00.000Z","static_
fire_date_unix":1522252320,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809
d1ec","success":true,"failures":[],"details":"The launch used a refurbished
booster (from CRS-12) for the 11th time, and a refurbished capsule (C110 from
CRS-8) for the third time. External payloads include a materials research
platform MISSE-FF phase 3 of the Robotic Refueling Mission TSIS, heliophysics
sensor several crystallization experiments, and the RemoveDebris spacecraft
aimed at space junk removal. The booster was expended in order to test a new
landing profile.","crew":[],"ships":["5ea6ed30080df4000697c912"],"capsules":["5e
9e2c5cf3591885d43b266d"],"payloads":["5eb0e4c7b6c3bb0006eeb221"],"launchpad":"5e
9e4501f509094ba4566f84","flight_number":59,"name":"CRS-14","date_utc":"2018-04-0
2T20:30:41.000Z","date_unix":1522701041,"date_local":"2018-04-02T16:30:41-04:00"
,"date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a4f3591884ee3b
264d","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":fal
se,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":tru
e,"tbd":false,"launch_library_id":null,"id":"5eb87d16ffd86e000604b364"},{"fairin
gs":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]},"link
s":{"patch":{"small":"https://images2.imgbox.com/4d/55/TQjhUrc7_o.png","large":"
https://images2.imgbox.com/22/84/wfppRwXb_o.png"},"reddit":{"campaign":"https://
www.reddit.com/r/spacex/comments/88l46q/tess_launch_campaign_thread/","launch":"
https://www.reddit.com/r/spacex/comments/8cm61o/rspacex_tess_official_launch_dis
cussion_updates/","media":"https://www.reddit.com/r/spacex/comments/8cmzop/rspac
ex_tess_media_thread_videos_images_gifs/","recovery":null},"flickr":{"small":[],
"original":["https://farm1.staticflickr.com/799/27684194488_0d9a703c1c_o.jpg","h
ttps://farm1.staticflickr.com/854/41512967372_0c37360126_o.jpg","https://farm1.s
taticflickr.com/832/41512968122_20c2e31de3_o.jpg","https://farm1.staticflickr.co
m/803/27684194678_c1ccd0680b_o.jpg","https://farm1.staticflickr.com/902/41512967
962_74913ef5b0_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/tes
spresskitfinal417.pdf","webcast":"https://www.youtube.com/watch?v=aY-0uBIYYKk","
youtube_id":"aY-0uBIYYKk","article":"https://spaceflightnow.com/2018/04/19/all-
sky-surveyor-launched-from-cape-canaveral-on-the-hunt-for-exoplanets/","wikipedi

a":"https://en.wikipedia.org/wiki/Transiting_Exoplanet_Survey_Satellite"},"stati
c_fire_date_utc":"2018-04-11T18:30:00.000Z","static_fire_date_unix":1523471400,"
net":false,"window":30,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failu
res":[],"details":"Part of the Explorers program, this space telescope is
intended for wide-field search of exoplanets transiting nearby stars. It is the
first NASA high priority science mission launched by SpaceX. It was the first
time SpaceX launched a scientific satellite not primarily intended for Earth
observations. The second stage placed it into a high-Earth elliptical orbit,
after which the satellite\'s own booster will perform complex maneuvers
including a lunar flyby, and over the course of two months, reach a stable, 2:1
resonant orbit with the Moon. In January 2018, SpaceX received NASA\'s Launch
Services Program Category 2 certification of its Falcon 9 \'Full Thrust\',
certification which is required for launching medium risk missions like TESS. It
was the last launch of a new Block 4 booster, and marked the 24th successful
recovery of the booster. An experimental water landing was performed in order to
attempt fairing recovery.","crew":[],"ships":["5ea6ed2e080df4000697c90a","5ea6ed
2f080df4000697c90b","5ea6ed2f080df4000697c90d","5ea6ed30080df4000697c913"],"caps
ules":[],"payloads":["5eb0e4c7b6c3bb0006eeb222"],"launchpad":"5e9e4501f509094ba4
566f84","flight_number":60,"name":"TESS","date_utc":"2018-04-18T22:51:00.000Z","
date_unix":1524091860,"date_local":"2018-04-18T18:51:00-04:00","date_precision":
"hour","upcoming":false,"cores":[{"core":"5e9e28a5f35918863d3b2655","flight":1,"
gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_succes
s":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_updat
e":true,"tbd":false,"launch_library_id":null,"id":"5eb87d18ffd86e000604b365"},{"
fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]}
,"links":{"patch":{"small":"https://images2.imgbox.com/97/bf/G9sPBnrg_o.png","la
rge":"https://images2.imgbox.com/8e/80/QIE1XB30_o.png"},"reddit":{"campaign":"ht
tps://www.reddit.com/r/spacex/comments/8624iq/bangabandhu1_launch_campaign_threa
d/","launch":"https://www.reddit.com/r/spacex/comments/8ia091/rspacex_bangabandh
u1_official_launch_discussion","media":"https://www.reddit.com/r/spacex/comments
/8ia5bu/rspacex_bangabandhu1_media_thread_videos_images/","recovery":"https://ww
w.reddit.com/r/spacex/comments/8j6moa/bangabandhu1_block_5_recovery_thread/"},"f
lickr":{"small":[],"original":["https://farm1.staticflickr.com/903/28197547888_d
d697d8147_o.jpg","https://farm1.staticflickr.com/823/42025498712_8ec531950f_o.jp
g","https://farm1.staticflickr.com/975/28197546158_880e466fb6_o.jpg","https://fa
rm1.staticflickr.com/823/27200014957_940f3720bb_o.jpg","https://farm1.staticflic
kr.com/945/42025498442_0b7b91d561_o.jpg","https://farm1.staticflickr.com/967/420
25498972_8720104d8a_o.jpg","https://farm1.staticflickr.com/954/42025499162_8a0ef
7feaa_o.jpg","https://farm1.staticflickr.com/911/42025499722_47d3433d65_o.jpg"]}
,"presskit":"http://www.spacex.com/sites/spacex/files/bangabandhupresskit51118.p
df","webcast":"https://www.youtube.com/watch?v=rQEqKZ7CJlk","youtube_id":"rQEqKZ
7CJlk","article":"https://spaceflightnow.com/2018/05/11/spacex-debuts-an-
improved-human-rated-model-of-the-falcon-9-rocket/","wikipedia":"https://en.wiki
pedia.org/wiki/Bangabandhu-1"},"static_fire_date_utc":"2018-05-04T23:25:00.000Z"
,"static_fire_date_unix":1525476300,"net":false,"window":7620,"rocket":"5e9d0d95
eda69973a809d1ec","success":true,"failures":[],"details":"First launch of a
Block V first stage.","crew":[],"ships":["5ea6ed2e080df4000697c90a","5ea6ed2f080
df4000697c90b","5ea6ed30080df4000697c913","5ea6ed30080df4000697c916"],"capsules"

:[],"payloads":["5eb0e4c7b6c3bb0006eeb223"],"launchpad":"5e9e4502f509094188566f8
8","flight_number":61,"name":"Bangabandhu-1","date_utc":"2018-05-11T20:14:00.000
Z","date_unix":1526069640,"date_local":"2018-05-11T16:14:00-04:00","date_precisi
on":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f359182b023b2656","flight"
:1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_su
ccess":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_u
pdate":true,"tbd":false,"launch_library_id":null,"id":"5eb87d19ffd86e000604b366"
},{"fairings":{"reused":false,"recovery_attempt":true,"recovered":false,"ships":
["5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.imgbox.
com/c8/01/ijWT6oSs_o.png","large":"https://images2.imgbox.com/e9/61/9dF2ELMJ_o.p
ng"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/8ffsgl/iridi
um6_gracefo_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/c
omments/8kyk5a/rspacex_iridium_next_6_official_launch_discussion/","media":"http
s://www.reddit.com/r/spacex/comments/8l9tfz/rspacex_iridium6gracefo_media_thread
_videos/","recovery":null},"flickr":{"small":[],"original":["https://farm1.stati
cflickr.com/897/42290934301_4c6ac431c8_o.jpg","https://farm1.staticflickr.com/83
1/42290933051_510176c9da_o.jpg","https://farm1.staticflickr.com/882/42290932011_
a522b43015_o.jpg","https://farm1.staticflickr.com/947/42290930761_4bf7b607b1_o.j
pg","https://farm1.staticflickr.com/982/42290930181_0117ab0dfb_o.jpg","https://f
arm1.staticflickr.com/955/42244412292_e787538fc5_o.jpg"]},"presskit":"http://www
.spacex.com/sites/spacex/files/iridium6presskit2018521.pdf","webcast":"https://w
ww.youtube.com/watch?v=I_0GgKfwCSk","youtube_id":"I_0GgKfwCSk","article":"https:
//spaceflightnow.com/2018/05/22/rideshare-launch-by-spacex-serves-commercial-
and-scientific-customers/","wikipedia":"https://en.wikipedia.org/wiki/Gravity_Re
covery_and_Climate_Experiment"},"static_fire_date_utc":"2018-05-18T20:16:00.000Z
","static_fire_date_unix":1526674560,"net":false,"window":0,"rocket":"5e9d0d95ed
a69973a809d1ec","success":true,"failures":[],"details":"GFZ arranged a rideshare
of GRACE-FO on a Falcon 9 with Iridium following the cancellation of their Dnepr
launch contract in 2015. Iridium CEO Matt Desch disclosed in September 2017 that
GRACE-FO would be launched on the sixth Iridium NEXT mission. The booster reuse
turnaround was a record 4.5 months between flights.","crew":[],"ships":["5ea6ed2
e080df4000697c908"],"capsules":[],"payloads":["5eb0e4c7b6c3bb0006eeb224","5eb0e4
c8b6c3bb0006eeb225"],"launchpad":"5e9e4502f509092b78566f87","flight_number":62,"
name":"Iridium NEXT Mission 6","date_utc":"2018-05-22T19:47:58.000Z","date_unix"
:1527018478,"date_local":"2018-05-22T12:47:58-08:00","date_precision":"hour","up
coming":false,"cores":[{"core":"5e9e28a4f35918345e3b2652","flight":2,"gridfins":
true,"legs":false,"reused":true,"landing_attempt":false,"landing_success":null,"
landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_libra
ry_id":null,"id":"5eb87d1affd86e000604b367"},{"fairings":{"reused":false,"recove
ry_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https
://images2.imgbox.com/fa/c4/37mkd4wY_o.png","large":"https://images2.imgbox.com/
9f/0c/0KIBjMfe_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/com
ments/8jv0ed/ses12_launch_campaign_thread/","launch":"https://www.reddit.com/r/s
pacex/comments/8o9woj/rspacex_ses12_official_launch_discussion_updates/","media"
:"https://www.reddit.com/r/spacex/comments/8oa3k4/rspacex_ses12_media_thread_vid
eos_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://far
m2.staticflickr.com/1752/41664024035_14c81a25e3_o.jpg","https://farm2.staticflic
kr.com/1731/27695627527_d9d5bca0ae_o.jpg","https://farm2.staticflickr.com/1735/2

7695627327_ed66c7282c_o.jpg","https://farm2.staticflickr.com/1752/27695627417_38ea7d7acf_o.jpg","https://farm2.staticflickr.com/1733/41664023935_e9e8120690_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/ses-12missionpress_kit_6.2.18.pdf","webcast":"https://www.youtube.com/watch?v=2hcM5hqQ45s","youtube_id":"2hcM5hqQ45s","article":"https://spaceflightnow.com/2018/06/04/multi-mission-telecom-craft-launched-by-spacex-for-ses/","wikipedia":"https://en.wikipedia.org/wiki/SES-12"},"static_fire_date_utc":"2018-05-25T01:48:00.000Z","static_fire_date_unix":1527212880,"net":false,"window":7200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SES-12, the replacement satellite for NSS-6, was successfully launched and deployed on June 4th, completing SpaceX\'s eleventh flight of 2018. According to SES Luxembourg, The SES-12 satellite will expand SES\xe2\x80\x99s capabilities to provide direct-to-home (DTH) broadcasting, VSAT, Mobility and High Throughput Satellite (HTS) data connectivity services in the Middle East and the Asia-Pacific region, including rapidly growing markets such as India and Indonesia. [SES-12] will be co-located with SES-8","crew":[],"ships":["5ea6ed2e080df4000697c90a"],"capsules":[],"payloads":["5eb0e4c8b6c3bb0006eeb226"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":63,"name":"SES-12","date_utc":"2018-06-04T04:45:00.000Z","date_unix":1528087500,"date_local":"2018-06-04T00:45:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a4f3591845123b264f","flight":2,"gridfins":false,"legs":false,"reused":true,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d1bffd86e000604b368"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/b3/12/t63UKas5_o.png","large":"https://images2.imgbox.com/15/3c/W0LEnrZx_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/8pua1m/crs15_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/8ugo3l/rspacex_crs15_official_launch_discussion_updates","media":"https://www.reddit.com/r/spacex/comments/8ujcwo/rspacex_crs15_media_thread_videos_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://farm1.staticflickr.com/836/42374725204_dae09db889_o.jpg","https://farm2.staticflickr.com/1781/41281636860_71dca92ab4_o.jpg","https://farm2.staticflickr.com/1829/42374725534_325e676d19_o.jpg","https://farm2.staticflickr.com/1810/42374724974_e50b050403_o.jpg","https://farm1.staticflickr.com/843/41281636620_437528bd1f_o.jpg","https://farm2.staticflickr.com/1790/41281637670_f6a6a2cf6c_o.jpg"]},"presskit":"http://www.spacex.com/sites/spacex/files/crs15presskit.pdf","webcast":"https://www.youtube.com/watch?v=ycMagB1s8XM","youtube_id":"ycMagB1s8XM","article":"https://spaceflightnow.com/2018/06/29/spacex-launches-ai-enabled-robot-companion-vegetation-monitor-to-space-station/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-15"},"static_fire_date_utc":"2018-06-23T21:30:00.000Z","static_fire_date_unix":1529789400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Payload included MISSE-FF 2, ECOSTRESS, and a Latching End Effector. The refurbished booster featured a record 2.5 months period turnaround from its original launch of the TESS satellite \xe2\x80\x94 the fastest previous was 4.5 months. This was the last commercial flight of a Block 4 booster, which was expended into the Atlantic without landing legs and grid fins.","crew":[],"ships":["5ea6ed30080df4000697c912"],"capsules":["5e9e2c5cf359183bb73b266e"],"payloads":["5eb0e4c8b6c3bb0006eeb227"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":64,"name":"CRS-15","d

ate_utc":"2018-06-29T09:42:00.000Z","date_unix":1530265320,"date_local":"2018-06
-29T05:42:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5
e9e28a5f35918863d3b2655","flight":2,"gridfins":false,"legs":false,"reused":true,
"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":nul
l}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d1cffd86e
000604b369"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":fa
lse,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/2b/de/2CF8
Q4Bq_o.png","large":"https://images2.imgbox.com/c0/d8/Jt7Es9az_o.png"},"reddit":
{"campaign":"https://www.reddit.com/r/spacex/comments/8w19yg/telstar_19v_launch_
campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/90p1a6/rspa
cex_telstar_19v_official_launch_discussion/","media":"https://www.reddit.com/r/s
pacex/comments/90oxrr/rspacex_telstar_19v_media_thread_videos_images/","recovery
":null},"flickr":{"small":[],"original":["https://farm1.staticflickr.com/856/286
84550147_49802752b3_o.jpg","https://farm1.staticflickr.com/927/28684552447_956a9
744f1_o.jpg","https://farm2.staticflickr.com/1828/29700007298_8ac5891d2c_o.jpg",
"https://farm1.staticflickr.com/914/29700004918_31ed7b73ef_o.jpg","https://farm1
.staticflickr.com/844/29700002748_3047e50a0a_o.jpg","https://farm2.staticflickr.
com/1786/29700000688_2514cd3cbb_o.jpg"]},"presskit":"http://www.spacex.com/sites
/spacex/files/telstar19vantagepresskit.pdf","webcast":"https://www.youtube.com/w
atch?v=xybp6zLaGx4","youtube_id":"xybp6zLaGx4","article":"https://spaceflightnow
.com/2018/07/22/spacex-delivers-for-telesat-with-successful-early-morning-launch
/","wikipedia":"https://en.wikipedia.org/wiki/Telstar_19V"},"static_fire_date_ut
c":"2018-07-18T21:00:00.000Z","static_fire_date_unix":1531947600,"net":false,"wi
ndow":7200,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"det
ails":"SSL-manufactured communications satellite intended to be placed at
63\xc2\xb0 West over the Americas. At 7,075 kg, it became the heaviest
commercial communications satellite ever launched.","crew":[],"ships":["5ea6ed2e
080df4000697c90a","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90d","5ea6ed3
0080df4000697c913"],"capsules":[],"payloads":["5eb0e4c8b6c3bb0006eeb228"],"launc
hpad":"5e9e4501f509094ba4566f84","flight_number":65,"name":"Telstar 19V","date_u
tc":"2018-07-22T05:50:00.000Z","date_unix":1532238600,"date_local":"2018-07-22T0
1:50:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28
a5f359181eed3b2657","flight":1,"gridfins":true,"legs":true,"reused":false,"landi
ng_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e303
2383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id
":"5eb87d1effd86e000604b36a"},{"fairings":{"reused":false,"recovery_attempt":tru
e,"recovered":false,"ships":["5ea6ed2e080df4000697c908"]},"links":{"patch":{"sma
ll":"https://images2.imgbox.com/b4/96/LRfRepkO_o.png","large":"https://images2.i
mgbox.com/e6/10/oZPCNx0m_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/
spacex/comments/8v4wcm/iridium_next_constellation_mission_7_launch/","launch":"h
ttps://www.reddit.com/r/spacex/comments/91i1ru/rspacex_iridium_next_7_official_l
aunch_discussion/","media":"https://www.reddit.com/r/spacex/comments/91gx44/rspa
cex_iridium_next_constellation_mission_7/","recovery":null},"flickr":{"small":[]
,"original":["https://farm1.staticflickr.com/934/41868222930_0a850d30dc_o.jpg","
https://farm1.staticflickr.com/852/41868222500_2ff5f6e5f9_o.jpg","https://farm1.
staticflickr.com/929/28787338307_7c0cfce99a_o.jpg","https://farm1.staticflickr.c
om/928/28787338507_3be74590d2_o.jpg"]},"presskit":"http://www.spacex.com/sites/s
pacex/files/iridium7_press_kit_7_24.pdf","webcast":"https://www.youtube.com/watc

h?v=vsDknmK30C0","youtube_id":"vsDknmK30C0","article":"https://spaceflightnow.co
m/2018/07/25/spacexs-second-launch-in-three-days-lofts-10-more-iridium-satellite
s/","wikipedia":"https://en.wikipedia.org/wiki/Iridium_satellite_constellation#N
ext-generation_constellation"},"static_fire_date_utc":"2018-07-20T21:08:00.000Z"
,"static_fire_date_unix":1532120880,"net":false,"window":0,"rocket":"5e9d0d95eda
69973a809d1ec","success":true,"failures":[],"details":"SpaceX\'s fourteenth
flight of 2018 and seventh of eight launches in a half-a-billion-dollar contract
with Iridium. Will use a Block 5 first stage, to be recovered in the Pacific
Ocean. Only one mission will be left for Iridium, with 10 more satellites. First
attempt to recover a Fairing with the upgraded net. Fairing recovery was not suc
cessful.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed2e080df4000697c90
8","5ea6ed30080df4000697c912","5ea6ed30080df4000697c914"],"capsules":[],"payload
s":["5eb0e4c9b6c3bb0006eeb229"],"launchpad":"5e9e4502f509092b78566f87","flight_n
umber":66,"name":"Iridium NEXT Mission 7","date_utc":"2018-07-25T11:39:26.000Z",
"date_unix":1532518766,"date_local":"2018-07-25T04:39:26-07:00","date_precision"
:"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591809c03b2658","flight":1,
"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_succe
ss":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_upda
te":true,"tbd":false,"launch_library_id":null,"id":"5eb87d1fffd86e000604b36b"},{
"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships":[]
},"links":{"patch":{"small":"https://images2.imgbox.com/46/b2/NUQmyHR4_o.png","l
arge":"https://images2.imgbox.com/9e/eb/uGUYOYfZ_o.png"},"reddit":{"campaign":"h
ttps://www.reddit.com/r/spacex/comments/91gwfg/merah_putih_telkom4_launch_campai
gn_thread/","launch":"https://www.reddit.com/r/spacex/comments/9539nr/rspacex_me
rah_putih_telkom4_official_launch/","media":"https://www.reddit.com/r/spacex/com
ments/94zr0b/rspacex_merah_putih_media_thread_videos_images/","recovery":null},"
flickr":{"small":[],"original":["https://farm2.staticflickr.com/1798/43862495212
_8fe1688c4b_o.jpg","https://farm1.staticflickr.com/935/43006330655_f1623a3fa1_o.
jpg","https://farm1.staticflickr.com/938/28974313177_d16381ff5f_o.jpg","https://
farm2.staticflickr.com/1780/43006334045_fb7b4a8714_o.jpg","https://farm1.staticf
lickr.com/929/28974335747_ffd87ff274_o.jpg","https://farm1.staticflickr.com/930/
30041972208_f735b9690b_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/
files/merahputihpresskit.pdf","webcast":"https://www.youtube.com/watch?v=FjfQNBY
v2IY","youtube_id":"FjfQNBYv2IY","article":"https://spaceflightnow.com/2018/08/0
7/indonesian-communications-satellite-deployed-in-orbit-by-spacex/","wikipedia":
"https://en.wikipedia.org/wiki/Telkom_Indonesia"},"static_fire_date_utc":"2018-0
8-02T15:53:00.000Z","static_fire_date_unix":1533225180,"net":false,"window":7200
,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Spa
ceX\'s fifteenth flight of 2018 launched the Merah Putih (also known as
Telkom-4) geostationary communications satellite for Telkom Indonesia. It marked
the first reuse of any Block 5 first stage; the booster B1046 had previously
launched Bangabandhu-1. The stage was recovered and is expected to become the
first Falcon 9 booster to fly three missions.","crew":[],"ships":["5ea6ed2f080df
4000697c90d","5ea6ed30080df4000697c913"],"capsules":[],"payloads":["5eb0e4c9b6c3
bb0006eeb22a"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":67,"name":
"Merah Putih","date_utc":"2018-08-07T05:18:00.000Z","date_unix":1533619080,"date
_local":"2018-08-07T01:18:00-04:00","date_precision":"hour","upcoming":false,"co
res":[{"core":"5e9e28a5f359182b023b2656","flight":2,"gridfins":true,"legs":true,

"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS
","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_
library_id":null,"id":"5eb87d20ffd86e000604b36c"},{"fairings":{"reused":false,"r
ecovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"
https://images2.imgbox.com/55/54/73EXeMfo_o.png","large":"https://images2.imgbox
.com/fd/59/nv3Ih3Am_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/space
x/comments/95cte4/telstar_18v_apstar_5c_launch_campaign_thread/","launch":"https
://www.reddit.com/r/spacex/comments/9e7bmq/rspacex_telstar_18v_official_launch_d
iscussion/","media":"https://www.reddit.com/r/spacex/comments/9ebkqw/rspacex_tel
star_18v_media_thread_videos_images/","recovery":"https://www.reddit.com/r/space
x/comments/9erxlh/telstar_18_vantage_recovery_thread/"},"flickr":{"small":[],"or
iginal":["https://farm2.staticflickr.com/1878/43690848045_492ef182dd_o.jpg","htt
ps://farm2.staticflickr.com/1856/43881229604_6d42e838b6_o.jpg","https://farm2.st
aticflickr.com/1852/43881223704_93777e34af_o.jpg","https://farm2.staticflickr.co
m/1841/43881217094_558b7b214e_o.jpg","https://farm2.staticflickr.com/1869/438811
93934_423eff8c86_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/
telstar18vantagepresskit.pdf","webcast":"https://www.youtube.com/watch?v=Apw3xqw
sG1U","youtube_id":"Apw3xqwsG1U","article":"https://spaceflightnow.com/2018/09/1
0/spacex-telesat-achieve-repeat-success-with-midnight-hour-launch/","wikipedia":
"https://en.wikipedia.org/wiki/Telstar_18V"},"static_fire_date_utc":"2018-09-05T
07:21:00.000Z","static_fire_date_unix":1536132060,"net":false,"window":14400,"ro
cket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX\
's sixteenth flight of 2018 launched the Telstar 18v GEO communication satellite
for Telesat, the second launch for the canadian company in a few months. The
first stage was a new Falcon 9 V1.2 Block 5 which was successfully recovered on
OCISLY.","crew":[],"ships":["5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90d
","5ea6ed2f080df4000697c90b"],"capsules":[],"payloads":["5eb0e4c9b6c3bb0006eeb22
b"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":68,"name":"Telstar 18
V","date_utc":"2018-09-10T04:45:00.000Z","date_unix":1536554700,"date_local":"20
18-09-10T00:45:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"cor
e":"5e9e28a5f3591833b13b2659","flight":1,"gridfins":true,"legs":true,"reused":fa
lse,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad
":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id
":null,"id":"5eb87d22ffd86e000604b36d"},{"fairings":{"reused":false,"recovery_at
tempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small":"https://im
ages2.imgbox.com/cb/41/RQIY0BjQ_o.png","large":"https://images2.imgbox.com/df/2c
/DsfygPln_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments
/9fwj9o/saocom_1a_launch_campaign_thread/","launch":"https://www.reddit.com/r/sp
acex/comments/9lazvr/rspacex_saocom_1a_official_launch_discussion/","media":"htt
ps://www.reddit.com/r/spacex/comments/9m3ly5/rspacex_saocom_1a_media_thread_vide
os_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://farm
2.staticflickr.com/1940/44262177535_9582184d3f_o.jpg","https://farm2.staticflick
r.com/1917/30234800687_fd94fde151_o.jpg","https://farm2.staticflickr.com/1951/30
234801997_b5a65426ca_o.jpg","https://farm2.staticflickr.com/1910/44262169525_e4c
6b27299_o.jpg","https://farm2.staticflickr.com/1923/44451125454_8d26929d0b_o.jpg
","https://farm2.staticflickr.com/1914/44262170545_22fe55d4bb_o.jpg","https://fa
rm2.staticflickr.com/1934/44262166295_3f84597f09_o.jpg"]},"presskit":"https://ww
w.spacex.com/sites/spacex/files/saocom1apresskit.pdf","webcast":"https://www.you

tube.com/watch?v=vr_C6LQ7mHc","youtube_id":"vr_C6LQ7mHc","article":"https://spac
eflightnow.com/2018/10/08/spacex-aces-first-rocket-landing-in-california-after-
launching-argentine-satellite/","wikipedia":"https://en.wikipedia.org/wiki/SAOCO
M"},"static_fire_date_utc":"2018-10-02T21:00:00.000Z","static_fire_date_unix":15
38514000,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":tr
ue,"failures":[],"details":"SpaceX\'s seventeenth flight of 2018 was the first
launch of the Saocom Earth observation satellite constellation of the Argentine
Space Agency CONAE. The second launch of Saocom 1B will happen in 2019. This
flight marked the first RTLS launch out of Vandenberg, with a landing on the
concrete pad at SLC-4W, very close to the launch pad.","crew":[],"ships":[],"cap
sules":[],"payloads":["5eb0e4c9b6c3bb0006eeb22c"],"launchpad":"5e9e4502f509092b7
8566f87","flight_number":69,"name":"SAOCOM 1A","date_utc":"2018-10-08T02:22:00.0
00Z","date_unix":1538965320,"date_local":"2018-10-07T19:22:00-07:00","date_preci
sion":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591809c03b2658","fligh
t":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_s
uccess":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb554034e7c9"}],"auto_
update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d23ffd86e000604b36e
"},{"fairings":{"reused":false,"recovery_attempt":false,"recovered":false,"ships
":[]},"links":{"patch":{"small":"https://images2.imgbox.com/ad/40/oCtCFYfl_o.png
","large":"https://images2.imgbox.com/7c/8a/j6Hu3TqR_o.png"},"reddit":{"campaign
":"https://www.reddit.com/r/spacex/comments/9p82jt/eshail_2_launch_campaign_thre
ad/","launch":"https://www.reddit.com/r/spacex/comments/9x9w9v/rspacex_eshail_2_
official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/9
xaa76/rspacex_eshail_2_media_thread_videos_images_gifs/","recovery":"https://www
.reddit.com/r/spacex/comments/9xmpa7/eshail_2_recovery_thread/"},"flickr":{"smal
l":[],"original":["https://farm5.staticflickr.com/4834/32040174268_b71d703417_o.
jpg","https://farm5.staticflickr.com/4810/32040174058_a65fa64e85_o.jpg","https:/
/farm5.staticflickr.com/4814/32040173268_0ab571e7bc_o.jpg","https://farm5.static
flickr.com/4899/32040173568_bb5c991565_o.jpg","https://farm5.staticflickr.com/48
75/32040173278_b5578ba6be_o.jpg","https://farm5.staticflickr.com/4862/3204017392
8_afdfb09939_o.jpg","https://farm5.staticflickr.com/4888/32040173048_b2b29c020f_
o.jpg","https://farm5.staticflickr.com/4808/32248947038_dd1cf9e8c3_o.jpg","https
://farm5.staticflickr.com/4887/31180979107_da6a935c20_o.jpg"]},"presskit":"https
://www.spacex.com/sites/spacex/files/eshail-2_mission_press_kit_11_14_2018.pdf",
"webcast":"https://www.youtube.com/watch?v=PhTbzc-
BqKs&feature=youtu.be","youtube_id":"PhTbzc-
BqKs","article":"https://spaceflightnow.com/2018/11/15/spacex-launches-qatars-
eshail-2-communications-satellite/","wikipedia":"https://en.wikipedia.org/wiki/E
s%27hailSat"},"static_fire_date_utc":"2018-11-12T18:13:00.000Z","static_fire_dat
e_unix":1542046380,"net":false,"window":6180,"rocket":"5e9d0d95eda69973a809d1ec"
,"success":true,"failures":[],"details":"SpaceX\'s eighteenth flight of 2018 was
its first for Es\'hailSat. Es\'hail-2 is a communications satellite delivering
television and internet to Qatar and the surrounding region. It was launched
into a geostationary transfer orbit from LC-39A at Kennedy Space Center. The
booster landed on OCISLY.","crew":[],"ships":["5ea6ed2f080df4000697c90d","5ea6ed
30080df4000697c913"],"capsules":[],"payloads":["5eb0e4c9b6c3bb0006eeb22d"],"laun
chpad":"5e9e4502f509094188566f88","flight_number":70,"name":"Es\xe2\x80\x99hail
2","date_utc":"2018-11-15T20:46:00.000Z","date_unix":1542314760,"date_local":"20

18-11-15T15:46:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"cor
e":"5e9e28a5f359181eed3b2657","flight":2,"gridfins":true,"legs":true,"reused":tr
ue,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad"
:"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id"
:null,"id":"5eb87d24ffd86e000604b36f"},{"fairings":{"reused":false,"recovery_att
empt":true,"recovered":false,"ships":["5ea6ed2e080df4000697c908"]},"links":{"pat
ch":{"small":"https://images2.imgbox.com/48/3b/Lg1Qc4uX_o.png","large":"https://
images2.imgbox.com/3e/87/xYszAJQc_o.png"},"reddit":{"campaign":"https://www.redd
it.com/r/spacex/comments/9raysi/ssoa_launch_campaign_thread","launch":"https://w
ww.reddit.com/r/spacex/comments/a0vjff/rspacex_ssoa_official_launch_discussion_u
pdates/","media":"https://old.reddit.com/r/spacex/comments/a0wylf/rspacex_ssoa_m
edia_thread_videos_images_gifs/","recovery":"https://www.reddit.com/r/spacex/com
ments/a2tjoe/ssoa_recovery_thread/"},"flickr":{"small":[],"original":["https://f
arm5.staticflickr.com/4875/45257565145_d53757e0b2_o.jpg","https://farm5.staticfl
ickr.com/4839/45257565835_4fd6f3e895_o.jpg","https://farm5.staticflickr.com/4822
/45257566865_9c9d34a7ca_o.jpg","https://farm5.staticflickr.com/4821/45257568225_
186c8431cf_o.jpg","https://farm5.staticflickr.com/4885/45257569445_1d74a601df_o.
jpg","https://farm5.staticflickr.com/4869/45257570925_8eae9a0888_o.jpg","https:/
/farm5.staticflickr.com/4842/31338804427_2e4dcda6e7_o.jpg","https://farm5.static
flickr.com/4894/46227271292_2eee9af3eb_o.jpg","https://farm5.staticflickr.com/48
70/44460659210_de634098ac_o.jpg"]},"presskit":"https://www.spacex.com/sites/spac
ex/files/ssoa_press_kit.pdf","webcast":"https://www.youtube.com/watch?v=Wq8kS6Uo
OrQ","youtube_id":"Wq8kS6UoOrQ","article":"https://spaceflightnow.com/2018/12/03
/spacex-launches-swarm-of-satellites-re-flies-rocket-for-third-time/","wikipedia
":"https://en.wikipedia.org/wiki/Spaceflight_Industries"},"static_fire_date_utc"
:"2018-11-15T21:55:00.000Z","static_fire_date_unix":1542318900,"net":false,"wind
ow":1680,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"detai
ls":"SpaceX\'s nineteenth flight of 2018 will fly SSO-A: SmallSat Express out of
Vandenberg SLC-4E for Spaceflight. SSO-A is a rideshare to sun synchronus low
earth orbit consisting of 64 individual microsatellites and cubesats. It is also
likely to be the third flight of core B1046 which previously flew Bangabandhu-1
and Merah Putih. If this happens it will be the first time a Falcon 9 has flown
more than two missions. ","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed3
0080df4000697c912","5ea6ed30080df4000697c914","5ea6ed2e080df4000697c908"],"capsu
les":[],"payloads":["5eb0e4c9b6c3bb0006eeb22e"],"launchpad":"5e9e4502f509092b785
66f87","flight_number":71,"name":"SSO-A","date_utc":"2018-12-03T18:34:00.000Z","
date_unix":1543861920,"date_local":"2018-12-03T10:34:00-08:00","date_precision":
"hour","upcoming":false,"cores":[{"core":"5e9e28a5f359182b023b2656","flight":3,"
gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success
":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update
":true,"tbd":false,"launch_library_id":null,"id":"5eb87d25ffd86e000604b370"},{"f
airings":null,"links":{"patch":{"small":"https://images2.imgbox.com/f0/a6/oNKZP5
Hu_o.png","large":"https://images2.imgbox.com/ee/c6/MkvXHhu1_o.png"},"reddit":{"
campaign":"https://www.reddit.com/r/spacex/comments/9z7i4j/crs16_launch_campaign
_thread/","launch":"https://www.reddit.com/r/spacex/comments/a2oubw/rspacex_crs1
6_official_launch_discussion_updates/","media":"https://www.reddit.com/r/spacex/
comments/a2uojp/rspacex_crs16_media_thread_videos_images_gifs/","recovery":"http
s://www.reddit.com/r/spacex/comments/a3n3vm/crs16_emergency_recovery_thread/"},"

flickr":{"small":[],"original":["https://farm5.staticflickr.com/4835/45473442624
_69ee8bee45_o.jpg","https://farm5.staticflickr.com/4903/45473443604_0d668c31da_o
.jpg","https://farm5.staticflickr.com/4858/45473444314_413a344dcb_o.jpg","https:
//farm5.staticflickr.com/4856/45473445134_d9384878f8_o.jpg","https://farm5.stati
cflickr.com/4840/45473446114_7d5e5d6fe2_o.jpg"]},"presskit":"https://www.spacex.
com/sites/spacex/files/crs16_press_kit_12_4.pdf","webcast":"https://www.youtube.
com/watch?v=Esh1jHT9oTA","youtube_id":"Esh1jHT9oTA","article":"https://spaceflig
htnow.com/2018/12/05/spacex-falcon-9-boosts-dragon-cargo-ship-to-orbit-first-
stage-misses-landing-target/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_
CRS-16"},"static_fire_date_utc":"2018-11-30T19:57:00.000Z","static_fire_date_uni
x":1543607820,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","succes
s":true,"failures":[],"details":"SpaceX\'s 16th Crew Resupply Mission on behalf
of NASA, with a total of 20 contracted flights. This will bring essential
supplies to the International Space Station using SpaceX\'s reusable Dragon
spacecraft. The Falcon 9 will launch from SLC-40 at Cape Canaveral Air Force
Station. During the landing of the first stage, a grid fin hydraulic pump
stalled, causing the core to enter an uncontrolled roll, and resulting in a
(succesful) water landing.","crew":[],"ships":["5ea6ed2f080df4000697c90b"],"caps
ules":["5e9e2c5cf359185d753b266f"],"payloads":["5eb0e4cab6c3bb0006eeb22f"],"laun
chpad":"5e9e4501f509094ba4566f84","flight_number":72,"name":"CRS-16","date_utc":
"2018-12-05T18:16:00.000Z","date_unix":1544033760,"date_local":"2018-12-05T13:16
:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f3
59185c603b265a","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_a
ttempt":true,"landing_success":false,"landing_type":"RTLS","landpad":"5e9e303238
3ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"
5eb87d26ffd86e000604b371"},{"fairings":{"reused":false,"recovery_attempt":false,
"recovered":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.
com/3c/2f/tL7xDUD6_o.png","large":"https://images2.imgbox.com/f9/31/MGTnAfuR_o.p
ng"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/a4516o/gps_i
ii2_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/
a71wyn/rspacex_gps_iii2_official_launch_discussion/","media":"https://www.reddit
.com/r/spacex/comments/a73kz5/rspacex_gps_iii2_media_thread_videos_images_gifs/"
,"recovery":null},"flickr":{"small":[],"original":["https://farm5.staticflickr.c
om/4864/45715171884_f1dd88c058_o.jpg","https://farm8.staticflickr.com/7926/45525
648155_32fdab17a5_o.jpg","https://farm8.staticflickr.com/7876/45525649035_ba6016
2fe0_o.jpg","https://farm8.staticflickr.com/7853/45525649825_e6d35415e1_o.jpg","
https://farm5.staticflickr.com/4893/45525650685_02b408c385_o.jpg"]},"presskit":"
https://www.spacex.com/sites/spacex/files/gps_iii_press_kit.pdf","webcast":"http
s://youtu.be/yRiLPoy_Mzc","youtube_id":"yRiLPoy_Mzc","article":"https://spacefli
ghtnow.com/2018/12/23/spacex-closes-out-year-with-successful-gps-satellite-launc
h/","wikipedia":"https://en.wikipedia.org/wiki/GPS_Block_IIIA"},"static_fire_dat
e_utc":"2018-12-13T21:24:00.000Z","static_fire_date_unix":1544736240,"net":false
,"window":1560,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],
"details":"SpaceX\'s twenty-first flight of 2018 launched the first of the new
GPS III satellites (Block IIIA) for the United States Air Force and was
SpaceX\'s first EELV mission. The spacecraft was delivered to a MEO transfer
orbit from SLC-40 at Cape Canaveral Air Force Station. This mission was the
first to fly with the redesigned COPV on the first stage (B1054) as well as the

second. The booster was expended.","crew":[],"ships":[],"capsules":[],"payloads"
:["5eb0e4cab6c3bb0006eeb230"],"launchpad":"5e9e4501f509094ba4566f84","flight_num
ber":73,"name":"GPS III SV01","date_utc":"2018-12-23T13:51:00.000Z","date_unix":
1545573060,"date_local":"2018-12-23T08:51:00-05:00","date_precision":"hour","upc
oming":false,"cores":[{"core":"5e9e28a6f35918513b3b265b","flight":1,"gridfins":f
alse,"legs":false,"reused":false,"landing_attempt":false,"landing_success":null,
"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_libr
ary_id":null,"id":"5eb87d27ffd86e000604b372"},{"fairings":{"reused":false,"recov
ery_attempt":false,"recovered":null,"ships":[]},"links":{"patch":{"small":"https
://images2.imgbox.com/75/cb/DMVc5j8b_o.png","large":"https://images2.imgbox.com/
d7/f9/861bfh4Q_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/com
ments/a699fh/iridium_next_constellation_mission_8_launch/","launch":"https://www
.reddit.com/r/spacex/comments/aemq2i/rspacex_iridium_next_8_official_launch_disc
ussion/","media":"https://www.reddit.com/r/spacex/comments/aeoxve/rspacex_iridiu
m_next_8_media_thread_videos_images/","recovery":"https://www.reddit.com/r/space
x/comments/aewp4r/iridium_8_recovery_thread/"},"flickr":{"small":[],"original":[
"https://farm5.staticflickr.com/4866/39745612523_14270b4b9d_o.jpg","https://farm
8.staticflickr.com/7833/39745612923_21aa442350_o.jpg","https://farm5.staticflick
r.com/4881/39745613173_e99b09c000_o.jpg","https://farm8.staticflickr.com/7882/39
745613513_6cdd4581af_o.jpg","https://farm8.staticflickr.com/7807/39745613733_1a7
b70e54a_o.jpg","https://farm5.staticflickr.com/4891/39745614053_43855205bc_o.jpg
"]},"presskit":"https://www.spacex.com/sites/spacex/files/iridium8presskit.pdf",
"webcast":"https://youtu.be/VshdafZvwrg","youtube_id":"VshdafZvwrg","article":"h
ttps://spaceflightnow.com/2019/01/11/spacex-begins-2019-with-eighth-and-final-
for-upgraded-iridium-network/","wikipedia":"https://en.wikipedia.org/wiki/Iridiu
m_satellite_constellation#Next-generation_constellation"},"static_fire_date_utc"
:"2019-01-06T13:51:00.000Z","static_fire_date_unix":1546782660,"net":false,"wind
ow":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details"
:"SpaceX\'s first flight of 2019 will be the eighth and final launch of its
planned Iridium flights. Delivering 10 satellites to low earth orbit, this
brings the total up to 75 and completes the Iridium NEXT constellation. This
mission launches from SLC-4E at Vandenberg AFB. The booster is expected to land
on JRTI.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed30080df4000697c91
2","5ea6ed30080df4000697c914"],"capsules":[],"payloads":["5eb0e4cab6c3bb0006eeb2
31"],"launchpad":"5e9e4502f509092b78566f87","flight_number":74,"name":"Iridium
NEXT Mission 8","date_utc":"2019-01-11T15:31:00.000Z","date_unix":1547220660,"da
te_local":"2019-01-11T07:31:00-08:00","date_precision":"hour","upcoming":false,"
cores":[{"core":"5e9e28a5f3591833b13b2659","flight":2,"gridfins":true,"legs":tru
e,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"AS
DS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launc
h_library_id":null,"id":"5eb87d28ffd86e000604b373"},{"fairings":{"reused":false,
"recovery_attempt":false,"recovered":false,"ships":[]},"links":{"patch":{"small"
:"https://images2.imgbox.com/06/bc/5KvLN0mH_o.png","large":"https://images2.imgb
ox.com/4d/63/oBLNSPkL_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spa
cex/comments/afxyrd/nusantara_satu_launch_campaign_thread/","launch":"https://ww
w.reddit.com/r/spacex/comments/assxjz/rspacex_psnvi_official_launch_discussion_u
pdates/","media":"https://www.reddit.com/r/spacex/comments/at5mu8/rspacex_psn6_m
edia_thread_videos_images_gifs/","recovery":"https://www.reddit.com/r/spacex/com

ments/atbmp3/psnvi_recovery_discussion_updates_thread/"},"flickr":{"small":[],"o
riginal":["https://farm8.staticflickr.com/7800/47173936271_b8ddb5bc5b_o.jpg","ht
tps://farm8.staticflickr.com/7821/47121969172_37428a280e_o.jpg","https://farm8.s
taticflickr.com/7923/47173936181_c0bf7a22a6_o.jpg","https://farm8.staticflickr.c
om/7829/46259779115_8982c2c8c2_o.jpg","https://farm8.staticflickr.com/7889/46259
778995_68130be69d_o.jpg","https://farm8.staticflickr.com/7895/47130341432_377264
1a68_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/nusantara_sa
tu_press_kit.pdf","webcast":"https://www.youtube.com/watch?v=XS0E35aYJcU","youtu
be_id":"XS0E35aYJcU","article":"https://spaceflightnow.com/2019/02/22/israeli-
moon-lander-hitches-ride-on-spacex-launch-with-indonesian-comsat/","wikipedia":"
https://en.wikipedia.org/wiki/PT_Pasifik_Satelit_Nusantara"},"static_fire_date_u
tc":"2019-02-18T17:03:00.000Z","static_fire_date_unix":1550509380,"net":false,"w
indow":1920,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"de
tails":"SpaceX will launch this rideshare to GTO for Space Systems Loral (SSL).
The primary payload for this mission is Nusantara Satu, a communications
satellite built by SSL for the private Indonesian company PT Pasifik Satelit
Nusantara (PSN). Spaceflight Industries\' GTO-1 mission consists of two
secondary payloads. One of those is Beresheet, the lunar lander built by the
Israeli non-profit organization, SpaceIL. Beresheet will make its own way to the
moon from GTO. The other secondary is Air Force Research Lab\'s (Space
Situational Awareness) S5 mission, which hitches a ride to GEO aboard Nusantara
Satu. This mission launches from SLC-40 at Cape Canaveral AFS. The booster is
expected to land on OCISLY.","crew":[],"ships":["5ea6ed30080df4000697c913"],"cap
sules":[],"payloads":["5eb0e4cab6c3bb0006eeb232","5eb0e4cab6c3bb0006eeb233","5eb
0e4cab6c3bb0006eeb234"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":7
5,"name":"Nusantara Satu (PSN-6) / S5 / Beresheet","date_utc":"2019-02-22T01:45:
00.000Z","date_unix":1550799900,"date_local":"2019-02-21T20:45:00-05:00","date_p
recision":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591809c03b2658","f
light":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landi
ng_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"a
uto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d2affd86e000604
b374"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ship
s":[]},"links":{"patch":{"small":"https://images2.imgbox.com/59/a8/q5IEqsOJ_o.pn
g","large":"https://images2.imgbox.com/ee/a6/x4AyUIc3_o.png"},"reddit":{"campaig
n":"https://www.reddit.com/r/spacex/comments/a65clm/dm1_launch_campaign_thread/"
,"launch":"https://www.reddit.com/r/spacex/comments/av1asz/rspacex_cctcap_demo_m
ission_1_official_launch/","media":"https://www.reddit.com/r/spacex/comments/aw6
g7j/rspacex_cctcap_demo_mission_1_media_thread_videos/","recovery":"https://www.
reddit.com/r/spacex/comments/awo5lf/cctcap_demo_mission_1_official_booster_recov
ery/"},"flickr":{"small":[],"original":["https://farm8.staticflickr.com/7899/396
84491043_f0289164bd_o.jpg","https://farm8.staticflickr.com/7804/39684490433_7033
7aa4e5_o.jpg","https://farm8.staticflickr.com/7826/32774791628_e2234480db_o.jpg"
,"https://farm5.staticflickr.com/4882/39684490143_7df3838d2c_o.jpg","https://far
m8.staticflickr.com/7851/46535572784_7eb295968e_o.jpg","https://farm8.staticflic
kr.com/7826/46535572564_a022f9c43a_o.jpg","https://farm8.staticflickr.com/7889/4
0294395933_f429c12e83_o.jpg","https://farm8.staticflickr.com/7914/40294395873_0a
328f2d87_o.jpg","https://farm8.staticflickr.com/7866/46535572294_22499c1223_o.jp
g","https://farm8.staticflickr.com/7850/46535573034_03da10f899_o.jpg","https://f

arm8.staticflickr.com/7848/46535572664_316c466742_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/crew_demo-1_press_kit.pdf","webcast":"https://youtu.be/2ZL0tbOZYhE","youtube_id":"2ZL0tbOZYhE","article":"https://spaceflightnow.com/2019/03/02/spacex-launches-first-crew-dragon-ferry-ship/","wikipedia":"https://en.wikipedia.org/wiki/SpX-DM1"},"static_fire_date_utc":"2019-01-24T19:03:00.000Z","static_fire_date_unix":1548356580,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Demonstration Mission 1 (DM-1) will launch Dragon 2 as part of NASA\'s Commercial Crew Transportation Capability program. This mission will demonstrate Dragon 2, and Falcon 9 in its configuration for crewed missions. DM-1 will launch from LC-39A at Kennedy Space Center, likely carrying some cargo to the International Space Station. The booster is expected to land on OCISLY.","crew":[],"ships":["5ea6ed30080df4000697c913"],"capsules":["5e9e2c5df35918b1063b2671"],"payloads":["5eb0e4cbb6c3bb0006eeb235"],"launchpad":"5e9e4502f509094188566f88","flight_number":76,"name":"CCtCap Demo Mission 1","date_utc":"2019-03-02T07:45:00.000Z","date_unix":1551512700,"date_local":"2019-03-02T02:45:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f35918c0803b265c","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d2bffd86e000604b375"},{"fairings":{"reused":false,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2f080df4000697c90c"]},"links":{"patch":{"small":"https://images2.imgbox.com/14/18/JxCyAHXk_o.png","large":"https://images2.imgbox.com/9f/c3/GvLfwIfg_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/b0kscl/arabsat6a_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/basm9y/rspacex_arabsat6a_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/bbhz9a/rspacex_arabsat6a_media_thread_videos_images_gifs/","recovery":"https://www.reddit.com/r/spacex/comments/bcecao/fh_arabsat_6a_center_core_recovery_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/7911/32652060737_4be1171d4a_o.jpg","https://live.staticflickr.com/7807/40628442293_9643eaf670_o.jpg","https://live.staticflickr.com/7804/40628440983_4da5d76cc7_o.jpg","https://live.staticflickr.com/7856/40628439793_27927d11de_o.jpg","https://live.staticflickr.com/7919/40628438523_c597eabff1_o.jpg","https://live.staticflickr.com/7834/40628437283_84088aca75_o.jpg","https://live.staticflickr.com/7856/40628435833_a1bcde59db_o.jpg","https://live.staticflickr.com/7809/40628435153_17c05d3b5e_o.jpg","https://live.staticflickr.com/7885/40628434483_3545598b82_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/arabsat-6a_press_kit.pdf","webcast":"https://youtu.be/TXMGu2d8c8g","youtube_id":"TXMGu2d8c8g","article":"https://spaceflightnow.com/2019/04/11/spacexs-falcon-heavy-successful-in-commercial-debut/","wikipedia":"https://en.wikipedia.org/wiki/Arabsat-6A"},"static_fire_date_utc":"2019-04-05T09:57:00.000Z","static_fire_date_unix":1554458220,"net":false,"window":7020,"rocket":"5e9d0d95eda69974db09d1ed","success":true,"failures":[],"details":"SpaceX will launch Arabsat 6A to a geostationary transfer orbit from SLC-39A, KSC. The satellite is a geostationary telecommunications satellite built by Lockheed Martin for the Saudi Arabian company Arabsat. This will be the first operational flight of Falcon Heavy, and also the first Block 5 Falcon Heavy. All three cores will be new Block 5 cores. The side cores are expected to land at LZ-1 and LZ-2, and the center core is

expected to land on OCISLY.","crew":[],"ships":["5ea6ed2f080df4000697c90e","5ea6
ed30080df4000697c913","5ea6ed2f080df4000697c90b","5ea6ed2e080df4000697c909","5ea
6ed2f080df4000697c90c"],"capsules":[],"payloads":["5eb0e4cbb6c3bb0006eeb236"],"l
aunchpad":"5e9e4502f509094188566f88","flight_number":77,"name":"ArabSat 6A","dat
e_utc":"2019-04-11T22:35:00.000Z","date_unix":1555022100,"date_local":"2019-04-1
1T18:35:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9
e28a6f3591897453b265f","flight":1,"gridfins":true,"legs":true,"reused":false,"la
nding_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e
3032383ecb6bb234e7ca"},{"core":"5e9e28a6f359183c413b265d","flight":1,"gridfins":
true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"l
anding_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"},{"core":"5e9e28a6f3591
88fd53b265e","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_atte
mpt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb
90a834e7c8"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb8
7d2dffd86e000604b376"},{"fairings":null,"links":{"patch":{"small":"https://image
s2.imgbox.com/97/8e/YbVKIUZB_o.png","large":"https://images2.imgbox.com/0d/05/zH
7YqLRe_o.png"},"reddit":{"campaign":"https://new.reddit.com/r/spacex/comments/bd
2l28/crs17_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/co
mments/bjsn0v/rspacex_crs17_official_launch_discussion_updates","media":"https:/
/www.reddit.com/r/spacex/comments/bkc4d5/rspacex_crs17_media_thread_videos_image
s_gifs","recovery":"https://www.reddit.com/r/spacex/comments/bjy7p5/rspacex_crs1
7_recovery_discussion_updates_thread"},"flickr":{"small":[],"original":["https:/
/live.staticflickr.com/65535/46856594435_206c773b5a_o.jpg","https://live.staticf
lickr.com/65535/47720639872_284e49381d_o.jpg","https://live.staticflickr.com/655
35/46856594755_88f1b22e50_o.jpg","https://live.staticflickr.com/65535/4772063954
2_1b7c1a71b0_o.jpg","https://live.staticflickr.com/65535/47720639732_e04b2a9ed7_
o.jpg","https://live.staticflickr.com/65535/32829382467_087d024428_o.jpg"]},"pre
sskit":"https://www.spacex.com/sites/spacex/files/crs-17_press_kit.pdf","webcast
":"https://youtu.be/AQFhX5TvP0M","youtube_id":"AQFhX5TvP0M","article":"https://s
paceflightnow.com/2019/05/04/spacex-launches-space-station-resupply-mission-
lands-rocket-on-drone-ship/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_C
RS-17"},"static_fire_date_utc":"2019-04-27T07:23:00.000Z","static_fire_date_unix
":1556349780,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success
":true,"failures":[],"details":"SpaceX\'s 17th Commercial Resupply Services
mission for NASA out of a total of 20 contracted flights, this mission brings
essential supplies to the International Space Station using SpaceX\'s reusable
Dragon 1 spacecraft. The external payloads for this mission include Orbital
Carbon Observatory 3 and Space Test Program-Houston 6. The Falcon 9 launches
from SLC-40 at Cape Canaveral AFS. The booster was expected to land at LZ-1,
however, due to the ongoing investigation and clean-up following the Crew Dragon
testing incident, it is likely to land on OCISLY instead.\\n   ","crew":[],"shi
ps":["5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90e","5ea6ed2f080df4000697
c90b"],"capsules":["5e9e2c5cf3591869b63b2670"],"payloads":["5eb0e4cbb6c3bb0006ee
b237"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":78,"name":"CRS-17"
,"date_utc":"2019-05-04T06:48:00.000Z","date_unix":1556952480,"date_local":"2019
-05-04T02:48:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core"
:"5e9e28a7f3591809313b2660","flight":1,"gridfins":true,"legs":true,"reused":fals
e,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":

"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":
null,"id":"5eb87d2effd86e000604b377"},{"fairings":{"reused":false,"recovery_atte
mpt":true,"recovered":true,"ships":["5ea6ed2f080df4000697c90c"]},"links":{"patch
":{"small":"https://images2.imgbox.com/79/ec/TOE2PBJq_o.png","large":"https://im
ages2.imgbox.com/39/aa/5of7buxK_o.png"},"reddit":{"campaign":"https://www.reddit
.com/comments/bjybrl","launch":"https://www.reddit.com/r/spacex/comments/brfbic/
rspacex_starlink_official_launch_discussion","media":"https://www.reddit.com/r/s
pacex/comments/bp0479/rspacex_starlink_media_thread_videos_images_gifs","recover
y":"https://www.reddit.com/r/spacex/comments/bsaljm/rspacex_starlink_b10493_reco
very_discussion_and"},"flickr":{"small":[],"original":["https://live.staticflick
r.com/65535/47926143711_4a0b2680bf_o.jpg","https://live.staticflickr.com/65535/4
7926136902_d8ce35223d_o.jpg","https://live.staticflickr.com/65535/47926144123_2a
828b66d5_o.jpg","https://live.staticflickr.com/65535/47926137127_ef58152b6b_o.jp
g","https://live.staticflickr.com/65535/47926137017_e6d86fa820_o.jpg"]},"presski
t":"https://www.spacex.com/sites/spacex/files/starlink_press_kit.pdf","webcast":
"https://www.youtube.com/watch?v=riBaVeDTEWI","youtube_id":"riBaVeDTEWI","articl
e":"https://spaceflightnow.com/2019/05/24/spacexs-first-60-starlink-broadband-
satellites-deployed-in-orbit","wikipedia":"https://en.wikipedia.org/wiki/Starlin
k_(satellite_constellation)"},"static_fire_date_utc":"2019-05-13T20:06:00.000Z",
"static_fire_date_unix":1557777960,"net":false,"window":9000,"rocket":"5e9d0d95e
da69973a809d1ec","success":true,"failures":[],"details":"SpaceX will launch
dozens of Starlink demonstration satellites from SLC-40, Cape Canaveral AFS.
Starlink is a low Earth orbit broadband internet constellation developed and
owned by SpaceX which will eventually consist of nearly 12 000 satellites and
will provide low latency internet service to ground terminals around the world.
Two prototype satellites, Microsats 2a and 2b, were launched from Vandenberg AFB
in February 2018. The booster for this mission will land on OCISLY.","crew":[],"
ships":["5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90c","5ea6ed2f080df4000
697c90e","5ea6ed2f080df4000697c90b","5ea6ed2e080df4000697c909"],"capsules":[],"p
ayloads":["5eb0e4cbb6c3bb0006eeb238"],"launchpad":"5e9e4501f509094ba4566f84","fl
ight_number":79,"name":"Starlink v0.9","date_utc":"2019-05-24T02:30:00.000Z","da
te_unix":1558665000,"date_local":"2019-05-23T22:30:00-04:00","date_precision":"h
our","upcoming":false,"cores":[{"core":"5e9e28a5f3591833b13b2659","flight":3,"gr
idfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":
true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":
true,"tbd":false,"launch_library_id":null,"id":"5eb87d30ffd86e000604b378"},{"fai
rings":{"reused":false,"recovery_attempt":false,"recovered":null,"ships":[]},"li
nks":{"patch":{"small":"https://images2.imgbox.com/39/af/ygmjLYhv_o.png","large"
:"https://images2.imgbox.com/03/18/xlkSHLy1_o.png"},"reddit":{"campaign":"https:
//www.reddit.com/r/spacex/comments/buq487/radarsat_constellation_launch_campaign
_thread","launch":"https://www.reddit.com/r/spacex/comments/byp69f/rspacex_radar
sat_constellation_official_launch","media":null,"recovery":null},"flickr":{"smal
l":[],"original":["https://live.staticflickr.com/65535/48052269657_71764b0fb3_o.
jpg","https://live.staticflickr.com/65535/48052269617_34447619f0_o.jpg","https:/
/live.staticflickr.com/65535/48052224858_20ea2a411e_o.jpg","https://live.staticf
lickr.com/65535/48052269562_325c117b81_o.jpg","https://live.staticflickr.com/655
35/48052182461_a419db6b84_o.jpg","https://live.staticflickr.com/65535/4805222473
3_f89f1dd046_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/rada

rsat_constellation_mission_press_kit.pdf","webcast":"https://youtu.be/8A2nJd9Urk
8","youtube_id":"8A2nJd9Urk8","article":"https://spaceflightnow.com/2019/06/12/t
hree-canadian-radar-surveillance-satellites-ride-spacex-rocket-into-orbit/","wik
ipedia":"https://en.wikipedia.org/wiki/RADARSAT_Constellation"},"static_fire_dat
e_utc":"2019-06-08T08:39:00.000Z","static_fire_date_unix":1559983140,"net":false
,"window":780,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"
details":"SpaceX is launching the three satellite RADARSAT Constellation Mission
into Sun Synchronous orbit from SLC-4E, VAFB. The RCM spacecraft are synthetic
aperture radar (SAR) Earth observation satellites built by the Canadian space
company, MDA, for the Canadian Space Agency. This mission was delayed when the
originally slated booster failed to land after CRS-16. The booster is expected
to return to LZ-4.","crew":[],"ships":[],"capsules":[],"payloads":["5eb0e4ccb6c3
bb0006eeb239"],"launchpad":"5e9e4502f509092b78566f87","flight_number":80,"name":
"RADARSAT Constellation","date_utc":"2019-06-12T14:17:00.000Z","date_unix":15603
49020,"date_local":"2019-06-12T07:17:00-07:00","date_precision":"hour","upcoming
":false,"cores":[{"core":"5e9e28a6f35918c0803b265c","flight":2,"gridfins":true,"
legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_
type":"RTLS","landpad":"5e9e3032383ecb554034e7c9"}],"auto_update":true,"tbd":fal
se,"launch_library_id":null,"id":"5eb87d31ffd86e000604b379"},{"fairings":{"reuse
d":false,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df4000697
c908"]},"links":{"patch":{"small":"https://images2.imgbox.com/b0/90/fA4QaCAi_o.p
ng","large":"https://images2.imgbox.com/81/9e/p6AaiJwj_o.png"},"reddit":{"campai
gn":"https://www.reddit.com/r/spacex/comments/bw6aa8/stp2_launch_campaign_thread
/","launch":"https://www.reddit.com/r/spacex/comments/c40a29/rspacex_stp2_offici
al_launch_discussion_updates","media":"https://www.reddit.com/r/spacex/comments/
c4ng3a/rspacex_stp2_media_thread_videos_images_gifs","recovery":null},"flickr":{
"small":[],"original":["https://live.staticflickr.com/65535/48129211778_83c17693
05_o.jpg","https://live.staticflickr.com/65535/48129211908_8390c775b0_o.jpg","ht
tps://live.staticflickr.com/65535/48129182836_fd53e5646b_o.jpg","https://live.st
aticflickr.com/65535/48129269897_22d854be5c_o.jpg","https://live.staticflickr.co
m/65535/48129182631_572051790c_o.jpg","https://live.staticflickr.com/65535/48129
211693_d23b0287f1_o.jpg","https://live.staticflickr.com/65535/48129269942_eb9b5c
25bc_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/stp-2_press_
kit.pdf","webcast":"https://youtu.be/WxH4CAlhtiQ","youtube_id":"WxH4CAlhtiQ","ar
ticle":"https://spaceflightnow.com/2019/06/25/falcon-heavy-launches-on-military-
led-rideshare-mission-boat-catches-fairing","wikipedia":"https://en.wikipedia.or
g/wiki/Space_Test_Program"},"static_fire_date_utc":"2019-06-19T21:52:00.000Z","s
tatic_fire_date_unix":1560981120,"net":false,"window":14400,"rocket":"5e9d0d95ed
a69974db09d1ed","success":true,"failures":[],"details":"Space Test Program 2 is
a rideshare managed by the U.S. Air Force Space and Missile Systems Center
(SMC), launching from LC-39A, KSC. Most of the spacecraft will be delivered into
low Earth orbit (LEO) in two deployment sequences separated by a second stage
burn. These LEO payloads include the six Taiwan and United States owned COSMIC-2
microsatellites, the Planetary Society\'s LightSail-B demonstrator cubesat, and
others. The third and final deployment will be the Air Force Research Lab\'s DSX
spacecraft, which will be delivered to a medium Earth orbit (MEO). This mission
will reuse the side cores from Arabsat 6A, which will return to LZ-1, and LZ-2.
The new center core will boost back to land on OCISLY less than 40 km from the

launch site.","crew":[],"ships":["5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90b","5ea6ed2e080df4000697c909","5ea6ed2e080df4000697c908","5ea6ed2f080df4000697c90e"],"capsules":[],"payloads":["5eb0e4ccb6c3bb0006eeb23a","5eb0e4ccb6c3bb0006eeb23b","5eb0e4ccb6c3bb0006eeb23c","5eb0e4ccb6c3bb0006eeb23d","5eb0e4ccb6c3bb0006eeb23e","5eb0e4cdb6c3bb0006eeb23f","5eb0e4cdb6c3bb0006eeb240","5eb0e4cdb6c3bb0006eeb241","5eb0e4cdb6c3bb0006eeb242","5eb0e4cdb6c3bb0006eeb243","5eb0e4cdb6c3bb0006eeb244","5eb0e4cdb6c3bb0006eeb245","5eb0e4ceb6c3bb0006eeb246","5eb0e4ceb6c3bb0006eeb247","5eb0e4ceb6c3bb0006eeb248","5eb0e4ceb6c3bb0006eeb249"],"launchpad":"5e9e4502f509094188566f88","flight_number":81,"name":"STP-2","date_utc":"2019-06-25T03:30:00.000Z","date_unix":1561433400,"date_local":"2019-06-24T23:30:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591878063b2661","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":false,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"},{"core":"5e9e28a6f359183c413b265d","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"},{"core":"5e9e28a6f359188fd53b265e","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb90a834e7c8"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d35ffd86e000604b37a"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/f1/70/USGBp3Dy_o.png","large":"https://images2.imgbox.com/79/a5/ZdV48VwO_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/c8k6g5/crs18_launch_campaign_thread","launch":"https://www.reddit.com/r/spacex/comments/ch2ml7/rspacex_crs18_official_launch_discussion_updates/","media":"https://www.reddit.com/r/spacex/comments/chbr8i/rspacex_crs18_media_thread_videos_images_gifs/","recovery":null},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/48380511527_190682b573_o.jpg","https://live.staticflickr.com/65535/48380370691_7b0757a4d3_o.jpg","https://live.staticflickr.com/65535/48380511492_51db1bf984_o.jpg","https://live.staticflickr.com/65535/48380370626_a5d264c637_o.jpg","https://live.staticflickr.com/65535/48380511427_97db52a9e3_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/crs-18_press_kit.pdf","webcast":"https://youtu.be/SlgrxVuP5jk","youtube_id":"SlgrxVuP5jk","article":"https://spaceflightnow.com/2019/07/25/new-docking-port-spacesuit-and-supplies-en-route-to-space-station/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-18"},"static_fire_date_utc":"2019-07-19T15:31:00.000Z","static_fire_date_unix":1563550260,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX\'s 18th Commercial Resupply Services mission out of a total of 20 such contracted flights for NASA, this launch will deliver essential supplies to the International Space Station using the reusable Dragon 1 cargo spacecraft. The external payload for this mission is International Docking Adapter 3, replacing IDA-1 lost in SpaceX\'s CRS-7 launch failure. This mission will launch from SLC-40 at Cape Canaveral AFS on a Falcon 9, and the first-stage booster is expected to land back at CCAFS LZ-1.","crew":[],"ships":[],"capsules":["5e9e2c5cf359188bfb3b266b"],"payloads":["5eb0e4ceb6c3bb0006eeb24a"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":82,"name":"CRS-18","date_utc":"2019-07-25T22:01:00.000Z","date_unix":1564092060,"date_local":"2019-07-25T18:01:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591809313b2660","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"lan

ding_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],
"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d36ffd86e0006
04b37b"},{"fairings":{"reused":false,"recovery_attempt":true,"recovered":true,"s
hips":["5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.i
mgbox.com/65/c2/MMGkhdcA_o.png","large":"https://images2.imgbox.com/9e/6f/oaYZfA
oF_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/cjaawx
/amos17_launch_campaign_thread","launch":"https://www.reddit.com/r/spacex/commen
ts/cmedgn/rspacex_amos17_official_launch_discussion_updates","media":"https://ww
w.reddit.com/r/spacex/comments/cmppne/rspacex_amos17_media_thread_videos_images_
gifs","recovery":null},"flickr":{"small":[],"original":["https://live.staticflic
kr.com/65535/48478269312_58dd3dc446_o.jpg","https://live.staticflickr.com/65535/
48478269747_353dcb2e62_o.jpg","https://live.staticflickr.com/65535/48478119901_2
de0441026_o.jpg","https://live.staticflickr.com/65535/48478120646_ab72c2c6c3_o.j
pg","https://live.staticflickr.com/65535/48478120031_5aae1f6131_o.jpg","https://
live.staticflickr.com/65535/48478269442_08479bed36_o.jpg"]},"presskit":"https://
www.spacex.com/sites/spacex/files/amos-17_mission_press_kit_8_6_2019.pdf","webca
st":"https://youtu.be/fZh82-WcCuo","youtube_id":"fZh82-WcCuo","article":"https:/
/spaceflightnow.com/2019/08/07/spacex-launches-israeli-owned-telecom-satellite/"
,"wikipedia":"https://en.wikipedia.org/wiki/Spacecom"},"static_fire_date_utc":"2
019-08-01T00:00:00.000Z","static_fire_date_unix":1564617600,"net":false,"window"
:5280,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details"
:"SpaceX will launch Boeing built Amos-17, a geostationary communications
satellite for Israeli company Spacecom. The satellite will be delivered to GTO
from KSC LC-39A or possibly CCAFS SLC-40, and will replace the defunct Amos-5 at
17\xc2\xb0 E. Amos-17 carries multi-band high throughput and regional beams
servicing Africa, Europe and the Middle East. The cost of this launch is covered
for Spacecom by SpaceX credit following the Amos-6 incident. A recovery of the
booster for this mission is not expected.","crew":[],"ships":["5ea6ed2e080df4000
697c908","5ea6ed2e080df4000697c909"],"capsules":[],"payloads":["5eb0e4cfb6c3bb00
06eeb24b"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":83,"name":"Amo
s-17","date_utc":"2019-08-06T22:52:00.000Z","date_unix":1565131920,"date_local":
"2019-08-06T18:52:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"
core":"5e9e28a5f359181eed3b2657","flight":3,"gridfins":false,"legs":false,"reuse
d":true,"landing_attempt":false,"landing_success":null,"landing_type":null,"land
pad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d
37ffd86e000604b37c"},{"fairings":{"reused":true,"recovery_attempt":false,"recove
red":false,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/61/
a6/1MnnbXIF_o.png","large":"https://images2.imgbox.com/3a/d1/R1MaGiiV_o.png"},"r
eddit":{"campaign":"https://www.reddit.com/r/spacex/comments/dgqcb6/2nd_starlink
_mission_launch_campaign_thread","launch":"https://www.reddit.com/r/spacex/comme
nts/du07rt/rspacex_starlink1_official_launch_discussion","media":"https://www.re
ddit.com/r/spacex/comments/durx53/rspacex_starlink_1_media_thread_videos_images"
,"recovery":"https://www.reddit.com/r/spacex/comments/du1duu/starlink1_booster_a
nd_fairing_recovery_discussion"},"flickr":{"small":[],"original":["https://live.
staticflickr.com/65535/49051988851_0b422e1603_o.jpg","https://live.staticflickr.
com/65535/49051988746_1a97e38ca8_o.jpg","https://live.staticflickr.com/65535/490
52201452_c3b01e37f0_o.jpg","https://live.staticflickr.com/65535/49051988636_3714
a78787_o.jpg","https://live.staticflickr.com/65535/49051477088_d86104481d_o.jpg"

]},"presskit":"https://www.spacex.com/sites/spacex/files/starlink_press_kit_nov2019.pdf","webcast":"https://youtu.be/pIDuv0Ta0XQ","youtube_id":"pIDuv0Ta0XQ","article":"https://spaceflightnow.com/2019/11/11/successful-launch-continues-deployment-of-spacexs-starlink-network","wikipedia":"https://en.wikipedia.org/wiki/Starlink_(satellite_constellation)"},"static_fire_date_utc":"2019-11-11T12:08:00.000Z","static_fire_date_unix":1573474080,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission will launch the first batch of Starlink version 1.0 satellites, from SLC-40, Cape Canaveral AFS. They are expected to contribute to the 550 km x 53\xc2\xb0 shell. It is the second Starlink launch overall. Starlink is a low Earth orbit broadband internet constellation developed and owned by SpaceX which will eventually consist of nearly 12 000 satellites and will provide low latency internet service to ground terminals around the world. The booster for this mission is expected to land on OCISLY.","crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6ed30080df4000697c913","5ea6ed2e080df4000697c909","5ea6ed2f080df4000697c90d"],"capsules":[],"payloads":["5eb0e4cfb6c3bb0006eeb24c"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":84,"name":"Starlink-1","date_utc":"2019-11-11T14:56:00.000Z","date_unix":1573484160,"date_local":"2019-11-11T09:56:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591809c03b2658","flight":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d39ffd86e000604b37d"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/5d/26/ZP75Il1j_o.png","large":"https://images2.imgbox.com/6e/76/jVcSQg0K_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/e0upb3/crs19_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/e5r8hj/rspacex_crs19_official_launch_discussion_updates","media":"https://www.reddit.com/r/spacex/comments/e6ln0m/rspacex_crs19_media_thread_videos_images_gifs","recovery":"https://www.reddit.com/r/spacex/comments/e6lbzy/rspacex_crs19_booster_recovery_discussion_updates"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/49178460143_e3ae2bd506_o.jpg","https://live.staticflickr.com/65535/49178954221_8544835325_o.jpg","https://live.staticflickr.com/65535/49179161792_9f1801a963_o.jpg","https://live.staticflickr.com/65535/49178460368_62eb945db8_o.jpg","https://live.staticflickr.com/65535/49184948561_ce20b38bc6_o.jpg","https://live.staticflickr.com/65535/49185149122_00a7fa573d_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/crs-19_mission_press_kit.pdf","webcast":"https://youtu.be/-aoAGdYXp_4","youtube_id":"-aoAGdYXp_4","article":"https://spaceflightnow.com/2019/12/05/dragon-soars-on-research-and-resupply-flight-to-international-space-station","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-19"},"static_fire_date_utc":"2019-11-26T17:04:00.000Z","static_fire_date_unix":1574787840,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX\'s 19th Crew Resupply Mission on behalf of NASA with a total of 20 contracted flights, this mission brings essential supplies to the International Space Station using SpaceX\'s reusable Dragon spacecraft. The external payloads for this mission include the Hyperspectral Imager Suite and a lithium-ion battery. Falcon 9 and Dragon will launch from SLC-40, Cape Canaveral AFS. The mission will be complete with return and recovery of the Dragon capsule and down cargo.","crew":[],"ships":["5ea6ed2f080d

f4000697c90d"],"capsules":["5e9e2c5bf3591880643b2669"],"payloads":["5eb0e4cfb6c3
bb0006eeb24d"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":85,"name":
"CRS-19","date_utc":"2019-12-05T17:29:23.000Z","date_unix":1575566963,"date_loca
l":"2019-12-05T12:29:23-05:00","date_precision":"hour","upcoming":false,"cores":
[{"core":"5e9e28a7f359187afd3b2662","flight":1,"gridfins":true,"legs":true,"reus
ed":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","l
andpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_libr
ary_id":null,"id":"5eb87d39ffd86e000604b37e"},{"fairings":{"reused":false,"recov
ery_attempt":true,"recovered":false,"ships":["5ea6ed2e080df4000697c908"]},"links
":{"patch":{"small":"https://images2.imgbox.com/2c/03/fMLdgNQ4_o.png","large":"h
ttps://images2.imgbox.com/73/e2/4I3Os6n7_o.png"},"reddit":{"campaign":"https://w
ww.reddit.com/r/spacex/comments/e5w6i8/jcsat18kacific1_launch_campaign_thread","
launch":"https://www.reddit.com/r/spacex/comments/ebfr9t/rspacex_jcsat18kacific1
_official_launch","media":"https://www.reddit.com/r/spacex/comments/ebn4g5/rspac
ex_jcsat18kacific1_media_thread_videos","recovery":"https://www.reddit.com/r/spa
cex/comments/ec48p3/jscat_18kacific1_recovery_discussion_and_updates"},"flickr":
{"small":[],"original":["https://live.staticflickr.com/65535/49235364922_e55ceb6
1be_o.jpg","https://live.staticflickr.com/65535/49235136806_e5a3774904_o.jpg","h
ttps://live.staticflickr.com/65535/49235137056_585dc050e7_o.jpg"]},"presskit":"h
ttps://www.spacex.com/sites/spacex/files/jcsat18kacific1_mission_press_kit.pdf",
"webcast":"https://youtu.be/sbXgZg9JmkI","youtube_id":"sbXgZg9JmkI","article":"h
ttps://spaceflightnow.com/2019/12/17/startup-launches-broadband-satellite-on-
spacex-rocket-to-connect-pacific-islands","wikipedia":"https://en.wikipedia.org/
wiki/JSAT_(satellite_constellation)"},"static_fire_date_utc":"2019-12-13T12:34:0
0.000Z","static_fire_date_unix":1576240440,"net":false,"window":5280,"rocket":"5
e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX will
launch the Boeing built dual payload satellite to geostationary transfer orbit
from XXXX. JCSat 18 is a mobile broadband communications payload built for Sky
Perfect JSAT Corporation of Japan and will service Asia Pacific. Kacific 1 is a
high throughput broadband internet payload built for Kacific Broadband
Satellites and will service certain high demand areas of Southeast Asia and the
Pacific. Both payloads share a single chassis. The booster for this mission is
expected to land on OCISLY.","crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6
ed2e080df4000697c907","5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90d"],"ca
psules":[],"payloads":["5eb0e4cfb6c3bb0006eeb24e"],"launchpad":"5e9e4501f509094b
a4566f84","flight_number":86,"name":"JCSat 18 / Kacific 1","date_utc":"2019-12-1
7T00:10:00.000Z","date_unix":1576541400,"date_local":"2019-12-16T19:10:00-05:00"
,"date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591809313b
2660","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":tru
e,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7
ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d3bffd8
6e000604b37f"},{"fairings":{"reused":false,"recovery_attempt":true,"recovered":f
alse,"ships":["5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://im
ages2.imgbox.com/36/f5/B08U2KHW_o.png","large":"https://images2.imgbox.com/69/c7
/G444jTFk_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments
/efqnvg/starlink2_launch_campaign_thread","launch":"https://www.reddit.com/r/spa
cex/comments/eko0hr/rspacex_starlink_2_official_launch_discussion","media":"http
s://www.reddit.com/r/spacex/comments/ekybzb/rspacex_starlink2_media_thread_video

s_images_gifs","recovery":"https://www.reddit.com/r/spacex/comments/elgp5k/rspac
ex_starlink_l2_recovery_discussion_updates"},"flickr":{"small":[],"original":["h
ttps://live.staticflickr.com/65535/49346907238_b27507e4d9_o.jpg","https://live.s
taticflickr.com/65535/49347368761_f4e45bd38a_o.jpg","https://live.staticflickr.c
om/65535/49347368406_8f9acf1e2a_o.jpg"]},"presskit":"https://www.spacex.com/site
s/spacex/files/starlink_press_kit_jan2020.pdf","webcast":"https://youtu.be/HwyXo
6T7jC4","youtube_id":"HwyXo6T7jC4","article":"https://spaceflightnow.com/2020/01
/07/spacex-launches-more-starlink-satellites-tests-design-change-for-astronomers
","wikipedia":"https://en.wikipedia.org/wiki/Starlink_(satellite_constellation)"
},"static_fire_date_utc":"2020-01-04T11:45:00.000Z","static_fire_date_unix":1578
138300,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true
,"failures":[],"details":"This mission will launch the second batch of Starlink
version 1.0 satellites, from SLC-40, Cape Canaveral AFS. They are expected to
contribute to the 550 km x 53\xc2\xb0 shell. It is the third Starlink launch
overall. Starlink is a low Earth orbit broadband internet constellation
developed and owned by SpaceX which will eventually consist of nearly 12 000
satellites and will provide low latency internet service to ground terminals
around the world. The booster for this mission is expected to land on OCISLY.","
crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6ed30080df4000697c913","5ea6ed2
e080df4000697c909","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90d"],"capsu
les":[],"payloads":["5eb0e4cfb6c3bb0006eeb24f"],"launchpad":"5e9e4501f509094ba45
66f84","flight_number":87,"name":"Starlink-2","date_utc":"2020-01-07T02:19:00.00
0Z","date_unix":1578363540,"date_local":"2020-01-06T21:19:00-05:00","date_precis
ion":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591833b13b2659","flight
":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_su
ccess":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_u
pdate":true,"tbd":false,"launch_library_id":null,"id":"5eb87d3cffd86e000604b380"
},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]
},"links":{"patch":{"small":"https://images2.imgbox.com/c0/9d/SJYvC4hT_o.png","l
arge":"https://images2.imgbox.com/19/df/IH0nVnSr_o.png"},"reddit":{"campaign":"h
ttps://www.reddit.com/r/spacex/comments/ek7eny/in_flight_abort_test_launch_campa
ign_thread","launch":"https://www.reddit.com/r/spacex/comments/eq24ap/rspacex_in
flight_abort_test_official_launch","media":"https://www.reddit.com/r/spacex/comm
ents/eq7pg4/rspacex_inflight_abort_test_media_thread_videos/","recovery":null},"
flickr":{"small":[],"original":["https://live.staticflickr.com/65535/49421605028
_b7ba890f0e_o.jpg","https://live.staticflickr.com/65535/49422067976_cda2b8f021_o
.jpg","https://live.staticflickr.com/65535/49422067876_13ed519fe6_o.jpg","https:
//live.staticflickr.com/65535/49421604803_0093a5d2cb_o.jpg","https://live.static
flickr.com/65535/49422294602_0d5e7d8e82_o.jpg","https://live.staticflickr.com/65
535/49422068111_2ed613b19b_o.jpg"]},"presskit":"https://www.spacex.com/sites/spa
cex/files/in-flight_abort_test_press_kit.pdf","webcast":"https://youtu.be/mhrkdH
shb3E","youtube_id":"mhrkdHshb3E","article":"https://spaceflightnow.com/2020/01/
19/spacex-aces-final-major-test-before-first-crew-mission","wikipedia":"https://
en.wikipedia.org/wiki/Commercial_Crew_Development"},"static_fire_date_utc":"2020
-01-11T09:42:00.000Z","static_fire_date_unix":1578735720,"net":false,"window":14
400,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"
SpaceX will launch a Crew Dragon capsule from LC-39A, KSC on a fully fueled
Falcon 9 rocket and then trigger the launch escape system during the period of

maximum dynamic pressure. As part of NASA\'a Commercial Crew Integrated Capability program (CCiCap) this test will contribute valuable data to help validate Crew Dragon and its launch abort system. The Crew Dragon will be recovered by GO Searcher after splashdown in the Atlantic Ocean. This flight does not go to orbit. The booster and upper stage are expected to break up following capsule separation and there will be no landing attempt.","crew":[],"ships":["5ea6ed2f080df4000697c90c"],"capsules":["5e9e2c5df359184c9a3b2672"],"payloads":["5eb0e4d0b6c3bb0006eeb250"],"launchpad":"5e9e4502f509094188566f88","flight_number":88,"name":"Crew Dragon In Flight Abort Test","date_utc":"2020-01-19T14:00:00.000Z","date_unix":1579442400,"date_local":"2020-01-19T09:00:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f359182b023b2656","flight":4,"gridfins":false,"legs":false,"reused":true,"landing_attempt":false,"landing_success":null,"landing_type":null,"landpad":null}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d3dffd86e000604b381"},{"fairings":{"reused":false,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.imgbox.com/3a/c6/ueu9Acdh_o.png","large":"https://images2.imgbox.com/1c/55/xNcIOR8Z_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/eof5pr/starlink3_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/eudve3/rspacex_starlink_3_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/evjdws/rspacex_starlink3_media_thread_videos_images_gifs/","recovery":"https://www.reddit.com/r/spacex/comments/evnyij/rspacex_starlink3_recovery_discussion_updates/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/49461673512_f4e01c8b27_o.jpg","https://live.staticflickr.com/65535/49461673792_b1804c2a2b_o.jpg","https://live.staticflickr.com/65535/49461673707_cb7fc4a3a8_o.jpg","https://live.staticflickr.com/65535/49461673552_65cc294f82_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/starlink_press_kit_jan272020.pdf","webcast":"https://youtu.be/1KmBDCiL7MU","youtube_id":"1KmBDCiL7MU","article":"https://spaceflightnow.com/2020/01/29/spacex-boosts-60-more-starlink-satellites-into-orbit-after-weather-delays/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_Starlink"},"static_fire_date_utc":"2020-01-20T13:17:00.000Z","static_fire_date_unix":1579526220,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission will launch the third batch of Starlink version 1.0 satellites, from SLC-40, Cape Canaveral AFS. It is the fourth Starlink launch overall. The satellites will be delivered to low Earth orbit and will spend a few weeks maneuvering to their operational altitude of 550 km. The booster for this mission is expected to land on OCISLY.","crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907","5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90d"],"capsules":[],"payloads":["5eb0e4d0b6c3bb0006eeb251"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":89,"name":"Starlink-3","date_utc":"2020-01-29T14:06:00.000Z","date_unix":1580306760,"date_local":"2020-01-29T09:06:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f35918c0803b265c","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d3fffd86e000604b382"},{"fairings":{"reused":false,"recovery_attempt":true,"recovered":false,"ships":["5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.imgbo

x.com/4f/07/GJWgTmKM_o.png","large":"https://images2.imgbox.com/90/7c/MlD6s04z_o
.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/ex0ilm/sta
rlink4_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/commen
ts/f4d8sg/rspacex_starlink4_official_launch_discussion/","media":"https://www.re
ddit.com/r/spacex/comments/f56mb4/rspacex_starlink4_media_thread_videos_images_g
ifs/","recovery":"https://www.reddit.com/r/spacex/comments/f5es7j/rspacex_starli
nk4_recovery_discussion_updates/"},"flickr":{"small":[],"original":["https://liv
e.staticflickr.com/65535/49549022017_18738a2552_o.jpg","https://live.staticflick
r.com/65535/49548795221_edd6dc7ef6_o.jpg","https://live.staticflickr.com/65535/4
9548795401_93ef80caf5_o.jpg","https://live.staticflickr.com/65535/49549022057_d4
dbd6a492_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/fifth_st
arlink_press_kit.pdf","webcast":"https://youtu.be/8xeX62mLcf8","youtube_id":"8xe
X62mLcf8","article":"https://spaceflightnow.com/2020/02/17/spacex-delivers-more-
starlink-satellites-to-orbit-booster-misses-drone-ship-landing/","wikipedia":"ht
tps://en.wikipedia.org/wiki/SpaceX_Starlink"},"static_fire_date_utc":"2020-02-14
T08:31:00.000Z","static_fire_date_unix":1581669060,"net":false,"window":0,"rocke
t":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This
mission will launch the fourth batch of Starlink version 1.0 satellites, from
SLC-40, Cape Canaveral AFS. It is the fifth Starlink launch overall. The
satellites will be delivered to low Earth orbit and will spend a few weeks
maneuvering to their operational altitude of 550 km. The booster for this
mission is expected to land on OCISLY.","crew":[],"ships":["5ea6ed2e080df4000697
c908","5ea6ed2e080df4000697c907","5ea6ed2f080df4000697c90b","5ea6ed30080df400069
7c913","5ea6ed2f080df4000697c90d"],"capsules":[],"payloads":["5eb0e4d0b6c3bb0006
eeb252"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":90,"name":"Starl
ink-4","date_utc":"2020-02-17T15:05:55.000Z","date_unix":1581951955,"date_local"
:"2020-02-17T10:05:55-05:00","date_precision":"hour","upcoming":false,"cores":[{
"core":"5e9e28a7f3591809313b2660","flight":4,"gridfins":true,"legs":true,"reused
":true,"landing_attempt":true,"landing_success":false,"landing_type":"ASDS","lan
dpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_librar
y_id":null,"id":"5eb87d41ffd86e000604b383"},{"fairings":null,"links":{"patch":{"
small":"https://images2.imgbox.com/9b/93/k1hCBIG8_o.png","large":"https://images
2.imgbox.com/dd/50/KsiuGQL4_o.png"},"reddit":{"campaign":"https://www.reddit.com
/r/spacex/comments/ezn6n0/crs20_launch_campaign_thread","launch":"https://www.re
ddit.com/r/spacex/comments/fe8pcj/rspacex_crs20_official_launch_discussion_updat
es/","media":"https://www.reddit.com/r/spacex/comments/fes64p/rspacex_crs20_medi
a_thread_videos_images_gifs/","recovery":null},"flickr":{"small":[],"original":[
"https://live.staticflickr.com/65535/49635401403_96f9c322dc_o.jpg","https://live
.staticflickr.com/65535/49636202657_e81210a3ca_o.jpg","https://live.staticflickr
.com/65535/49636202572_8831c5a917_o.jpg","https://live.staticflickr.com/65535/49
635401423_e0bef3e82f_o.jpg","https://live.staticflickr.com/65535/49635985086_660
be7062f_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/files/crs-20_mi
ssion_press_kit.pdf","webcast":"https://youtu.be/1MkcWK2PnsU","youtube_id":"1Mkc
WK2PnsU","article":"https://spaceflightnow.com/2020/03/07/late-night-launch-of-
spacex-cargo-ship-marks-end-of-an-era/","wikipedia":"https://en.wikipedia.org/wi
ki/SpaceX_CRS-20"},"static_fire_date_utc":"2020-03-01T10:20:00.000Z","static_fir
e_date_unix":1583058000,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1e
c","success":true,"failures":[],"details":"SpaceX\'s 20th and final Crew

Resupply Mission under the original NASA CRS contract, this mission brings essential supplies to the International Space Station using SpaceX\'s reusable Dragon spacecraft. It is the last scheduled flight of a Dragon 1 capsule. (CRS-21 and up under the new Commercial Resupply Services 2 contract will use Dragon 2.) The external payload for this mission is the Bartolomeo ISS external payload hosting platform. Falcon 9 and Dragon will launch from SLC-40, Cape Canaveral Air Force Station and the booster will land at LZ-1. The mission will be complete with return and recovery of the Dragon capsule and down cargo.","cre
w":[],"ships":[],"capsules":["5e9e2c5cf359185d753b266f"],"payloads":["5eb0e4d0b6
c3bb0006eeb253"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":91,"name
":"CRS-20","date_utc":"2020-03-07T04:50:31.000Z","date_unix":1583556631,"date_lo
cal":"2020-03-06T23:50:31-05:00","date_precision":"hour","upcoming":false,"cores
":[{"core":"5e9e28a7f359187afd3b2662","flight":2,"gridfins":true,"legs":true,"re
used":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","
landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_lib
rary_id":null,"id":"5eb87d42ffd86e000604b384"},{"fairings":{"reused":true,"recov
ery_attempt":true,"recovered":false,"ships":["5ea6ed2e080df4000697c908"]},"links
":{"patch":{"small":"https://images2.imgbox.com/dc/14/DLlaYbmf_o.png","large":"h
ttps://images2.imgbox.com/e4/fd/2NPlCwzs_o.png"},"reddit":{"campaign":"https://w
ww.reddit.com/r/spacex/comments/f8awv0/starlink5_launch_campaign_thread/","launc
h":"https://www.reddit.com/r/spacex/comments/fhymy3/rspacex_starlink_5_official_
launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/fizrn1/rsp
acex_starlink5_media_thread_videos_images_gifs/","recovery":null},"flickr":{"sma
ll":[],"original":["https://live.staticflickr.com/65535/49673373182_93a517e140_o
.jpg","https://live.staticflickr.com/65535/49672551378_fabc17ef6f_o.jpg","https:
//live.staticflickr.com/65535/49672551303_564ce21658_o.jpg"]},"presskit":"https:
//www.spacex.com/sites/spacex/files/sixth_starlink_press_kit.pdf","webcast":"htt
ps://youtu.be/I4sMhHbHYXM","youtube_id":"I4sMhHbHYXM","article":"https://spacefl
ightnow.com/2020/03/18/falcon-9-rocket-overcomes-engine-failure-to-deploy-
starlink-satellites/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"sta
tic_fire_date_utc":"2020-03-13T18:37:00.000Z","static_fire_date_unix":1584124620
,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"fail
ures":[],"details":"The sixth Starlink launch overall and the fifth operational
batch of Starlink satellites will launch into orbit aboard a Falcon 9 rocket.
This mission is expected to deploy all sixty satellites into an elliptical orbit
about fifteen minutes into flight. In the weeks following launch the satellites
are expected to utilize their onboard ion thrusters to raise their orbits to 550
km in three groups of 20, making use of precession rates to separate themselves
into three planes. The booster will land on a drone ship approximately 628 km do
wnrange.","crew":[],"ships":["5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90
d"],"capsules":[],"payloads":["5eb0e4d0b6c3bb0006eeb254"],"launchpad":"5e9e4502f
509094188566f88","flight_number":92,"name":"Starlink-5","date_utc":"2020-03-18T1
2:16:00.000Z","date_unix":1584533760,"date_local":"2020-03-18T08:16:00-04:00","d
ate_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591809c03b265
8","flight":5,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"
landing_success":false,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca
"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d43ffd86e
000604b385"},{"fairings":{"reused":true,"recovery_attempt":false,"recovered":nul

l,"ships":["5ea6ed2e080df4000697c908","5ea6ed2f080df4000697c90d"]},"links":{"pat
ch":{"small":"https://images2.imgbox.com/ef/36/h10Ds3kT_o.png","large":"https://
images2.imgbox.com/ab/12/2cQPNTCZ_o.png"},"reddit":{"campaign":"https://www.redd
it.com/r/spacex/comments/fxkc7k/starlink6_launch_campaign_thread/","launch":"htt
ps://www.reddit.com/r/spacex/comments/g5jmx0/rspacex_starlink_6_official_launch_
discussion/","media":"https://www.reddit.com/r/spacex/comments/g5fqka/rspacex_st
arlink6_media_thread_photographer/","recovery":"https://www.reddit.com/r/spacex/
comments/g6kztd/rspacex_starlink_v1_l6_recovery_discussion/"},"flickr":{"small":
[],"original":["https://live.staticflickr.com/65535/49673373182_93a517e140_o.jpg
","https://live.staticflickr.com/65535/49672551378_fabc17ef6f_o.jpg","https://li
ve.staticflickr.com/65535/49672551303_564ce21658_o.jpg","https://live.staticflic
kr.com/65535/49806771628_fef13c852d_o.jpg","https://live.staticflickr.com/65535/
49807633862_e5abcb41a6_o.jpg"]},"presskit":"https://www.spacex.com/sites/spacex/
files/seventh_starlink_mission_overview.pdf","webcast":"https://youtu.be/wSge0I7
pwFI","youtube_id":"wSge0I7pwFI","article":"https://spaceflightnow.com/2020/04/2
2/spacexs-starlink-network-surpasses-400-satellite-mark-after-successful-launch/
","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":"
2020-04-17T11:48:00.000Z","static_fire_date_unix":1587687810,"net":false,"window
":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"
This mission will launch the sixth batch of operational Starlink satellites,
which are expected to be version 1.0, from SLC-40, Cape Canaveral AFS. It is the
seventh Starlink launch overall. The satellites will be delivered to low Earth
orbit and will spend a few weeks maneuvering to their operational altitude of
550 km. The booster for this mission is expected to land on OCISLY.","crew":[],"
ships":["5ea6ed30080df4000697c913","5ea6ed2e080df4000697c908","5ea6ed2e080df4000
697c907","5ee68c683c228f36bd5809b5"],"capsules":[],"payloads":["5eb0e4d1b6c3bb00
06eeb255"],"launchpad":"5e9e4502f509094188566f88","flight_number":93,"name":"Sta
rlink-6","date_utc":"2020-04-22T19:30:00.000Z","date_unix":1587583800,"date_loca
l":"2020-04-22T15:30:00-04:00","date_precision":"hour","upcoming":false,"cores":
[{"core":"5e9e28a6f35918c0803b265c","flight":4,"gridfins":true,"legs":true,"reus
ed":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","la
ndpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_libra
ry_id":null,"id":"5eb87d44ffd86e000604b386"},{"fairings":null,"links":{"patch":{
"small":"https://images2.imgbox.com/48/a8/LTqq8OrE_o.png","large":"https://image
s2.imgbox.com/e3/b7/DeT7QTkx_o.png"},"reddit":{"campaign":"https://www.reddit.co
m/r/spacex/comments/fjf6rr/dm2_launch_campaign_thread/","launch":"https://www.re
ddit.com/r/spacex/comments/glwz6n/rspacex_cctcap_demonstration_mission_2_general
","media":"https://www.reddit.com/r/spacex/comments/gp1gf5/rspacex_dm2_media_thr
ead_photographer_contest/","recovery":"https://www.reddit.com/r/spacex/comments/
gu5gkd/cctcap_demonstration_mission_2_stage_1_recovery/"},"flickr":{"small":[],"
original":["https://live.staticflickr.com/65535/49927519643_b43c6d4c44_o.jpg","h
ttps://live.staticflickr.com/65535/49927519588_8a39a3994f_o.jpg","https://live.s
taticflickr.com/65535/49928343022_6fb33cbd9c_o.jpg","https://live.staticflickr.c
om/65535/49934168858_cacb00d790_o.jpg","https://live.staticflickr.com/65535/4993
4682271_fd6a31becc_o.jpg","https://live.staticflickr.com/65535/49956109906_f88d8
15772_o.jpg","https://live.staticflickr.com/65535/49956109706_cffa847208_o.jpg",
"https://live.staticflickr.com/65535/49956109671_859b323ede_o.jpg","https://live
.staticflickr.com/65535/49955609618_4cca01d581_o.jpg","https://live.staticflickr

.com/65535/49956396622_975c116b71_o.jpg","https://live.staticflickr.com/65535/49
955609378_9b77e5c771_o.jpg","https://live.staticflickr.com/65535/49956396262_ef4
1c1d9b0_o.jpg"]},"presskit":"https://www.nasa.gov/sites/default/files/atoms/file
s/commercialcrew_press_kit.pdf","webcast":"https://youtu.be/xY96v0OIcK4","youtub
e_id":"xY96v0OIcK4","article":"https://spaceflightnow.com/2020/05/30/nasa-
astronauts-launch-from-us-soil-for-first-time-in-nine-years/","wikipedia":"https
://en.wikipedia.org/wiki/Crew_Dragon_Demo-2"},"static_fire_date_utc":"2020-05-22
T17:39:00.000Z","static_fire_date_unix":1590169140,"net":false,"window":0,"rocke
t":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX
will launch the second demonstration mission of its Crew Dragon vehicle as part
of NASA\'s Commercial Crew Transportation Capability Program (CCtCap), carrying
two NASA astronauts to the International Space Station. Barring unexpected
developments, this mission will be the first crewed flight to launch from the
United States since the end of the Space Shuttle program in 2011. DM-2
demonstrates the Falcon 9 and Crew Dragon\'s ability to safely transport crew to
the space station and back to Earth and it is the last major milestone for
certification of Crew Dragon. Initially the mission duration was planned to be
no longer than two weeks, however NASA has been considering an extension to as
much as six weeks or three months. The astronauts have been undergoing
additional training for the possible longer mission.","crew":["5ebf1a6e23a9a6000
6e03a7a","5ebf1b7323a9a60006e03a7b"],"ships":["5ea6ed30080df4000697c913","5ea6ed
2f080df4000697c90b","5ea6ed2f080df4000697c90c","5ea6ed2e080df4000697c909","5ea6e
d2f080df4000697c90d"],"capsules":["5e9e2c5df359188aba3b2676"],"payloads":["5eb0e
4d1b6c3bb0006eeb257"],"launchpad":"5e9e4502f509094188566f88","flight_number":94,
"name":"CCtCap Demo Mission 2","date_utc":"2020-05-30T19:22:00.000Z","date_unix"
:1590866520,"date_local":"2020-05-30T15:22:00-04:00","date_precision":"hour","up
coming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":1,"gridfins":
true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"l
anding_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"t
bd":false,"launch_library_id":null,"id":"5eb87d46ffd86e000604b388"},{"fairings":
{"reused":false,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed2e080df
4000697c908","5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://ima
ges2.imgbox.com/14/8a/x2EqeeM4_o.png","large":"https://images2.imgbox.com/f4/9a/
sUj3vEI3_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/
gamcbr/starlink7_launch_campaign_thread/","launch":"https://www.reddit.com/r/spa
cex/comments/gkfe30/rspacex_starlink_7_official_launch_discussion/","media":null
,"recovery":null},"flickr":{"small":[],"original":["https://live.staticflickr.co
m/65535/49971196871_a0462d0084_o.jpg","https://live.staticflickr.com/65535/49970
682603_e6333945ee_o.jpg"]},"presskit":"https://spacextimemachine.com/assets/pres
s_kits/185.pdf","webcast":"https://youtu.be/y4xBFHjkUvw","youtube_id":"y4xBFHjkU
vw","article":"https://spaceflightnow.com/2020/06/04/spacex-sets-new-mark-in-
rocket-reuse-10-years-after-first-falcon-9-launch/","wikipedia":"https://en.wiki
pedia.org/wiki/Starlink"},"static_fire_date_utc":"2020-05-13T11:11:00.000Z","sta
tic_fire_date_unix":1589368260,"net":false,"window":0,"rocket":"5e9d0d95eda69973
a809d1ec","success":true,"failures":[],"details":"This mission will launch the
seventh batch of operational Starlink satellites, which are expected to be
version 1.0, from SLC-40, Cape Canaveral AFS. It is the eighth Starlink launch
overall. The satellites will be delivered to low Earth orbit and will spend a

few weeks maneuvering to their operational altitude of 550 km. The booster for this mission is expected to land on JRTI on its first mission since arriving at Port Canaveral.","crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907","5ee68c683c228f36bd5809b5"],"capsules":[],"payloads":["5eb0e4d1b6c3bb0006eeb256"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":95,"name":"Starlink-7","date_utc":"2020-06-04T01:25:00.000Z","date_unix":1591233900,"date_local":"2020-06-03T21:25:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591833b13b2659","flight":5,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d45ffd86e000604b387"},{"fairings":{"reused":true,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://images2.imgbox.com/f2/ab/jxHngBd5_o.png","large":"https://images2.imgbox.com/ba/aa/6rusTkQw_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/gwbr4t/starlink8_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/h7gqlc/rspacex_starlink_8_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/h842qk/rspacex_starlink8_media_thread_photographer/","recovery":"https://www.reddit.com/r/spacex/comments/h8sx6q/starlink8_recovery_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/50009748327_93e52a451f_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/8riKQXChPGg","youtube_id":"8riKQXChPGg","article":"https://spaceflightnow.com/2020/06/13/starlink-satellite-deployments-continue-with-successful-falcon-9-launch/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission will launch the eighth batch of operational Starlink satellites, which are expected to be version 1.0, from SLC-40, Cape Canaveral AFS. It is the ninth Starlink launch overall. The satellites will be delivered to low Earth orbit and will spend a few weeks maneuvering to their operational altitude of 550 km. This mission is includes rideshare payloads, SkySats 16-18, on top of the Starlink stack. The booster for this mission is expected to land an ASDS.","crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907","5ea6ed2f080df4000697c90b"],"capsules":[],"payloads":["5eb0e4d1b6c3bb0006eeb258"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":96,"name":"Starlink-8 & SkySat 16-18","date_utc":"2020-06-13T09:21:00.000Z","date_unix":1592040060,"date_local":"2020-06-13T05:21:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f359187afd3b2662","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d46ffd86e000604b389"},{"fairings":{"reused":null,"recovery_attempt":true,"recovered":true,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/1f/83/TEXnegNL_o.png","large":"https://images2.imgbox.com/14/95/yd34FANN_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/gzeshn/gps_iii_sv03_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/hi5hit/rspacex_gps_iii_sv03_columbus_official_launch/","media":"https://www.reddit.com/r/spacex/comments/hiq0vd/rspacex_gps_iii_sv03_media_thread_photographer/","recovery":"https://www.reddit.com/r/spacex/comments/hjendd/gps_iii_svo3_recovery_thread/"},"flick

r":{"small":[],"original":["https://live.staticflickr.com/65535/50065947228_804e
fe6117_o.jpg","https://live.staticflickr.com/65535/50065947263_e1a6ea1e22_o.jpg"
,"https://live.staticflickr.com/65535/50065947218_88ef29951a_o.jpg","https://liv
e.staticflickr.com/65535/50066762457_8c92090037_o.jpg","https://live.staticflick
r.com/65535/50085443052_9f6b843a02_o.jpg","https://live.staticflickr.com/65535/5
0085211776_588bed76f0_o.jpg","https://live.staticflickr.com/65535/50084627433_89
d8915596_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/6zr0nfG3Xy4","yout
ube_id":"6zr0nfG3Xy4","article":"https://spaceflightnow.com/2020/06/30/spacex-
launches-its-first-mission-for-u-s-space-force/","wikipedia":"https://en.wikiped
ia.org/wiki/GPS_Block_III"},"static_fire_date_utc":"2020-06-25T09:48:00.000Z","s
tatic_fire_date_unix":1593078480,"net":false,"window":0,"rocket":"5e9d0d95eda699
73a809d1ec","success":true,"failures":[],"details":"SpaceX will launch GPS Block
III Space Vehicle 03 from SLC-40, Cape Canaveral AFS aboard a Falcon 9. GPS III
is owned and operated by the US Air Force and produced by Lockheed Martin. This
is the third GPS III satellite and the second launched by SpaceX. The satellite
will be delivered into a MEO transfer orbit. The booster for this mission is
expected to land on an ASDS.","crew":[],"ships":[],"capsules":[],"payloads":["5e
b0e4d2b6c3bb0006eeb25c"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":
97,"name":"GPS III SV03 (Columbus)","date_utc":"2020-06-30T19:55:00.000Z","date_
unix":1593546900,"date_local":"2020-06-30T15:55:00-04:00","date_precision":"hour
","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a826c","flight":1,"gridf
ins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":tr
ue,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":tr
ue,"tbd":false,"launch_library_id":null,"id":"5eb87d4affd86e000604b38b"},{"fairi
ngs":{"reused":null,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e0
80df4000697c908","5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https:/
/images2.imgbox.com/c3/19/YmxxZMLw_o.png","large":"https://images2.imgbox.com/d4
/0b/QdfjLsV3_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comme
nts/hkbhqo/anasisii_launch_campaign_thread","launch":"https://www.reddit.com/r/s
pacex/comments/hu6sci/rspacex_anasisii_official_launch_discussion/","media":"htt
ps://www.reddit.com/r/spacex/comments/hun4pv/rspacex_anasisii_media_thread_photo
grapher_contest/","recovery":"https://www.reddit.com/r/spacex/comments/hvgjk9/an
asisii_recovery_thread/"},"flickr":{"small":[],"original":["https://live.staticf
lickr.com/65535/50136967628_eda99b6353_o.jpg","https://live.staticflickr.com/655
35/50137510881_4618ba6c84_o.jpg","https://live.staticflickr.com/65535/5013696755
3_e1ac93fab0_o.jpg","https://live.staticflickr.com/65535/50136967658_9347d7c575_
o.jpg"]},"presskit":null,"webcast":"https://youtu.be/TshvZlQ7le8","youtube_id":"
TshvZlQ7le8","article":"https://spaceflightnow.com/2020/07/20/spacex-delivers-
south-koreas-first-military-satellite-into-on-target-orbit/","wikipedia":null},"
static_fire_date_utc":"2020-07-11T17:58:00.000Z","static_fire_date_unix":1594490
280,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"f
ailures":[],"details":"SpaceX will launch ANASIS-II, a South Korean
geostationary military communication satellite from LC-39A, Kennedy Space
Center. It will be South Korea\'s first dedicated military communications
satellite. Falcon 9 will deliver the satellite to a geostationary transfer
orbit. The booster is expected to land downrange on an ASDS.","crew":[],"ships":
["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907","5ea6ed2f080df4000697c90b
"],"capsules":[],"payloads":["5eb0e4d2b6c3bb0006eeb25b"],"launchpad":"5e9e4501f5

09094ba4566f84","flight_number":98,"name":"ANASIS-II","date_utc":"2020-07-20T21:30:00.000Z","date_unix":1595280600,"date_local":"2020-07-20T17:30:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d50ffd86e000604b394"},{"fairings":{"reused":null,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://images2.imgbox.com/ac/ad/FhIfqkTq_o.png","large":"https://images2.imgbox.com/2f/4f/Mk46ah9f_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/h8mold/starlink9_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/i4ozw3/rspacex_starlink9_launch_discussion_updates/","media":"https://www.reddit.com/r/spacex/comments/hg499n/rspacex_starlink9_media_thread_photographer/","recovery":"https://www.reddit.com/r/spacex/comments/i5smhk/starlink_9blacksky_recovery_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/50198901143_0bb53a499e_o.jpg","https://live.staticflickr.com/65535/50199448011_35d0e9c8bf_o.jpg","https://live.staticflickr.com/65535/50199715777_eca6f41d25_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/KU6KogxG5BE","youtube_id":"KU6KogxG5BE","article":"https://spaceflightnow.com/2020/08/07/spacex-closes-out-busy-week-with-launch-of-more-starlink-satellites/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":"2020-06-24T18:18:00.000Z","static_fire_date_unix":1593022680,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission will launch the ninth batch of operational Starlink satellites, which are expected to be version 1.0, from LC-39A, Kennedy Space Center. It is the tenth Starlink launch overall. The satellites will be delivered to low Earth orbit and will spend a few weeks maneuvering to their operational altitude of 550 km. This mission is includes a rideshare of two BlackSky satellites on top of the Starlink stack. The booster for this mission is expected to land an ASDS.","crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907","5ea6ed30080df4000697c913","5ee68c683c228f36bd5809b5"],"capsules":[],"payloads":["5ed9858b1f30554030d45c3e","5ee522e32f1f3d474c758123"],"launchpad":"5e9e4502f509094188566f88","flight_number":99,"name":"Starlink-9 (v1.0) & BlackSky Global 5-6","date_utc":"2020-08-07T05:12:00.000Z","date_unix":1596777120,"date_local":"2020-08-07T01:12:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f35918c0803b265c","flight":5,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5ed9819a1f30554030d45c29"},{"fairings":{"reused":true,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://images2.imgbox.com/64/b3/CIqV9XMZ_o.png","large":"https://images2.imgbox.com/17/e3/ZxklwOkr_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/i63bst/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/ibacxz/rspacex_starlink10_launch_discussion_updates/","media":"https://www.reddit.com/r/spacex/comments/ic46fw/starlink10_recovery_updates_discussion_thread/","recovery":"https://www.reddit.com/r/spacex/comments/ic46fw/starlink10_recovery_updates_discussion_thread/"},"flickr":{"small":[],"ori

ginal":["https://live.staticflickr.com/65535/50241845831_9a7412e81d_o.jpg","https://live.staticflickr.com/65535/50242057637_ea4f98d517_o.jpg","https://live.staticflickr.com/65535/50242057682_6084977bf7_o.jpg","https://live.staticflickr.com/65535/50242057677_e96fbd46e6_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/jTMJK7wb0rM","youtube_id":"jTMJK7wb0rM","article":"https://spaceflightnow.com/2020/08/18/spacex-adds-more-satellites-to-ever-growing-starlink-network/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":"2020-08-17T10:00:00.000Z","static_fire_date_unix":1597658400,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission will launch the tenth batch of operational Starlink satellites, which are expected to be version 1.0, from LC-39A, Kennedy Space Center. It is the eleventh Starlink launch overall. The satellites will be delivered to low Earth orbit and will spend a few weeks maneuvering to their operational altitude of 550 km. This mission is includes rideshare payloads, SkySats 19-21, on top of the Starlink stack. The booster for this mission is expected to land on an ASDS. ","crew":[],"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907","5ee68c683c228f36bd5809b5","5ea6ed2f080df4000697c90b","5ea6ed30080df4000697c913"],"capsules":[],"payloads":["5ed9859f1f30554030d45c3f"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":100,"name":"Starlink-10 (v1.0) & SkySat 19-21","date_utc":"2020-08-18T14:31:00.000Z","date_unix":1597761060,"date_local":"2020-08-18T10:31:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591833b13b2659","flight":6,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5ed981d91f30554030d45c2a"},{"fairings":{"reused":null,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://images2.imgbox.com/ff/20/EcENG8MX_o.png","large":"https://images2.imgbox.com/97/0a/h6UEgv3Y_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/ffoz5r/saocom_1b_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/iiwlch/rspacex_saocom_1b_launch_discussion_updates_thread/","media":"https://www.reddit.com/r/spacex/comments/ij8mxf/rspacex_starlink11_saocom_1b_media_thread/","recovery":null},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/50291453997_aa715950e7_o.jpg","https://live.staticflickr.com/65535/50291306296_85b6ff12a2_o.jpg","https://live.staticflickr.com/65535/50291306061_2f9e350a85_o.jpg","https://live.staticflickr.com/65535/50291306216_4fd44c261e_o.jpg","https://live.staticflickr.com/65535/50291306346_136d3dce7b_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/P-gLOsDjE3E","youtube_id":"P-gLOsDjE3E","article":"https://spaceflightnow.com/2020/08/31/spacex-launches-first-polar-orbit-mission-from-florida-in-decades/","wikipedia":"https://en.wikipedia.org/wiki/SAOCOM"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX\'s Falcon 9 will launch the second of the two satellite SAOCOM 1 satellites into a sun-synchronous polar orbit from SLC-40, Cape Canaveral AFS. SAOCOM 1B is a synthetic aperture radar Earth observation satellite to support disaster management. The SAOCOM spacecraft are operated by CONAE, the Argentinian National Space Activities Commission, and are built by INVAP. This mission is also expected to include rideshare payloads Sequoia, and GNOMES-1. This will be the first polar launch from the Space Coast

in 60 years. The launch azimuth will be southward and the booster will land at L
Z-1.","crew":[],"ships":["5ea6ed2e080df4000697c907"],"capsules":[],"payloads":["
5eb0e4d1b6c3bb0006eeb259"],"launchpad":"5e9e4501f509094ba4566f84","flight_number
":101,"name":"SAOCOM 1B, GNOMES-1, Tyvak-0172","date_utc":"2020-08-30T23:18:00.0
00Z","date_unix":1598829480,"date_local":"2020-08-30T19:18:00-04:00","date_preci
sion":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f359187afd3b2662","fligh
t":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_s
uccess":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_
update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d47ffd86e000604b38a
"},{"fairings":{"reused":null,"recovery_attempt":true,"recovered":null,"ships":[
"5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.imgbox.c
om/38/09/yStzn5Er_o.png","large":"https://images2.imgbox.com/83/11/smudwRMI_o.pn
g"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/i63bst/starli
nk_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r
/spacex/comments/iip8h3/rspacex_starlink11_launch_discussion_updates/","media":"
https://www.reddit.com/r/spacex/comments/ij8mxf/rspacex_starlink11_saocom_1b_med
ia_thread/","recovery":null},"flickr":{"small":[],"original":[]},"presskit":null
,"webcast":"https://youtu.be/_j4xR7LMCGY","youtube_id":"_j4xR7LMCGY","article":n
ull,"wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc"
:null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95e
da69973a809d1ec","success":true,"failures":[],"details":"This mission will
launch the eleventh batch of operational Starlink satellites, which are expected
to be version 1.0, from SLC-40, Cape Canaveral Air Force Station. It is the
twelfth Starlink launch overall. The satellites will be delivered to low Earth
orbit and will spend a few weeks maneuvering to their operational altitude of
550 km. The booster for this mission is expected to land on an ASDS.","crew":[],
"ships":["5ea6ed2e080df4000697c908","5ea6ed2f080df4000697c90b","5ee68c683c228f36
bd5809b5"],"capsules":[],"payloads":["5ef6a4600059c33cee4a829e"],"launchpad":"5e
9e4502f509094188566f88","flight_number":102,"name":"Starlink-11 (v1.0)","date_ut
c":"2020-09-03T12:46:00.000Z","date_unix":1599137160,"date_local":"2020-09-03T08
:46:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5ef670f
10059c33cee4a826c","flight":2,"gridfins":true,"legs":true,"reused":true,"landing
_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e30323
83ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":
"5ef6a1e90059c33cee4a828a"},{"fairings":{"reused":true,"recovery_attempt":true,"
recovered":true,"ships":["5ea6ed2e080df4000697c907","5ea6ed2e080df4000697c908"]}
,"links":{"patch":{"small":"https://images2.imgbox.com/3b/c3/kd7H9FTQ_o.png","la
rge":"https://images2.imgbox.com/79/1f/hBdiixIW_o.png"},"reddit":{"campaign":"ht
tps://www.reddit.com/r/spacex/comments/i63bst/starlink_general_discussion_and_de
ployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/iu0vtg/rspa
cex_starlink12_official_launch_discussion/","media":"https://www.reddit.com/r/sp
acex/comments/iudifm/rspacex_starlink12_media_thread_photographer/","recovery":n
ull},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/50428
228397_6151927733_o.jpg","https://live.staticflickr.com/65535/50427359318_67b339
7892_o.jpg","https://live.staticflickr.com/65535/50428050591_36defbe958_o.jpg"]}
,"presskit":null,"webcast":"https://youtu.be/UZkaE_9zwQQ","youtube_id":"UZkaE_9z
wQQ","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"stati
c_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":0,"rocke

t":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This
mission will launch the twelfth batch of operational Starlink satellites, which
are expected to be version 1.0, from SLC-40, Cape Canaveral Air Force Station.
It is the thirteenth Starlink launch overall. The satellites will be delivered
to low Earth orbit and will spend a few weeks maneuvering to their operational
altitude of 550 km. The booster for this mission is expected to land on an ASDS.
","crew":[],"ships":["5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c910","5ea6
ed2e080df4000697c907","5ea6ed2e080df4000697c908","5ea6ed30080df4000697c913"],"ca
psules":[],"payloads":["5ef6a48e0059c33cee4a829f"],"launchpad":"5e9e4502f5090941
88566f88","flight_number":103,"name":"Starlink-12 (v1.0)","date_utc":"2020-10-06
T11:29:00.000Z","date_unix":1601983740,"date_local":"2020-10-06T07:29:00-04:00",
"date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23b2
663","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true
,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7c
a"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5ef6a2090059c
33cee4a828b"},{"fairings":{"reused":true,"recovery_attempt":true,"recovered":nul
l,"ships":["5ea6ed2e080df4000697c907","5ea6ed2e080df4000697c908"]},"links":{"pat
ch":{"small":"https://images2.imgbox.com/1d/5c/Eg5XilXY_o.png","large":"https://
images2.imgbox.com/42/26/UbDMepRy_o.png"},"reddit":{"campaign":"https://www.redd
it.com/r/spacex/comments/i63bst/starlink_general_discussion_and_deployment_threa
d/","launch":"https://www.reddit.com/r/spacex/comments/jctqq9/rspacex_starlink13
_official_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/
jdgsm2/rspacex_starlink13_media_thread_photographer/","recovery":"https://www.re
ddit.com/r/spacex/comments/jdgpgl/starlink13_recovery_updates_discussion_thread/
"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/5050080
4918_eb1187e1b2_o.jpg","https://live.staticflickr.com/65535/50501674637_f16f5287
28_o.jpg","https://live.staticflickr.com/65535/50501515611_2a3753bed1_o.jpg","ht
tps://live.staticflickr.com/65535/50501674632_0d5276b1b5_o.jpg"]},"presskit":nul
l,"webcast":"https://youtu.be/UM8CDDAmp98","youtube_id":"UM8CDDAmp98","article":
"https://spaceflightnow.com/2020/10/18/spacex-launches-another-batch-of-
starlink-satellites/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"sta
tic_fire_date_utc":"2020-10-17T05:23:00.000Z","static_fire_date_unix":1602912180
,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"f
ailures":[],"details":"This mission will launch the thirteenth batch of
operational Starlink satellites, which are expected to be version 1.0, from
LC-39A, Kennedy Space Center. It is the fourteenth Starlink launch overall. The
satellites will be delivered to low Earth orbit and will spend a few weeks
maneuvering to their operational altitude of 550 km. The booster for this
mission is expected to land on an ASDS.","crew":[],"ships":["5ea6ed30080df400069
7c913","5ea6ed2f080df4000697c90b","5ee68c683c228f36bd5809b5","5ea6ed2e080df40006
97c907","5ea6ed2e080df4000697c908"],"capsules":[],"payloads":["5ef6a4d50059c33ce
e4a82a1"],"launchpad":"5e9e4502f509094188566f88","flight_number":104,"name":"Sta
rlink-13 (v1.0)","date_utc":"2020-10-18T12:25:00.000Z","date_unix":1603023900,"d
ate_local":"2020-10-18T08:25:00-04:00","date_precision":"hour","upcoming":false,
"cores":[{"core":"5e9e28a6f35918c0803b265c","flight":6,"gridfins":true,"legs":tr
ue,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"A
SDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"laun
ch_library_id":null,"id":"5ef6a2bf0059c33cee4a828c"},{"fairings":{"reused":false

,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed2e080df4000697c907","5
ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.imgbox.com
/65/e5/GS6w5gPI_o.png","large":"https://images2.imgbox.com/21/50/iOx9Tpuy_o.png"
},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/i63bst/starlink
_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/s
pacex/comments/jetth8/rspacex_starlink14_official_launch_discussion/","media":"h
ttps://www.reddit.com/r/spacex/comments/jhcwun/rspacex_starlink14_media_thread_p
hotographer/","recovery":null},"flickr":{"small":[],"original":[]},"presskit":nu
ll,"webcast":"https://youtu.be/2gbVgTxLgN0","youtube_id":"2gbVgTxLgN0","article"
:"https://spaceflightnow.com/2020/10/24/spacex-adds-another-60-satellites-to-
starlink-network/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static
_fire_date_utc":"2020-10-21T12:55:00.000Z","static_fire_date_unix":1603284900,"n
et":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"fail
ures":[],"details":"This mission will launch the fourteenth batch of operational
Starlink satellites, which are expected to be version 1.0, from SLC-40, Kennedy
Space Center. It is the fifteenth Starlink launch overall. The satellites will
be delivered to low Earth orbit and will spend a few weeks maneuvering to their
operational altitude of 550 km. The booster for this mission is expected to land
on JRTI.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed2f080df4000697c90
b","5ea6ed2e080df4000697c907","5ea6ed2e080df4000697c908"],"capsules":[],"payload
s":["5ef6a4ea0059c33cee4a82a2"],"launchpad":"5e9e4501f509094ba4566f84","flight_n
umber":105,"name":"Starlink-14 (v1.0)","date_utc":"2020-10-24T15:31:00.000Z","da
te_unix":1603553460,"date_local":"2020-10-24T11:31:00-04:00","date_precision":"h
our","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a826c","flight":3,"gr
idfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":
true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":
true,"tbd":false,"launch_library_id":null,"id":"5ef6a2e70059c33cee4a8293"},{"fai
rings":{"reused":null,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed2
e080df4000697c907"]},"links":{"patch":{"small":"https://images2.imgbox.com/5e/b7
/Kn4Vn6nM_o.png","large":"https://images2.imgbox.com/c8/f5/tRqtdHD6_o.png"},"red
dit":{"campaign":"https://www.reddit.com/r/spacex/comments/io0swm/gps_iii_sv04_l
aunch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/jobxn
2/rspacex_gps_iii_sv04_sacagawea_official_launch/","media":null,"recovery":null}
,"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/506118655
11_2299e11860_o.jpg","https://live.staticflickr.com/65535/50611118958_448d239fe1
_o.jpg","https://live.staticflickr.com/65535/50611979827_48811d2ea6_o.jpg"]},"pr
esskit":null,"webcast":"https://youtu.be/wufXF5YKR1M","youtube_id":"wufXF5YKR1M"
,"article":"https://spaceflightnow.com/2020/11/06/spacex-launches-gps-
navigation-satellite-from-cape-canaveral/","wikipedia":"https://en.wikipedia.org
/wiki/GPS_Block_III"},"static_fire_date_utc":"2020-09-25T05:42:00.000Z","static_
fire_date_unix":1601012520,"net":false,"window":null,"rocket":"5e9d0d95eda69973a
809d1ec","success":true,"failures":[],"details":"SpaceX will launch GPS Block
III Space Vehicle 04 from SLC-40, Cape Canaveral AFS aboard a Falcon 9. GPS III
is owned and operated by the US Air Force and produced by Lockheed Martin. This
will be the fourth GPS III satellite launched and the third launched by SpaceX.
The satellite will be delivered into a MEO transfer orbit. The booster for this
mission will land on an ASDS.","crew":[],"ships":["5ea6ed30080df4000697c913","5e
e68c683c228f36bd5809b5","5ea6ed2e080df4000697c907"],"capsules":[],"payloads":["5

eb0e4d2b6c3bb0006eeb25e"],"launchpad":"5e9e4501f509094ba4566f84","flight_number"
:106,"name":"GPS III SV04 (Sacagawea)","date_utc":"2020-11-05T23:24:00.000Z","da
te_unix":1604618640,"date_local":"2020-11-05T18:24:00-05:00","date_precision":"h
our","upcoming":false,"cores":[{"core":"5f57c5440622a633027900a0","flight":1,"gr
idfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success"
:true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update"
:true,"tbd":false,"launch_library_id":null,"id":"5eb87d4cffd86e000604b38d"},{"fa
irings":null,"links":{"patch":{"small":"https://images2.imgbox.com/98/cc/UJd0SS7
3_o.png","large":"https://images2.imgbox.com/03/3d/LzQWXPfy_o.png"},"reddit":{"c
ampaign":"https://www.reddit.com/r/spacex/comments/iwb8bl/crew1_launch_campaign_
thread/","launch":"https://www.reddit.com/r/spacex/comments/ju7fxv/rspacex_crew1
_official_launch_coast_docking/","media":"https://www.reddit.com/r/spacex/commen
ts/judv0r/rspacex_crew1_media_thread_photographer_contest/","recovery":null},"fl
ickr":{"small":[],"original":["https://live.staticflickr.com/65535/50618376646_8
f52c31fc4_o.jpg","https://live.staticflickr.com/65535/50618376731_43ddaab1b8_o.j
pg","https://live.staticflickr.com/65535/50618376671_ba4e60af7c_o.jpg","https://
live.staticflickr.com/65535/50618376351_ecfdee4ab2_o.jpg","https://live.staticfl
ickr.com/65535/50618727917_01e579c4d9_o.jpg","https://live.staticflickr.com/6553
5/50618355216_2872d1fe98_o.jpg","https://live.staticflickr.com/65535/50618354801
_ff3e722884_o.jpg","https://live.staticflickr.com/65535/50618463487_41642939a4_o
.jpg","https://live.staticflickr.com/65535/50617619613_5630422345_o.jpg","https:
//live.staticflickr.com/65535/50617619668_d680d7319c_o.jpg","https://live.static
flickr.com/65535/50617625523_a7484e0abf_o.jpg","https://live.staticflickr.com/65
535/50618469202_fa86f88ab3_o.jpg","https://live.staticflickr.com/65535/506176251
83_8554412cee_o.jpg","https://live.staticflickr.com/65535/50618470472_fb8e6507d7
_o.jpg","https://live.staticflickr.com/65535/50617626838_c0c71de1f7_o.jpg","http
s://live.staticflickr.com/65535/50617626738_aa3997aaea_o.jpg","https://live.stat
icflickr.com/65535/50617626408_fb0bba0f89_o.jpg","https://live.staticflickr.com/
65535/51158778650_9b8d555c1e_o.jpg","https://live.staticflickr.com/65535/5115845
8619_9b74f6a3d0_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/bnChQbxLkkI
","youtube_id":"bnChQbxLkkI","article":"https://spaceflightnow.com/2020/11/16/as
tronauts-ride-spacex-crew-capsule-in-landmark-launch-for-commercial-spaceflight/
","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_Crew-1"},"static_fire_date_u
tc":"2020-11-11T16:17:00.000Z","static_fire_date_unix":1605111420,"net":false,"w
indow":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"detai
ls":"SpaceX will launch the first operational mission of its Crew Dragon vehicle
as part of NASA\'s Commercial Crew Transportation Capability Program (CCtCap),
carrying 3 NASA astronauts and 1 JAXA astronaut to the International Space
Station. This mission will be the second crewed flight to launch from the United
States since the end of the Space Shuttle program in 2011.","crew":["5f7f1543bf3
2c864a529b23e","5f7f158bbf32c864a529b23f","5f7f15d5bf32c864a529b240","5f7f1614bf
32c864a529b241"],"ships":["5ea6ed2f080df4000697c910","5ee68c683c228f36bd5809b5",
"5ea6ed2f080df4000697c90c","5ea6ed2e080df4000697c909","5ea6ed2f080df4000697c90b"
],"capsules":["5f6f99fddcfdf403df379709"],"payloads":["5eb0e4d2b6c3bb0006eeb25f"
],"launchpad":"5e9e4502f509094188566f88","flight_number":107,"name":"Crew-1","da
te_utc":"2020-11-16T00:27:00.000Z","date_unix":1605486420,"date_local":"2020-11-
15T19:27:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f
57c53d0622a6330279009f","flight":1,"gridfins":true,"legs":true,"reused":false,"l

anding_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9
e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null
,"id":"5eb87d4dffd86e000604b38e"},{"fairings":{"reused":null,"recovery_attempt":
null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.img
box.com/96/40/667HXq7w_o.png","large":"https://images2.imgbox.com/26/73/pypHBlGD
_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jkk93v/s
entinel6_michael_freilich_launch_campaign_thread/","launch":"https://www.reddit.
com/r/spacex/comments/jxsche/rspacex_sentinel6_official_launch_discussion/","med
ia":"https://www.reddit.com/r/spacex/comments/jyd67q/rspacex_sentinel6_media_thr
ead_photographer/","recovery":null},"flickr":{"small":[],"original":["https://li
ve.staticflickr.com/65535/50630802488_8cc373728e_o.jpg","https://live.staticflic
kr.com/65535/50631642722_3af8131c6f_o.jpg","https://live.staticflickr.com/65535/
50631544171_66bd43eaa9_o.jpg","https://live.staticflickr.com/65535/50631543966_e
8035d5cca_o.jpg","https://live.staticflickr.com/65535/50631643257_c214ceee7b_o.j
pg","https://live.staticflickr.com/65535/50631643917_cb7db291d0_o.jpg"]},"pressk
it":null,"webcast":"https://youtu.be/aVFPzTDCihQ","youtube_id":"aVFPzTDCihQ","ar
ticle":"https://spaceflightnow.com/2020/11/21/international-satellite-launches-
to-extend-measurements-of-sea-level-rise/","wikipedia":"https://en.wikipedia.org
/wiki/Copernicus_Sentinel-6"},"static_fire_date_utc":"2020-11-17T13:17:00.000Z",
"static_fire_date_unix":1605619020,"net":false,"window":null,"rocket":"5e9d0d95e
da69973a809d1ec","success":true,"failures":[],"details":"SpaceX will launch
Sentinel-6 Michael Freilich into low Earth orbit for NASA, NOAA, ESA, and the
European Organization for the Exploitation of Meteorological Satellites aboard a
Falcon 9 from SLC-4E, Vandenberg Air Force Station. Sentinel-6(A) is an ocean
observation satellite providing radar ocean surface altimetry data and also
atmospheric temperature profiles as a secondary mission. The booster for this
mission is will land at LZ-4.","crew":[],"ships":[],"capsules":[],"payloads":["5
ed9867c1f30554030d45c40"],"launchpad":"5e9e4502f509092b78566f87","flight_number"
:108,"name":"Sentinel-6 Michael Freilich","date_utc":"2020-11-21T17:17:00.000Z",
"date_unix":1605979020,"date_local":"2020-11-21T09:17:00-08:00","date_precision"
:"hour","upcoming":false,"cores":[{"core":"5f57c54a0622a633027900a1","flight":1,
"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_succe
ss":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb554034e7c9"}],"auto_upda
te":true,"tbd":false,"launch_library_id":null,"id":"5ed983aa1f30554030d45c31"},{
"fairings":{"reused":true,"recovery_attempt":true,"recovered":null,"ships":["5ea
6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://images2.imgbox.com/5
4/00/2OgoVFlS_o.png","large":"https://images2.imgbox.com/4a/e7/h403ivFa_o.png"},
"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_g
eneral_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spa
cex/comments/jxyodz/rspacex_starlink15_official_launch_discussion/","media":"htt
ps://www.reddit.com/r/spacex/comments/k0mom0/starlink15_media_thread_photographe
r_contest/","recovery":null},"flickr":{"small":[],"original":["https://live.stat
icflickr.com/65535/50644831893_bb40b60827_o.jpg","https://live.staticflickr.com/
65535/50645580736_44af27257f_o.jpg"]},"presskit":null,"webcast":"https://youtu.b
e/J442-ti-Dhg","youtube_id":"J442-ti-
Dhg","article":"https://spaceflightnow.com/2020/11/25/spacex-launches-60-more-
starlink-satellites-on-100th-falcon-9-flight/","wikipedia":"https://en.wikipedia
.org/wiki/Starlink"},"static_fire_date_utc":"2020-11-21T16:31:00.000Z","static_f

ire_date_unix":1605976260,"net":false,"window":null,"rocket":"5e9d0d95eda69973a8
09d1ec","success":true,"failures":[],"details":"This mission will launch the
fifteenth batch of operational Starlink satellites, which are version 1.0, from
SLC-40, Cape Canaveral Air Force Station. It will be the sixteenth Starlink
launch overall. The satellites will be delivered to low Earth orbit and will
spend a few weeks maneuvering to their operational altitude of 550 km. The
booster for this mission is expected to land on an ASDS.","crew":[],"ships":["5e
a6ed30080df4000697c913","5ea6ed2f080df4000697c90c","5ea6ed2f080df4000697c90b","5
ea6ed2f080df4000697c90d","5ea6ed2e080df4000697c907"],"capsules":[],"payloads":["
5fb95c263a88ae63c9546044"],"launchpad":"5e9e4501f509094ba4566f84","flight_number
":109,"name":"Starlink-15 (v1.0)","date_utc":"2020-11-25T02:13:00.000Z","date_un
ix":1606270380,"date_local":"2020-11-24T21:13:00-05:00","date_precision":"hour",
"upcoming":false,"cores":[{"core":"5e9e28a5f3591833b13b2659","flight":7,"gridfin
s":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,
"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,
"tbd":false,"launch_library_id":null,"id":"5fb95b3f3a88ae63c954603c"},{"fairings
":null,"links":{"patch":{"small":"https://images2.imgbox.com/a2/a0/cHJWyFCo_o.pn
g","large":"https://images2.imgbox.com/dd/53/W10Rog1y_o.png"},"reddit":{"campaig
n":"https://www.reddit.com/r/spacex/comments/jw8bfe/crs21_launch_campaign_thread
/","launch":"https://www.reddit.com/r/spacex/comments/k6my16/rspacex_crs21_offic
ial_launch_discussion_updates/","media":null,"recovery":"https://www.reddit.com/
r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"s
mall":[],"original":["https://live.staticflickr.com/65535/50689254612_db8bc87d2c
_o.jpg","https://live.staticflickr.com/65535/50689254712_98ef758c81_o.jpg","http
s://live.staticflickr.com/65535/50689254512_bb44826694_o.jpg","https://live.stat
icflickr.com/65535/50689254642_ba6b08d142_o.jpg","https://live.staticflickr.com/
65535/50689254552_1d9f91a963_o.jpg"]},"presskit":"https://www.nasa.gov/sites/def
ault/files/atoms/files/spacex_crs-21_mision_overview_high_res.pdf","webcast":"ht
tps://youtu.be/4xJAGFR_N-c","youtube_id":"4xJAGFR_N-c","article":"https://spacef
lightnow.com/2020/12/06/spacex-launches-first-in-new-line-of-upgraded-space-
station-cargo-ships/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-21"}
,"static_fire_date_utc":"2020-12-03T13:45:00.000Z","static_fire_date_unix":16070
03100,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":tr
ue,"failures":[],"details":"SpaceX\'s 21st ISS resupply mission on behalf of
NASA and the first under the CRS-2 contract, this mission brings essential
supplies to the International Space Station using the cargo variant of SpaceX\'s
Dragon 2 spacecraft. The external payload for this mission is the Nanoracks
Bishop Airlock. Falcon 9 and Dragon launch from LC-39A, Kennedy Space Center and
the booster is expected to land on an ASDS. The mission will be complete with
return and recovery of the Dragon capsule and down cargo.","crew":[],"ships":["5
ea6ed30080df4000697c913","5ea6ed2f080df4000697c90b","5ea6ed2f080df4000697c90d"],
"capsules":["5fbb0f8fec55b34eb9f35c14"],"payloads":["5eb0e4d3b6c3bb0006eeb262"],
"launchpad":"5e9e4502f509094188566f88","flight_number":110,"name":"CRS-21","date
_utc":"2020-12-06T16:17:00.000Z","date_unix":1607271420,"date_local":"2020-12-06
T11:17:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e
28a7f3591817f23b2663","flight":4,"gridfins":true,"legs":true,"reused":true,"land
ing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e30
32383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":null,"i

d":"5eb87d4effd86e000604b391"},{"fairings":{"reused":true,"recovery_attempt":tru
e,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox
.com/a9/be/43FhrPoq_o.png","large":"https://images2.imgbox.com/17/34/WgRl7YFh_o.
png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/k51p7b/sxm7
_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/kai
zok/rspacex_sxm7_official_launch_discussion_updates/","media":"https://www.reddi
t.com/r/spacex/comments/kcev8p/sxm7_media_thread_photographer_contest/","recover
y":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discus
sion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/6
5535/50715254423_3cb2a8ff9c_o.jpg","https://live.staticflickr.com/65535/50715992
426_bf43a8f872_o.jpg","https://live.staticflickr.com/65535/50716071077_5a5bc00af
9_o.jpg","https://live.staticflickr.com/65535/50716071167_100d6f7092_o.jpg"]},"p
resskit":null,"webcast":"https://youtu.be/COraGXFb1lo","youtube_id":"COraGXFb1lo
","article":"https://spaceflightnow.com/2020/12/13/siriusxm-satellite-rides-
spacex-rocket-into-orbit/","wikipedia":"https://en.wikipedia.org/wiki/Sirius_XM#
Satellites"},"static_fire_date_utc":"2020-12-07T23:00:00.000Z","static_fire_date
_unix":1607382000,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec",
"success":true,"failures":[],"details":"SpaceX will launch the first of two next
generation high power S-band broadcast satellites for SiriusXM. The spacecraft
will be delivered into a geostationary transfer orbit and the booster will be
recovered downrange. The spacecraft is built by Space Systems Loral (SSL) on the
SSL 1300 platform and includes two solar arrays producing 20kW, and an
unfurlable antenna dish. SXM-7 will replace XM-3 in geostationary orbit.","crew"
:[],"ships":["5ea6ed2f080df4000697c910","5ee68c683c228f36bd5809b5","5ea6ed2f080d
f4000697c90c"],"capsules":[],"payloads":["5eb0e4d2b6c3bb0006eeb25d"],"launchpad"
:"5e9e4501f509094ba4566f84","flight_number":111,"name":"SXM-7","date_utc":"2020-
12-13T17:30:00.000Z","date_unix":1607880600,"date_local":"2020-12-13T12:30:00-05
:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f35918c0
803b265c","flight":7,"gridfins":true,"legs":true,"reused":true,"landing_attempt"
:true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e5
34e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d4b
ffd86e000604b38c"},{"fairings":{"reused":false,"recovery_attempt":true,"recovere
d":true,"ships":["5ea6ed2e080df4000697c908","5ea6ed2f080df4000697c90c"]},"links"
:{"patch":{"small":"https://images2.imgbox.com/25/01/sBErNO7T_o.jpg","large":"ht
tps://images2.imgbox.com/be/b5/tGnEI6rY_o.jpg"},"reddit":{"campaign":"https://ww
w.reddit.com/r/spacex/comments/j7qqbg/nrol108_launch_campaign_thread/","launch":
"https://www.reddit.com/r/spacex/comments/ke9pmg/rspacex_nrol108_official_launch
_discussion/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/
k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original
":["https://live.staticflickr.com/65535/50740257483_0f550f6a25_o.jpg","https://l
ive.staticflickr.com/65535/50740993291_57ef3f881b_o.jpg","https://live.staticfli
ckr.com/65535/50740257263_b41b843e85_o.jpg","https://live.staticflickr.com/65535
/50740993211_dc00af6dbb_o.jpg","https://live.staticflickr.com/65535/50740257078_
e46a6462df_o.jpg","https://live.staticflickr.com/65535/50741096702_2a152bdf13_o.
jpg","https://live.staticflickr.com/65535/50740257323_e3e49fa2c6_o.jpg"]},"press
kit":null,"webcast":"https://youtu.be/9OeVwaFBkfE","youtube_id":"9OeVwaFBkfE","a
rticle":"https://spaceflightnow.com/2020/12/19/spacex-closes-out-record-year-of-
launches-from-floridas-space-coast/","wikipedia":"https://en.wikipedia.org/wiki/

National_Reconnaissance_Office"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX will launch NROL-108 for the National Reconnaissance Office aboard a Falcon 9 from SLC-40, Cape Canaveral Air Force Station. The booster for this mission is expected to land at LZ-1.","crew":[],"ships":["5ea6ed2f080df4000697c90c","5ea6ed2e080df4000697c908"],"capsules":[],"payloads":["5f839ac7818d8b59f5740d48"],"launchpad":"5e9e4502f509094188566f88","flight_number":112,"name":"NROL-108","date_utc":"2020-12-19T14:00:00.000Z","date_unix":1608386400,"date_local":"2020-12-19T09:00:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f359187afd3b2662","flight":5,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5f8399fb818d8b59f5740d43"},{"fairings":{"reused":true,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed2e080df4000697c907","5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.imgbox.com/a4/9a/8KhFejXx_o.png","large":"https://images2.imgbox.com/aa/a6/hE0kWqix_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/kawyb4/t%C3%BCrksat_5a_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/ksagr9/rspacex_t%C3%BCrksat_5a_official_launch_discussion/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/50814482042_476d87b020_o.jpg","https://live.staticflickr.com/65535/50813630408_d98c2215f8_o.jpg","https://live.staticflickr.com/65535/50814379121_8834b5362d_o.jpg","https://live.staticflickr.com/65535/50814379056_f032a23955_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/9I0UYXVqIn8","youtube_id":"9I0UYXVqIn8","article":"https://spaceflightnow.com/2021/01/08/spacex-deploys-turkish-satellite-in-first-launch-of-2021/","wikipedia":"https://en.wikipedia.org/wiki/T%C3%BCrksat_5A"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":17820,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX will launch the first of two next generation satellites on contract for T\xc3\xbcrksat. T\xc3\xbcrksat 5A is a Ku-band broadcast satellite built by Airbus Defense and Space and based on the Electric Orbit Raising version of the Eurostar E3000 platform. This spacecraft will be delivered into a transfer orbit and will then raise itself to its operational 31\xc2\xb0 East geostationary orbit to serve Turkey, the Middle East, Europe, North Africa and South Africa. The booster for this mission will be recovered downrange via ASDS.","crew":[],"ships":["5ea6ed2f080df4000697c90d","5ea6ed2f080df4000697c910","5ea6ed2e080df4000697c907","5ea6ed2e080df4000697c908"],"capsules":[],"payloads":["5eb0e4d3b6c3bb0006eeb264"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":113,"name":"Turksat 5A","date_utc":"2021-01-08T02:15:00.000Z","date_unix":1610072100,"date_local":"2021-01-07T21:15:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a826c","flight":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":null,"id":"5eb87d4fffd86e000604b393"},{"fairings":{"reused":true,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed2e080df4000697c907","5ea6ed2e080df4000697c908"]},"links":{"patch":{"small":"https://images2.imgbox.com/a6/d3/bPczm8gQ_o.png","large":"https://ima

ges2.imgbox.com/2b/28/fZnNbGqX_o.png"},"reddit":{"campaign":"https://www.reddit.
com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/"
,"launch":"https://www.reddit.com/r/spacex/comments/kz969o/rspacex_starlink16_of
ficial_launch_discussion/","media":"https://www.reddit.com/r/spacex/comments/l1b
5q8/starlink16_media_thread_photographer_contest/","recovery":"https://www.reddi
t.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flick
r":{"small":[],"original":["https://live.staticflickr.com/65535/50855737853_4d29
0519b4_o.jpg","https://live.staticflickr.com/65535/50856457401_5fd05cddd1_o.jpg"
,"https://live.staticflickr.com/65535/50855737933_bcc65bdf8b_o.jpg","https://liv
e.staticflickr.com/65535/50856551642_5190c59ec1_o.jpg"]},"presskit":null,"webcas
t":"https://youtu.be/84Nct_Q9Lqw","youtube_id":"84Nct_Q9Lqw","article":"https://
spaceflightnow.com/2021/01/20/spacex-sets-new-rocket-reuse-records-with-
successful-starlink-launch/","wikipedia":"https://en.wikipedia.org/wiki/Starlink
"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window"
:null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details"
:"This mission launches the sixteenth batch of operational Starlink satellites,
which are version 1.0, from SLC-40 or LC-39A. It is the seventeenth Starlink
launch overall. The satellites will be delivered to low Earth orbit and will
spend a few weeks maneuvering to their operational altitude. The booster is
expected to land on an ASDS.","crew":[],"ships":["5ea6ed2e080df4000697c907","5ea
6ed2e080df4000697c908","5ea6ed2f080df4000697c910","5ea6ed2f080df4000697c90d","5e
a6ed2f080df4000697c90b"],"capsules":[],"payloads":["5fbfedba54ceb10a5664c813"],"
launchpad":"5e9e4502f509094188566f88","flight_number":114,"name":"Starlink-16 (v
1.0)","date_utc":"2021-01-20T13:02:00.000Z","date_unix":1611147720,"date_local":
"2021-01-20T08:02:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"
core":"5e9e28a6f35918c0803b265c","flight":8,"gridfins":true,"legs":true,"reused"
:true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landp
ad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_
id":null,"id":"5fbfecce54ceb10a5664c80a"},{"fairings":{"reused":false,"recovery_
attempt":true,"recovered":true,"ships":["5ea6ed2e080df4000697c908","5ea6ed2e080d
f4000697c907"]},"links":{"patch":{"small":"https://images2.imgbox.com/58/70/eapA
og9v_o.png","large":"https://images2.imgbox.com/82/9a/fzsUstOu_o.png"},"reddit":
{"campaign":"https://www.reddit.com/r/spacex/comments/kt5gds/transporter1_launch
_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/l210i3/rsp
acex_transporter1_official_launch_discussion/","media":null,"recovery":"https://
www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/
"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/5087034
3533_e815eb30c4_o.jpg","https://live.staticflickr.com/65535/50871151292_af114a3f
9e_o.jpg","https://live.staticflickr.com/65535/50871053741_59a1dbb6cc_o.jpg","ht
tps://live.staticflickr.com/65535/50871053696_cd01a7e092_o.jpg","https://live.st
aticflickr.com/65535/50870343763_1b1ac55eae_o.jpg"]},"presskit":null,"webcast":"
https://youtu.be/ScHI1cbkUv4","youtube_id":"ScHI1cbkUv4","article":"https://spac
eflightnow.com/2021/01/24/spacex-launches-record-setting-rideshare-mission-
with-143-small-satellites/","wikipedia":null},"static_fire_date_utc":null,"stati
c_fire_date_unix":null,"net":false,"window":2520,"rocket":"5e9d0d95eda69973a809d
1ec","success":true,"failures":[],"details":"SpaceX will launch a dedicated
rideshare mission from SLC-40 or LC-39A. The spacecraft will be delivered into a
sun-synchronous orbit. The booster for this mission is expected to land on an AS

DS.","crew":[],"ships":["5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90c","5
ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907"],"capsules":[],"payloads":["
5fd3871a7faea57d297c86c6"],"launchpad":"5e9e4501f509094ba4566f84","flight_number
":115,"name":"Transporter-1","date_utc":"2021-01-24T15:00:00.000Z","date_unix":1
611500400,"date_local":"2021-01-24T10:00:00-05:00","date_precision":"hour","upco
ming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":5,"gridfins":tr
ue,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"land
ing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd"
:false,"launch_library_id":null,"id":"5fd386aa7faea57d297c86c1"},{"fairings":{"r
eused":true,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed2e080df4000
697c908","5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://images2
.imgbox.com/81/af/UT6KOE53_o.png","large":"https://images2.imgbox.com/6b/53/ZqAx
QPhS_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu3
7i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.red
dit.com/r/spacex/comments/lbjuok/rspacex_starlink18_official_launch_discussion/"
,"media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspace
x_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://l
ive.staticflickr.com/65535/50908787351_5733229c09_o.jpg","https://live.staticfli
ckr.com/65535/50908092893_d254477be0_o.jpg","https://live.staticflickr.com/65535
/50908092833_4cb5833fb9_o.jpg","https://live.staticflickr.com/65535/50908787221_
9cf383a2b4_o.jpg","https://live.staticflickr.com/65535/50908787166_8dde2e29bd_o.
jpg"]},"presskit":null,"webcast":"https://youtu.be/fe6HBw1y6bA","youtube_id":"fe
6HBw1y6bA","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Starlink"},
"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":nu
ll,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"T
his mission launches the eighteenth batch of operational Starlink satellites,
which are version 1.0, from SLC-40. It is the nineteenth Starlink launch
overall. The satellites will be delivered to low Earth orbit and will spend a
few weeks maneuvering to their operational altitude. The booster is expected to
land on an ASDS.","crew":[],"ships":["5ea6ed30080df4000697c913","601742b20c87b90
be7bb7e86","5ea6ed2e080df4000697c908","5ea6ed2e080df4000697c907","5ea6ed2f080df4
000697c90b"],"capsules":[],"payloads":["5ff655769257f579ee3a6c64"],"launchpad":"
5e9e4501f509094ba4566f84","flight_number":116,"name":"Starlink-18 (v1.0)","date_
utc":"2021-02-04T06:19:00.000Z","date_unix":1612419540,"date_local":"2021-02-04T
01:19:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5ef67
0f10059c33cee4a826c","flight":5,"gridfins":true,"legs":true,"reused":true,"landi
ng_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e303
2383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"f31702e
8-6353-4c9a-932c-5bd104717500","id":"5ff6554f9257f579ee3a6c5f"},{"fairings":{"re
used":null,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df40006
97c908","5ea6ed2e080df4000697c907"]},"links":{"patch":{"small":"https://images2.
imgbox.com/fa/01/EAdaKWgq_o.png","large":"https://images2.imgbox.com/ec/c1/ex40h
2Xp_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37
i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.redd
it.com/r/spacex/comments/ljkh7l/rspacex_starlink19_official_launch_discussion/",
"media":"https://www.reddit.com/r/spacex/comments/lkwllg/starlink19_media_thread
_photographer_contest/","recovery":"https://www.reddit.com/r/spacex/comments/k2t
s1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[

"https://live.staticflickr.com/65535/50949943433_87e3002307_o.jpg"]},"presskit":
null,"webcast":"https://youtu.be/L0dkyV09Zso","youtube_id":"L0dkyV09Zso","articl
e":"https://spaceflightnow.com/2021/02/16/spacex-successfully-deploys-60-more-
starlink-satellites-but-loses-booster-on-descent/","wikipedia":"https://en.wikip
edia.org/wiki/Starlink"},"static_fire_date_utc":"2021-02-13T18:17:00.000Z","stat
ic_fire_date_unix":1613240220,"net":false,"window":null,"rocket":"5e9d0d95eda699
73a809d1ec","success":true,"failures":[],"details":"This mission launches the
eighteenth batch of operational Starlink satellites, which are version 1.0, from
SLC-40. It is the nineteenth Starlink launch overall. The satellites will be
delivered to low Earth orbit and will spend a few weeks maneuvering to their
operational altitude. The booster is expected to land on an ASDS.","crew":[],"sh
ips":["5ea6ed30080df4000697c913"],"capsules":[],"payloads":["600f9bc08f798e2a4d5
f97a4"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":117,"name":"Starl
ink-19 (v1.0)","date_utc":"2021-02-16T03:59:00.000Z","date_unix":1613447940,"dat
e_local":"2021-02-15T22:59:00-05:00","date_precision":"hour","upcoming":false,"c
ores":[{"core":"5e9e28a7f359187afd3b2662","flight":6,"gridfins":true,"legs":true
,"reused":true,"landing_attempt":true,"landing_success":false,"landing_type":"AS
DS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launc
h_library_id":"985f1cc1-82c1-4a89-b2cc-e9dc91829a0e","id":"600f9a5e8f798e2a4d5f9
79c"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships
":[]},"links":{"patch":{"small":"https://images2.imgbox.com/ba/a9/Q6APoE8C_o.png
","large":"https://images2.imgbox.com/29/6c/mQwxR0KQ_o.png"},"reddit":{"campaign
":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_a
nd_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/l8qsz3
/rspacex_starlink17_official_launch_discussion/","media":null,"recovery":"https:
//www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_threa
d/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51004
598206_9779f08338_o.jpg","https://live.staticflickr.com/65535/51004598196_b20597
99f4_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/d5DzoKuhdNk","youtube_
id":"d5DzoKuhdNk","article":"https://spaceflightnow.com/2021/03/04/spacex-
sticks-75th-falcon-rocket-landing-after-launching-60-more-starlink-satellites/",
"wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":"20
21-02-24T12:25:00.000Z","static_fire_date_unix":1614169500,"net":false,"window":
null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":
"This mission launches the sixteenth batch of operational Starlink satellites,
which are version 1.0, from LC-39A. It is the eighteenth Starlink launch
overall. The satellites will be delivered to low Earth orbit and will spend a
few weeks maneuvering to their operational altitude. The booster is expected to
land on an ASDS.","crew":[],"ships":["5ea6ed2f080df4000697c90d","5ea6ed30080df40
00697c913"],"capsules":[],"payloads":["5fbfedc654ceb10a5664c814"],"launchpad":"5
e9e4502f509094188566f88","flight_number":118,"name":"Starlink-17 (v1.0)","date_u
tc":"2021-03-04T08:24:00.000Z","date_unix":1614846240,"date_local":"2021-03-04T0
3:24:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28
a5f3591833b13b2659","flight":8,"gridfins":true,"legs":true,"reused":true,"landin
g_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032
383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"dfd4f0e0
-0ab4-494d-bd88-1b93b934b269","id":"5fbfecfe54ceb10a5664c80b"},{"fairings":{"reu
sed":true,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df400069

7c909","5ea6ed2f080df4000697c90c"]},"links":{"patch":{"small":"https://images2.i
mgbox.com/df/ea/lre39tFr_o.png","large":"https://images2.imgbox.com/38/db/moPRrp
CB_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i
/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddi
t.com/r/spacex/comments/m0yww5/rspacex_starlink20_official_launch_discussion/","
media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_
fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://liv
e.staticflickr.com/65535/51027544097_799f5baccc_o.jpg","https://live.staticflick
r.com/65535/51027443336_3e7486be6f_o.jpg","https://live.staticflickr.com/65535/5
1027443321_9a59458d39_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/U4sWb
Tfrzj8","youtube_id":"U4sWbTfrzj8","article":"https://spaceflightnow.com/2021/03
/11/spacex-adds-more-satellites-to-starlink-internet-fleet/","wikipedia":"https:
//en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":"2021-03-09T23:00:00.0
00Z","static_fire_date_unix":1615330800,"net":false,"window":null,"rocket":"5e9d
0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission
launches the 20th batch of operational Starlink satellites, which are version
1.0, from LC-39A or SLC-40. It is the 21st Starlink launch overall. The
satellites will be delivered to low Earth orbit and will spend a few weeks
maneuvering to their operational altitude. The booster is expected to land on an
ASDS.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ee68c683c228f36bd5809b5",
"5ea6ed2e080df4000697c909","5ea6ed2f080df4000697c90c"],"capsules":[],"payloads":
["600f9bcb8f798e2a4d5f97a5"],"launchpad":"5e9e4501f509094ba4566f84","flight_numb
er":119,"name":"Starlink-20 (v1.0)","date_utc":"2021-03-11T08:13:00.000Z","date_
unix":1615450380,"date_local":"2021-03-11T03:13:00-05:00","date_precision":"hour
","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":6,"gridf
ins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":tru
e,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":tru
e,"tbd":false,"launch_library_id":"134eb787-244e-4131-8b03-c9fbd0a11efc","id":"6
00f9a718f798e2a4d5f979d"},{"fairings":{"reused":true,"recovery_attempt":true,"re
covered":true,"ships":["5ea6ed2e080df4000697c909","5ea6ed2f080df4000697c90c"]},"
links":{"patch":{"small":"https://images2.imgbox.com/a0/1a/BLRGLyNe_o.png","larg
e":"https://images2.imgbox.com/a0/db/7LwA6xV9_o.png"},"reddit":{"campaign":"http
s://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_depl
oyment_thread/","launch":"https://www.reddit.com/r/spacex/comments/m4e377/rspace
x_starlink21_launch_discussion_updates/","media":null,"recovery":"https://www.re
ddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"fl
ickr":{"small":[],"original":["https://live.staticflickr.com/65535/51036945097_9
fc94fa9a9_o.jpg","https://live.staticflickr.com/65535/51036945067_ce0d5b3c0b_o.j
pg","https://live.staticflickr.com/65535/51036945027_47c96d71d1_o.jpg"]},"pressk
it":null,"webcast":"https://youtu.be/JKf45ATgATc","youtube_id":"JKf45ATgATc","ar
ticle":"https://spaceflightnow.com/2021/03/14/spacex-extends-its-own-rocket-
reuse-record-on-starlink-launch/","wikipedia":"https://en.wikipedia.org/wiki/Sta
rlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"wi
ndow":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"det
ails":"This mission launches the 21st batch of operational Starlink satellites,
which are version 1.0, from LC-39A or SLC-40. It is the 22nd Starlink launch
overall. The satellites will be delivered to low Earth orbit and will spend a
few weeks maneuvering to their operational altitude. The booster is expected to

land on an ASDS.","crew":[],"ships":["5ea6ed2e080df4000697c909","5ea6ed2f080df40
00697c90c","5ea6ed2f080df4000697c90d","5ea6ed30080df4000697c913"],"capsules":[],
"payloads":["600f9bd88f798e2a4d5f97a6"],"launchpad":"5e9e4502f509094188566f88","
flight_number":120,"name":"Starlink-21 (v1.0)","date_utc":"2021-03-14T10:01:00.0
00Z","date_unix":1615716060,"date_local":"2021-03-14T06:01:00-04:00","date_preci
sion":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f35918c0803b265c","fligh
t":9,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_s
uccess":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_
update":true,"tbd":false,"launch_library_id":"896d876d-e834-4810-8a5e-44d6b6a426
30","id":"600f9a8d8f798e2a4d5f979e"},{"fairings":{"reused":null,"recovery_attemp
t":true,"recovered":true,"ships":["6059166413f40e27e8af34b6","5ea6ed2f080df40006
97c90b"]},"links":{"patch":{"small":"https://images2.imgbox.com/f3/0d/E2I1NJs2_o
.png","large":"https://images2.imgbox.com/68/e1/XpScXejQ_o.png"},"reddit":{"camp
aign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussi
on_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/ma
qmd0/rspacex_starlink22_launch_discussion_updates/","media":null,"recovery":"htt
ps://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_th
read/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://y
outu.be/a15czI9B91c","youtube_id":"a15czI9B91c","article":"https://spaceflightno
w.com/2021/03/24/spacex-launches-25th-mission-to-build-out-starlink-internet-net
work/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_u
tc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d
95eda69973a809d1ec","success":true,"failures":[],"details":"This mission
launches the 22nd batch of operational Starlink satellites, which are version
1.0, from or SLC-40. It is the 23rd Starlink launch overall. The satellites will
be delivered to low Earth orbit and will spend a few weeks maneuvering to their
operational altitude. The booster is expected to land on an ASDS.","crew":[],"sh
ips":["5ee68c683c228f36bd5809b5","5ea6ed30080df4000697c913","5ea6ed2f080df400069
7c90b","6059166413f40e27e8af34b6"],"capsules":[],"payloads":["60428afbc041c16716
f73cdd"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":121,"name":"Star
link-22 (v1.0)","date_utc":"2021-03-24T08:28:00.000Z","date_unix":1616574480,"da
te_local":"2021-03-24T04:28:00-04:00","date_precision":"hour","upcoming":false,"
cores":[{"core":"5ef670f10059c33cee4a826c","flight":6,"gridfins":true,"legs":tru
e,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"AS
DS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launc
h_library_id":"ec03fe36-fe2a-4e43-8e10-d07d5349f1de","id":"60428aafc041c16716f73
cd7"},{"fairings":{"reused":true,"recovery_attempt":true,"recovered":null,"ships
":["6059166413f40e27e8af34b6","5ea6ed2f080df4000697c90b","5ea6ed2e080df4000697c9
08"]},"links":{"patch":{"small":"https://images2.imgbox.com/b7/ca/KRGYs6pm_o.png
","large":"https://images2.imgbox.com/10/23/NARQHPzA_o.png"},"reddit":{"campaign
":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_a
nd_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/mlitqf
/rspacex_starlink23_launch_discussion_updates/","media":null,"recovery":"https:/
/www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread
/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/511018
36837_8671b88722_o.jpg","https://live.staticflickr.com/65535/51101836832_e151d33
d66_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/Uy9Jn-3vuPs","youtube_i
d":"Uy9Jn-3vuPs","article":"https://spaceflightnow.com/2021/04/07/spacex-

launches-its-100th-mission-from-floridas-space-coast/","wikipedia":"https://en.w
ikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix"
:null,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,
"failures":[],"details":"This mission launches the 23rd batch of operational
Starlink satellites, which are version 1.0, from or SLC-40 or LC-39A. It is the
24th Starlink launch overall. The satellites will be delivered to low Earth
orbit and will spend a few weeks maneuvering to their operational altitude. The
booster is expected to land on an ASDS.","crew":[],"ships":["5ea6ed30080df400069
7c913","5ee68c683c228f36bd5809b5","5ea6ed2f080df4000697c90b"],"capsules":[],"pay
loads":["60428b02c041c16716f73cde"],"launchpad":"5e9e4501f509094ba4566f84","flig
ht_number":122,"name":"Starlink-23 (v1.0)","date_utc":"2021-04-07T16:34:00.000Z"
,"date_unix":1617813240,"date_local":"2021-04-07T12:34:00-04:00","date_precision
":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":7
,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_succe
ss":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_upda
te":true,"tbd":false,"launch_library_id":"385455f4-067e-4c24-9937-ca8283ed3307",
"id":"60428ac4c041c16716f73cd8"},{"fairings":null,"links":{"patch":{"small":"htt
ps://images2.imgbox.com/c4/ee/2m9k8HLW_o.png","large":"https://images2.imgbox.co
m/cf/e3/b0i2QZU1_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/c
omments/lrx7ez/crew2_launch_campaign_thread/","launch":"https://www.reddit.com/r
/spacex/comments/mvcst9/rspacex_crew2_launch_discussion_updates_thread/","media"
:null,"recovery":null},"flickr":{"small":[],"original":["https://live.staticflic
kr.com/65535/51136761295_edb4d3ba1d_o.jpg","https://live.staticflickr.com/65535/
51135652706_3e8448193d_o.jpg","https://live.staticflickr.com/65535/51135865043_3
ee9818a56_o.jpg","https://live.staticflickr.com/65535/51136428854_4723547f5a_o.j
pg","https://live.staticflickr.com/65535/51134975562_ca678d7e2f_o.jpg","https://
live.staticflickr.com/65535/51135650561_0bd04e5a56_o.jpg","https://live.staticfl
ickr.com/65535/51135650711_f65e45739d_o.jpg","https://live.staticflickr.com/6553
5/51136428874_30a1912bc6_o.jpg","https://live.staticflickr.com/65535/51135650696
_80bb4d0047_o.jpg","https://live.staticflickr.com/65535/51135650641_f8c77b5420_o
.jpg","https://live.staticflickr.com/65535/51136428829_2b995a79bc_o.jpg","https:
//live.staticflickr.com/65535/51135650621_187bc9fa5b_o.jpg","https://live.static
flickr.com/65535/51135324597_816d0bc217_o.jpg","https://live.staticflickr.com/65
535/51135997286_1b5a4452f0_o.jpg","https://live.staticflickr.com/65535/511364288
99_eb329865d1_o.jpg","https://live.staticflickr.com/65535/51136428909_d4d6cf76ae
_o.jpg","https://live.staticflickr.com/65535/51136761220_9a2e6dbaf6_o.jpg"]},"pr
esskit":null,"webcast":"https://youtu.be/lW07SN3YoLI","youtube_id":"lW07SN3YoLI"
,"article":"https://spaceflightnow.com/2021/04/23/spacex-launches-astronauts-on-
refurbished-capsule-and-flight-proven-rocket/","wikipedia":"https://en.wikipedia
.org/wiki/SpaceX_Crew-2"},"static_fire_date_utc":"2021-04-17T11:01:00.000Z","sta
tic_fire_date_unix":1618657260,"net":false,"window":0,"rocket":"5e9d0d95eda69973
a809d1ec","success":true,"failures":[],"details":"SpaceX launches the second
operational mission of its Crew Dragon vehicle as part of NASA\'s Commercial
Crew Program, carrying NASA astronauts Shane Kimbrough, Megan McArthur, Thomas
Pesquet, and Akihiko Hoshide to the International Space Station. The Falcon 9
and Crew Dragon lift off from LC-39A, Kennedy Space Center. Both the booster and
the capsule have flown previously, each a first for a commercial crew flight.
The booster for this mission is expected to land on an ASDS. The mission will be

complete with the safe return of the astronauts to Earth.","crew":["5fe3ba5fb346
7846b3242188","5fe3bb01b3467846b3242189","5fe3bc3db3467846b324218b","5fe3bc8ab34
67846b324218c"],"ships":["5ea6ed2e080df4000697c909","5ea6ed30080df4000697c913"],
"capsules":["5e9e2c5df359188aba3b2676"],"payloads":["5fe3b3adb3467846b3242173"],
"launchpad":"5e9e4502f509094188566f88","flight_number":123,"name":"Crew-2","date
_utc":"2021-04-23T09:49:00.000Z","date_unix":1619171340,"date_local":"2021-04-23
T05:49:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57
c53d0622a6330279009f","flight":2,"gridfins":true,"legs":true,"reused":true,"land
ing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e30
32383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"32dcb5
ad-7609-4fc0-8094-768ee5c2ebe0","id":"5fe3af58b3467846b324215f"},{"fairings":{"r
eused":false,"recovery_attempt":true,"recovered":true,"ships":["6059166413f40e27
e8af34b6"]},"links":{"patch":{"small":"https://images2.imgbox.com/cd/30/UYfjAmuT
_o.png","large":"https://images2.imgbox.com/2e/a8/bvzKCiwf_o.png"},"reddit":{"ca
mpaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discus
sion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/
mzol0k/rspacex_starlink24_launch_discussion_updates/","media":null,"recovery":"h
ttps://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_
thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/
51146838376_4667d78231_o.jpg","https://live.staticflickr.com/65535/51147622479_d
027e09727_o.jpg","https://live.staticflickr.com/65535/51147949685_975bd6b4ee_o.j
pg"]},"presskit":null,"webcast":"https://youtu.be/RBxkRKZ34yo","youtube_id":"RBx
kRKZ34yo","article":"https://spaceflightnow.com/2021/04/29/spacex-
launches-60-more-starlink-spacecraft-fcc-clears-spacex-to-fly-satellites-at-
lower-altitudes/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_
fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rock
et":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This
mission launches the 24th batch of operational Starlink satellites, which are
version 1.0, from LC-39A or SLC-40. It is the 25th Starlink launch overall. The
satellites will be delivered to low Earth orbit and will spend a few weeks
maneuvering to their operational altitude. The booster is expected to land on an
ASDS.","crew":[],"ships":["5ea6ed2f080df4000697c910","5ea6ed2f080df4000697c90d",
"5ee68c683c228f36bd5809b5","6059166413f40e27e8af34b6"],"capsules":[],"payloads":
["605b4be3aa5433645e37d046"],"launchpad":"5e9e4501f509094ba4566f84","flight_numb
er":124,"name":"Starlink-24 (v1.0)","date_utc":"2021-04-29T03:44:00.000Z","date_
unix":1619667840,"date_local":"2021-04-28T23:44:00-04:00","date_precision":"hour
","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a826c","flight":7,"gridf
ins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":tru
e,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":tru
e,"tbd":false,"launch_library_id":"fbd23c86-89d0-4d3f-b5fb-5d7165d05cca","id":"6
05b4b6aaa5433645e37d03f"},{"fairings":{"reused":true,"recovery_attempt":true,"re
covered":true,"ships":["6059166413f40e27e8af34b6"]},"links":{"patch":{"small":"h
ttps://images2.imgbox.com/33/03/aHKx9cu1_o.png","large":"https://images2.imgbox.
com/8e/e0/wOt6ZecV_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex
/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"h
ttps://www.reddit.com/r/spacex/comments/n3z0aa/rspacex_starlink25_launch_discuss
ion_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/
k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original

":[]},"presskit":null,"webcast":"https://youtu.be/xpl_JnG7rcg","youtube_id":"xpl
_JnG7rcg","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"
static_fire_date_utc":"2021-05-03T05:00:00.000Z","static_fire_date_unix":1620018
000,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"f
ailures":[],"details":"This mission launches the 25th batch of operational
Starlink satellites, which are version 1.0, from LC-39A. It is the 26th Starlink
launch overall. The satellites will be delivered to low Earth orbit and will
spend a few weeks maneuvering to their operational altitude. The booster is
expected to land on OCISLY.","crew":[],"ships":["608c1a06cf7f3d6152666ad4","5ea6
ed30080df4000697c913","6059166413f40e27e8af34b6"],"capsules":[],"payloads":["605
b4befaa5433645e37d047"],"launchpad":"5e9e4502f509094188566f88","flight_number":1
25,"name":"Starlink-25 (v1.0)","date_utc":"2021-05-04T19:01:00.000Z","date_unix"
:1620154860,"date_local":"2021-05-04T15:01:00-04:00","date_precision":"hour","up
coming":false,"cores":[{"core":"5e9e28a5f3591833b13b2659","flight":9,"gridfins":
true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"la
nding_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tb
d":false,"launch_library_id":"1ecc82c0-c5c8-41f0-aa58-b50a3b839ae0","id":"605b4b
7daa5433645e37d040"},{"fairings":{"reused":true,"recovery_attempt":true,"recover
ed":true,"ships":["6059166413f40e27e8af34b6"]},"links":{"patch":{"small":"https:
//images2.imgbox.com/ad/eb/pq1vQuoW_o.png","large":"https://images2.imgbox.com/9
7/83/Y1Qj9iUC_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comm
ents/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https:
//www.reddit.com/r/spacex/comments/n7ju15/rspacex_starlink27_launch_discussion_u
pdates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1
q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]}
,"presskit":null,"webcast":"https://youtu.be/J71s2KmkSrc","youtube_id":"J71s2Kmk
Src","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"stati
c_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"ro
cket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This
mission launches the 26th batch of operational Starlink satellites, which are
version 1.0, from SLC-40. It is the 27th Starlink launch overall. The satellites
will be delivered to low Earth orbit and will spend a few weeks maneuvering to
their operational altitude. The booster is expected to land on an ASDS.","crew":
[],"ships":["5ea6ed30080df4000697c913","5ee68c683c228f36bd5809b5","6059166413f40
e27e8af34b6"],"capsules":[],"payloads":["6079bd5e9a06446e8c61bf7c"],"launchpad":
"5e9e4501f509094ba4566f84","flight_number":126,"name":"Starlink-27 (v1.0)","date
_utc":"2021-05-09T06:42:00.000Z","date_unix":1620542520,"date_local":"2021-05-09
T02:42:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e
28a6f35918c0803b265c","flight":10,"gridfins":true,"legs":true,"reused":true,"lan
ding_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3
032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"e5085
f22-208b-4b28-b66c-fd4bd9df90e7","id":"6079bd1c9a06446e8c61bf76"},{"fairings":{"
reused":true,"recovery_attempt":true,"recovered":null,"ships":["6059166413f40e27
e8af34b6"]},"links":{"patch":{"small":"https://images2.imgbox.com/b5/8a/KeiGEz4f
_o.png","large":"https://images2.imgbox.com/f6/28/amlU5JWP_o.png"},"reddit":{"ca
mpaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discus
sion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/
ncfexu/rspacex_starlink26_launch_discussion_updates/","media":null,"recovery":"h

ttps://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51171344450_6a3f0e08b9_o.jpg","https://live.staticflickr.com/65535/51170251791_9b36fba5b7_o.jpg","https://live.staticflickr.com/65535/51185653708_86840b1672_o.jpg","https://live.staticflickr.com/65535/51185653723_7bd9ecab87_o.jpg","https://live.staticflickr.com/65535/51186506630_1a47a43787_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/tdgg_qwj-hI","youtube_id":"tdgg_qwj-hI","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission launches the 27th batch of operational Starlink satellites, which are version 1.0, from LC-39A or SLC-40. It is the 28th Starlink launch overall. The satellites will be delivered to low Earth orbit and will spend a few weeks maneuvering to their operational altitude. The booster is expected to land on an ASDS.","crew":[],"ships":["5ea6ed30080df4000697c913","6059166413f40e27e8af34b6","608c1a06cf7f3d6152666ad4","5ea6ed2f080df4000697c90b"],"capsules":[],"payloads":["605b4bfcaa5433645e37d048","609f48374a12e4692eae4667","609f49c64a12e4692eae4668"],"launchpad":"5e9e4502f509094188566f88","flight_number":127,"name":"Starlink-26 (v1.0) + Capella-6 + Tyvak-0130","date_utc":"2021-05-15T22:54:00.000Z","date_unix":1621119240,"date_local":"2021-05-15T18:54:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":8,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"c32d1f5e-2dd9-4b55-ac8b-3eb8c4a4e955","id":"605b4b95aa5433645e37d041"},{"fairings":{"reused":true,"recovery_attempt":true,"recovered":true,"ships":["5ea6ed2e080df4000697c909","5ea6ed2f080df4000697c90c"]},"links":{"patch":{"small":"https://images2.imgbox.com/28/ee/Bchywpgu_o.png","large":"https://images2.imgbox.com/06/09/908F8uzV_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/nkxg4s/rspacex_starlink28_launch_discussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51225270061_42bc3abb43_o.jpg","https://live.staticflickr.com/65535/51226036719_584d141279_o.jpg","https://live.staticflickr.com/65535/51225480623_5ef7d3957a_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/xRu-ekesDyY","youtube_id":"xRu-
ekesDyY","article":"https://spaceflightnow.com/2021/05/26/first-phase-of-spacexs-starlink-network-nears-completion-with-falcon-9-launch/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"This mission launches the 28th batch of operational Starlink satellites, which were version 1.0, from SLC-40. It was the 29th Starlink launch overall. The satellites plan to be delivered to low Earth orbit and will spend a few weeks maneuvering to their operational altitude. The booster is expected to land on ASDS JRTI.","crew":[],"ships":["5ea6ed30080df4000697c913","5ea6ed2f080df4000697c90c","5ee68c683c228f36bd5809b5","5ea6ed2f080df4000697c90b","5ea6ed2e080df4000697c909"],"capsules":[],"payloads":["6079bd679a06446e8c61bf7d"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":128,"name":"S

tarlink-28 (v1.0)","date_utc":"2021-05-26T18:59:00.000Z","date_unix":1622055540,
"date_local":"2021-05-26T14:59:00-04:00","date_precision":"hour","upcoming":fals
e,"cores":[{"core":"5f57c54a0622a633027900a1","flight":2,"gridfins":true,"legs":
true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":
"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"la
unch_library_id":"fb25ecf0-fb51-4b5e-b678-105f6ba4c06e","id":"6079bd399a06446e8c
61bf77"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/
aa/a8/HhwYIXoB_o.png","large":"https://images2.imgbox.com/16/32/9Z7btrQF_o.png"}
,"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/nhztq5/crs22_lau
nch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/nqqojc/
rspacex_crs22_launch_docking_discussion_updates/","media":null,"recovery":"https
://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thre
ad/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/5122
5482033_086576f2cd_o.jpg","https://live.staticflickr.com/65535/51226340205_9c3ac
87b8e_o.jpg","https://live.staticflickr.com/65535/51224563112_61d493b775_o.jpg",
"https://live.staticflickr.com/65535/51224563062_95bf029b80_o.jpg","https://live
.staticflickr.com/65535/51225271661_49315dc688_o.jpg","https://live.staticflickr
.com/65535/51226340225_27df994080_o.jpg","https://live.staticflickr.com/65535/51
224563102_d07c630ef5_o.jpg","https://live.staticflickr.com/65535/51225482053_1fe
7157f74_o.jpg","https://live.staticflickr.com/65535/51226038164_304c347347_o.jpg
"]},"presskit":null,"webcast":"https://youtu.be/QXf9mRWbXDM","youtube_id":"QXf9m
RWbXDM","article":"https://spaceflightnow.com/2021/06/03/spacex-supply-ship-
launches-on-mission-to-begin-upgrading-space-station-electrical-grid/","wikipedi
a":"https://en.wikipedia.org/wiki/SpaceX_CRS-22"},"static_fire_date_utc":null,"s
tatic_fire_date_unix":null,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809
d1ec","success":true,"failures":[],"details":"SpaceX\'s 22nd ISS resupply
mission on behalf of NASA, this mission sends essential supplies to the
International Space Station using the cargo variant of SpaceX\'s Dragon 2
spacecraft. The external payload for this mission is the first pair of ISS Roll
Out Solar Arrays. Falcon 9 and Dragon launch from LC-39A, Kennedy Space Center
and the booster is expected to land on an ASDS. The mission will be complete
with splashdown and recovery of the capsule and down cargo.","crew":[],"ships":[
"5ea6ed2f080df4000697c90b","608c1a06cf7f3d6152666ad4","5ea6ed30080df4000697c913"
],"capsules":["60b803421f83cc1e59f1644d"],"payloads":["5fe3b642b3467846b324217b"
],"launchpad":"5e9e4502f509094188566f88","flight_number":129,"name":"CRS-22 & IR
OSA","date_utc":"2021-06-03T17:29:00.000Z","date_unix":1622741340,"date_local":"
2021-06-03T13:29:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"c
ore":"60b800111f83cc1e59f16438","flight":1,"gridfins":true,"legs":true,"reused":
false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landp
ad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_
id":"89a150ea-6e4b-489f-853c-3603ae684611","id":"5fe3af84b3467846b3242161"},{"fa
irings":{"reused":false,"recovery_attempt":true,"recovered":true,"ships":["5ea6e
d2f080df4000697c90b","5ea6ed2e080df4000697c909"]},"links":{"patch":{"small":"htt
ps://images2.imgbox.com/9a/f0/UVl6cZ6e_o.png","large":"https://images2.imgbox.co
m/98/c3/8McdwgVu_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/c
omments/n9llxw/sxm8_launch_campaign_thread/","launch":"https://www.reddit.com/r/
spacex/comments/nss9br/rspacex_sxm8_launch_discussion_and_updates_thread/","medi
a":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":null,"we

bcast":"https://youtu.be/bgtDRR2F2wA","youtube_id":"bgtDRR2F2wA","article":null,
"wikipedia":"https://en.wikipedia.org/wiki/Sirius_XM#Satellites"},"static_fire_d
ate_utc":"2021-06-03T06:32:00.000Z","static_fire_date_unix":1622701920,"net":fal
se,"window":5940,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[
],"details":"SpaceX launches the second of two next generation satellites for
SiriusXM from SLC-40, Cape Canaveral Space Force Station. The spacecraft will be
delivered into a sub-synchronous geostationary transfer orbit and will replace
XM-4 in geostationary orbit. The booster for this mission will land on an ASDS."
,"crew":[],"ships":["5ee68c683c228f36bd5809b5","5ea6ed2f080df4000697c910","5ea6e
d2f080df4000697c90b","5ea6ed2e080df4000697c909"],"capsules":[],"payloads":["5fe3
b57db3467846b324217a"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":13
0,"name":"SXM-8","date_utc":"2021-06-06T04:26:00.000Z","date_unix":1622953560,"d
ate_local":"2021-06-06T00:26:00-04:00","date_precision":"hour","upcoming":false,
"cores":[{"core":"5f57c53d0622a6330279009f","flight":3,"gridfins":true,"legs":tr
ue,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"A
SDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"laun
ch_library_id":"edaf9a8d-d67c-4e0e-8452-a37b111581d5","id":"5fe3af6db3467846b324
2160"},{"fairings":{"reused":false,"recovery_attempt":true,"recovered":true,"shi
ps":["60c8c7a45d4819007ea69871"]},"links":{"patch":{"small":"https://images2.img
box.com/d0/66/bCRsHNSZ_o.png","large":"https://images2.imgbox.com/2f/6f/ebFS9FDJ
_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/nuud0l/g
ps_iii_sv05_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/c
omments/o0gcnq/rspacex_gps_iii_sv05_launch_discussion_and/","media":null,"recove
ry":null},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/
51254829184_e6e1d0d79c_o.jpg","https://live.staticflickr.com/65535/51253353892_d
e82b01e23_o.jpg","https://live.staticflickr.com/65535/51254285968_288383ce6e_o.j
pg","https://live.staticflickr.com/65535/51254829154_3c5980c086_o.jpg","https://
live.staticflickr.com/65535/51253353882_e59ea4df4f_o.jpg","https://live.staticfl
ickr.com/65535/51254829139_ca68c19689_o.jpg","https://live.staticflickr.com/6553
5/51262926489_9fbce20e9c_o.jpg","https://live.staticflickr.com/65535/51262926469
_974292477d_o.jpg","https://live.staticflickr.com/65535/51262179176_e4302db116_o
.jpg","https://live.staticflickr.com/65535/51263224735_3210fb7499_o.jpg"]},"pres
kit":null,"webcast":"https://youtu.be/QJXxVtp3KqI","youtube_id":"QJXxVtp3KqI","
article":null,"wikipedia":"https://en.wikipedia.org/wiki/GPS_Block_III"},"static
_fire_date_utc":"2021-06-13T19:30:00.000Z","static_fire_date_unix":1623612600,"n
et":false,"window":900,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failu
res":[],"details":"SpaceX\'s fourth GPS III launch will use the first stage from
the previous GPS mission. This will be the first time a National Security Space
Launch has flown on a flight proven booster. Falcon 9 will launch from SLC-40,
Cape Canaveral and the booster will land downrange on a drone ship. GPS III is
the third generation of the U.S. Space Force\'s NAVSTAR Global Positioning
System satellites, developed by Lockheed Martin. The GPS III constellation will
feature a cross-linked command and control architecture, allowing the entire GPS
constellation to be updated simultaneously from a single ground station. A new
spot beam capability for enhanced military coverage and increased resistance to
hostile jamming will be incorporated.","crew":[],"ships":["60c8c7a45d4819007ea69
871","5ee68c683c228f36bd5809b5","5ea6ed2f080df4000697c910"],"capsules":[],"paylo
ads":["5eb0e4d2b6c3bb0006eeb261"],"launchpad":"5e9e4501f509094ba4566f84","flight

_number":131,"name":"GPS III SV05","date_utc":"2021-06-17T16:09:00.000Z","date_u
nix":1623946140,"date_local":"2021-06-17T12:09:00-04:00","date_precision":"hour"
,"upcoming":false,"cores":[{"core":"5f57c5440622a633027900a0","flight":2,"gridfi
ns":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true
,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true
,"tbd":false,"launch_library_id":"110c808a-a091-47ab-8532-4fa058c1de7a","id":"5e
b87d4effd86e000604b390"},{"fairings":{"reused":true,"recovery_attempt":true,"rec
overed":true,"ships":["60c8c7a45d4819007ea69871"]},"links":{"patch":{"small":"ht
tps://images2.imgbox.com/a9/3e/L2EqHznO_o.png","large":"https://images2.imgbox.c
om/96/8c/4HOqLFoZ_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/
comments/nz7rai/transporter2_launch_campaign_thread/","launch":"https://www.redd
it.com/r/spacex/comments/o9ki7u/rspacex_transporter2_launch_discussion_and/","me
dia":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fl
eet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.
staticflickr.com/65535/51283430951_a9e5a41141_o.jpg","https://live.staticflickr.
com/65535/51283430936_3852120bbe_o.jpg","https://live.staticflickr.com/65535/512
83604493_d1a088b7c9_o.jpg","https://live.staticflickr.com/65535/51284454795_5917
17faee_o.jpg","https://live.staticflickr.com/65535/51284454810_9fdd0e8db4_o.jpg"
,"https://live.staticflickr.com/65535/51283604443_6d92fe1231_o.jpg","https://liv
e.staticflickr.com/65535/51283604428_b24ebf1b5f_o.jpg","https://live.staticflick
r.com/65535/51283604438_7202e2a388_o.jpg"]},"presskit":null,"webcast":"https://y
outu.be/sSiuW1HcGjA","youtube_id":"sSiuW1HcGjA","article":null,"wikipedia":null}
,"static_fire_date_utc":"2021-06-22T15:24:00.000Z","static_fire_date_unix":16243
75440,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,
"failures":[],"details":"Falcon 9 launches to sun-synchronous polar orbit from
Florida as part of SpaceX\'s Rideshare program dedicated to smallsat customers.
The mission lifts off from SLC-40, Cape Canaveral on a southward azimuth and
performs a dogleg maneuver. The booster for this mission is expected to return
to LZ-1 based on FCC communications filings. This rideshare takes approximately
90 satellites and hosted payloads into orbit on a variety of deployers including
three free-flying spacecraft which dispense their customers\' satellites after
separation from the SpaceX stack.","crew":[],"ships":["60c8c7a45d4819007ea69871"
],"capsules":[],"payloads":["608ac397eb3e50044e3630e7"],"launchpad":"5e9e4501f50
9094ba4566f84","flight_number":132,"name":"Transporter-2","date_utc":"2021-06-30
T19:31:00.000Z","date_unix":1625081460,"date_local":"2021-06-30T15:31:00-04:00",
"date_precision":"hour","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a8
26c","flight":8,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true
,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c
7"}],"auto_update":true,"tbd":false,"launch_library_id":"5d248abe-17ef-43ce-9c04
-aef33af40520","id":"600f9b6d8f798e2a4d5f979f"},{"fairings":null,"links":{"patch
":{"small":"https://images2.imgbox.com/23/8a/eyj3lHJk_o.png","large":"https://im
ages2.imgbox.com/fd/60/g7jacgTb_o.png"},"reddit":{"campaign":"https://www.reddit
.com/r/spacex/comments/p67i27/crs23_launch_campaign_thread/","launch":"https://w
ww.reddit.com/r/spacex/comments/pcj0ao/rspacex_crs23_launch_docking_discussion_u
pdates/","media":null,"recovery":null},"flickr":{"small":[],"original":["https:/
/live.staticflickr.com/65535/51411435986_82d7088b61_o.jpg","https://live.staticf
lickr.com/65535/51411702583_fe67991413_o.jpg","https://live.staticflickr.com/655
35/51411702573_de10cdbc06_o.jpg","https://live.staticflickr.com/65535/5141143511

6_ac7b3cc3d1_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/x-KiDqxAMU0","youtube_id":"x-KiDqxAMU0","article":null,"wikipedia":"https://en.wikipedia.org/wiki/SpaceX_CRS-23"},"static_fire_date_utc":"2021-08-26T02:49:00.000Z","static_fire_date_unix":1629946140,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"SpaceX\'s 23rd ISS resupply mission on behalf of NASA, this mission brings essential supplies to the International Space Station using the cargo variant of SpaceX\'s Dragon 2 spacecraft. Cargo includes several science experiments. The booster for this mission is expected to land on an ASDS. The mission will be complete with return and recovery of the Dragon capsule and down cargo.","crew":[],"ships":["5ea6ed2d080df4000697c904"],"capsules":[],"payloads":["5fe3c4f2b3467846b3242193"],"launchpad":"5e9e4502f509094188566f88","flight_number":133,"name":"CRS-23","date_utc":"2021-08-29T07:14:00.000Z","date_unix":1630221240,"date_local":"2021-08-29T03:14:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c53d0622a6330279009f","flight":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"13386512-85bb-4c93-a9b0-f5eac05fbe4f","id":"5fe3b11eb3467846b324216c"},{"fairings":{"reused":true,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/cb/ef/u7GOlbj4_o.png","large":"https://images2.imgbox.com/a3/55/7K6zEOT2_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/pmn0xm/rspacex_starlink21_launch_discussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51474853666_be4615e186_o.jpg","https://live.staticflickr.com/65535/51475097383_dcf9002e9c_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/4372QYiPZB4","youtube_id":"4372QYiPZB4","article":"https://spaceflightnow.com/2021/09/14/spacex-launches-first-full-batch-of-laser-equipped-starlink-satellites/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":"2021-09-02T17:29:00.000Z","static_fire_date_unix":1630603740,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":["5ea6ed30080df4000697c913"],"capsules":[],"payloads":["60e3bf3373359e1e20335c3c"],"launchpad":"5e9e4502f509092b78566f87","flight_number":134,"name":"Starlink 2-1 (v1.5)","date_utc":"2021-09-14T03:55:00.000Z","date_unix":1631591700,"date_local":"2021-09-13T20:55:00-07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a5f3591833b13b2659","flight":10,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"6b9f9fe6-7f94-498b-a664-7c9e42dbe76d","id":"60e3bf0d73359e1e20335c37"},{"fairings":null,"links":{"patch":{"small":"https://images2.imgbox.com/bb/2f/jMnSSQHM_o.png","large":"https://images2.imgbox.com/eb/36/ZJnCO6hc_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/pc1fq7/inspiration4_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/po651k/rspacex_inspiration4_launch_discussion_updates/","media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/3pv01sSq44w","youtube_id":"3pv01sSq44w","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Inspiration4"},"stati

c_fire_date_utc":"2021-09-13T07:07:00.000Z","static_fire_date_unix":1631516820,"
net":false,"window":18000,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"fa
ilures":[],"details":"Inspiration4 is the world\xe2\x80\x99s first all-civilian
mission to space. The mission will be commanded by Jared Isaacman, the 37-year-
old founder and Chief Executive Officer of Shift4 Payments and an accomplished
pilot and adventurer. Inspiration4 will leave Earth from Kennedy Space
Center\xe2\x80\x99s historic Launch Complex 39A, the embarkation point for
Apollo and Space Shuttle missions, and travel across a low earth orbit on a
multi-day journey that will continually eclipse more than 90% of the
earth\xe2\x80\x99s population. Named in recognition of the four-person crew that
will raise awareness and funds for St. Jude Children\xe2\x80\x99s Research
Hospital, this milestone represents a new era for human spaceflight and explorat
ion.","crew":["607a3a5f5a906a44023e0870","607a3ab45a906a44023e0872","607b48375a9
06a44023e08b8","607b48da5a906a44023e08b9"],"ships":["5ea6ed2f080df4000697c910","
5ee68c683c228f36bd5809b5","614251b711a64135defb3654"],"capsules":["5f6f99fddcfdf
403df379709"],"payloads":["607a382f5a906a44023e0867"],"launchpad":"5e9e4502f5090
94188566f88","flight_number":135,"name":"Inspiration4","date_utc":"2021-09-16T00
:02:00.000Z","date_unix":1631750520,"date_local":"2021-09-15T20:02:00-04:00","da
te_precision":"hour","upcoming":false,"cores":[{"core":"5f57c5440622a633027900a0
","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"l
anding_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}
],"auto_update":true,"tbd":false,"launch_library_id":"621d64e6-0513-45dc-8ffa-c9
fd56518398","id":"607a37565a906a44023e0866"},{"fairings":null,"links":{"patch":{
"small":"https://images2.imgbox.com/5a/2f/w3woVyro_o.png","large":"https://image
s2.imgbox.com/80/34/J7ROsgsi_o.png"},"reddit":{"campaign":"https://www.reddit.co
m/r/spacex/comments/q8r52a/crew3_launch_campaign_thread/","launch":"https://www.
reddit.com/r/spacex/comments/qij6f4/rspacex_crew3_launch_discussion_updates_thre
ad/","media":null,"recovery":null},"flickr":{"small":[],"original":["https://liv
e.staticflickr.com/65535/51673353699_e3da266245_o.jpg","https://live.staticflick
r.com/65535/51673548360_64354b760f_o.jpg","https://live.staticflickr.com/65535/5
1672676881_3b88410a96_o.jpg","https://live.staticflickr.com/65535/51673548330_7a
cc53d2fb_o.jpg","https://live.staticflickr.com/65535/51671874407_4f56a87855_o.jp
g","https://live.staticflickr.com/65535/51672676961_36371a6a76_o.jpg","https://l
ive.staticflickr.com/65535/51672915563_7f5b373701_o.jpg","https://live.staticfli
ckr.com/65535/51672915633_947e35cabc_o.jpg"]},"presskit":null,"webcast":"https:/
/youtu.be/WZvtrnFItNs","youtube_id":"WZvtrnFItNs","article":"https://spaceflight
now.com/2021/11/11/spacex-debuts-new-dragon-capsule-in-launch-to-the-
international-space-station/","wikipedia":"https://en.wikipedia.org/wiki/SpaceX_
Crew-3"},"static_fire_date_utc":"2021-10-28T05:46:00.000Z","static_fire_date_uni
x":1635399960,"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","succes
s":true,"failures":[],"details":"SpaceX will launch the third operational
mission of its Crew Dragon vehicle as part of NASA\'s Commercial Crew Program,
carrying four astronauts to the International Space Station, including 1
international partner This mission will fly on a new capsule and a once used
booster. The booster will land downrange on a drone ship. The Crew-2 mission
returns from the space station in November.","crew":["5fe3c587b3467846b3242198",
"5fe3c5beb3467846b3242199","5fe3c5f6b3467846b324219a","60c4b5ad4e041c0b356db393"
],"ships":["5ea6ed2d080df4000697c904","5ee68c683c228f36bd5809b5","614251b711a641

35defb3654","5ea6ed2f080df4000697c90c","5ea6ed2e080df4000697c909"],"capsules":["
617c05591bad2c661a6e2909"],"payloads":["5fe3b3bab3467846b3242174"],"launchpad":"
5e9e4502f509094188566f88","flight_number":136,"name":"Crew-3","date_utc":"2021-1
1-11T02:03:00.000Z","date_unix":1636596180,"date_local":"2021-11-10T21:03:00-05:
00","date_precision":"hour","upcoming":false,"cores":[{"core":"60b800111f83cc1e5
9f16438","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":
true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb07513
4e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"0d779392-1a36-4c1e-
b0b8-ec11e3031ee6","id":"5fe3b15eb3467846b324216d"},{"fairings":{"reused":null,"
recovery_attempt":true,"recovered":true,"ships":["618fad7e563d69573ed8caa9"]},"l
inks":{"patch":{"small":"https://images2.imgbox.com/f1/38/HYBzPrio_o.png","large
":"https://images2.imgbox.com/c9/b7/R0e1MkGD_o.png"},"reddit":{"campaign":"https
://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deplo
yment_thread/","launch":"https://www.reddit.com/r/spacex/comments/qro60o/rspacex
_starlink_41_launch_discussion_and_updates/","media":null,"recovery":"https://ww
w.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"}
,"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/516769396
46_1a12780e54_o.jpg","https://live.staticflickr.com/65535/51677186188_e03e87ae8e
_o.jpg","https://live.staticflickr.com/65535/51676136297_0bbb893f44_o.jpg","http
s://live.staticflickr.com/65535/51677822295_87c2ee94b1_o.jpg","https://live.stat
icflickr.com/65535/51677186098_12c8f54593_o.jpg","https://live.staticflickr.com/
65535/51676136282_5118fa42ef_o.jpg"]},"presskit":null,"webcast":"https://youtu.b
e/AtmtP4vouSY","youtube_id":"AtmtP4vouSY","article":"https://spaceflightnow.com/
2021/11/13/spacex-launch-starts-deployment-of-new-starlink-orbital-shell/","wiki
pedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"st
atic_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a8
09d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":["5ea6ed2f
080df4000697c910","618fad7e563d69573ed8caa9"],"capsules":[],"payloads":["618fabf
0563d69573ed8caa6"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":137,"
name":"Starlink 4-1 (v1.5)","date_utc":"2021-11-13T12:40:00.000Z","date_unix":16
36807200,"date_local":"2021-11-13T07:40:00-05:00","date_precision":"hour","upcom
ing":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":9,"gridfins":tru
e,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landi
ng_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":
false,"launch_library_id":null,"id":"618faad2563d69573ed8ca9d"},{"fairings":{"re
used":null,"recovery_attempt":true,"recovered":null,"ships":["5ea6ed30080df40006
97c912"]},"links":{"patch":{"small":"https://images2.imgbox.com/5a/fa/fhZj1ebN_o
.png","large":"https://images2.imgbox.com/57/b8/7pGrT5cb_o.png"},"reddit":{"camp
aign":"https://www.reddit.com/r/spacex/comments/qu8s5a/dart_launch_campaign_thre
ad/","launch":"https://www.reddit.com/r/spacex/comments/r0dn3a/rspacex_dart_laun
ch_discussion_and_updates_thread/","media":null,"recovery":null},"flickr":{"smal
l":[],"original":["https://live.staticflickr.com/65535/51702654584_13a4b39655_o.
jpg","https://live.staticflickr.com/65535/51702261963_ec86519bce_o.jpg","https:/
/live.staticflickr.com/65535/51702654544_c4b0a727c3_o.jpg","https://live.staticf
lickr.com/65535/51702654514_c379940fa3_o.jpg","https://live.staticflickr.com/655
35/51702654339_7c40563d73_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/X
KRf6-NcMqI","youtube_id":"XKRf6-NcMqI","article":null,"wikipedia":"https://en.wi
kipedia.org/wiki/Double_Asteroid_Redirection_Test"},"static_fire_date_utc":"2021

-11-19T20:20:00.000Z","static_fire_date_unix":1637353200,"net":false,"window":nu
ll,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"N
ASA\'s Double Asteroid Redirect Test (DART) will demonstrate the use of a
kinetic impactor to alter an asteroid\'s trajectory, an intervention that could
be used in the future to prevent devastating Earth impacts. The target system
consists of Didymos, 780 meters in diameter, and its moonlet Dimorphos, 160
meters. The DART spacecraft will intercept the double asteroid, using autonomous
guidance to crash into the smaller one. Moving at about 6 km/s, the transferred
momentum should alter Dimorphos\'s 12 hour orbital period around its companion
by several minutes. The mission tests several technologies, including the Small-
body Maneuvering Autonomous Real-Time Navigation (SMART Nav) used to
differentiate and steer toward the target body and Roll-Out Solar Arrays (ROSA)
with Transformational Solar Array concentrators. NASA\xe2\x80\x99s Evolutionary
Xenon Thruster \xe2\x80\x94 Commercial (NEXT\xe2\x80\x93C) ion engine will also
be demonstrated, although the spacecraft\'s primary propulsion is hydrazine
thrusters. DART should arrive at Didymos in late September 2022, when it is
about 11 million kilometers from Earth. Ten days before impact, the Italian
Space Agency\'s cubesat LICIACube will be deployed to observe the collision and
ejecta with its two cameras. Earth-based telescopes will be used to measure the
altered orbit.","crew":[],"ships":["5ea6ed30080df4000697c913","5ea6ed2f080df4000
697c90b","5ea6ed30080df4000697c912"],"capsules":[],"payloads":["5fe3c4a6b3467846
b3242192"],"launchpad":"5e9e4502f509092b78566f87","flight_number":138,"name":"DA
RT","date_utc":"2021-11-24T06:20:00.000Z","date_unix":1637734800,"date_local":"2
021-11-23T22:20:00-08:00","date_precision":"hour","upcoming":false,"cores":[{"co
re":"5f57c54a0622a633027900a1","flight":2,"gridfins":true,"legs":true,"reused":t
rue,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad
":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id
":"c4b2f90e-3385-4cbe-a89f-fc5f57da1bfb","id":"5fe3b107b3467846b324216b"},{"fair
ings":{"reused":null,"recovery_attempt":true,"recovered":null,"ships":["618fad7e
563d69573ed8caa9"]},"links":{"patch":{"small":"https://images2.imgbox.com/fc/e7/
esvHlHwA_o.png","large":"https://images2.imgbox.com/91/15/2LRaHihk_o.png"},"redd
it":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_genera
l_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/c
omments/r79osa/spacex_starlink_43_launch_discussion_and_updates/","media":null,"
recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates
_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflick
r.com/65535/51732172914_4efa7d5210_o.jpg","https://live.staticflickr.com/65535/5
1730706247_4b5bf2899f_o.jpg","https://live.staticflickr.com/65535/51732172879_4c
e91546ed_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/594TbXriaAk","yout
ube_id":"594TbXriaAk","article":null,"wikipedia":"https://en.wikipedia.org/wiki/
Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,
"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"
details":null,"crew":[],"ships":["5ea6ed2d080df4000697c904","618fad7e563d69573ed
8caa9","5ee68c683c228f36bd5809b5"],"capsules":[],"payloads":["6161d0f26db1a92bfb
a85355"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":139,"name":"Star
link 4-3 (v1.5)","date_utc":"2021-12-01T23:20:00.000Z","date_unix":1638400800,"d
ate_local":"2021-12-01T18:20:00-05:00","date_precision":"hour","upcoming":false,
"cores":[{"core":"5ef670f10059c33cee4a826c","flight":9,"gridfins":true,"legs":tr

ue,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"A
SDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"laun
ch_library_id":"56db9abd-41b8-41a3-9d6d-88e52460682b","id":"6161c94c6db1a92bfba8
5349"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ship
s":[]},"links":{"patch":{"small":"https://images2.imgbox.com/75/ac/qogMzpf1_o.pn
g","large":"https://images2.imgbox.com/29/60/zFjdRVpC_o.png"},"reddit":{"campaig
n":"https://www.reddit.com/r/spacex/comments/r7chh2/ixpe_launch_campaign_thread/
","launch":null,"media":null,"recovery":null},"flickr":{"small":[],"original":["
https://live.staticflickr.com/65535/51736587581_c944959eaa_o.jpg","https://live.
staticflickr.com/65535/51737479675_63a2074244_o.jpg","https://live.staticflickr.
com/65535/51737234364_b43ca3ea26_o.jpg","https://live.staticflickr.com/65535/517
35767097_6126fe3138_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/CpmHsN5
GUn8","youtube_id":"CpmHsN5GUn8","article":null,"wikipedia":"https://en.wikipedi
a.org/wiki/IXPE"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net"
:false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failure
s":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["61c1f395a4a
2462678cbf46e"],"launchpad":"5e9e4502f509094188566f88","flight_number":140,"name
":"IXPE","date_utc":"2021-12-09T06:00:00.000Z","date_unix":1639029600,"date_loca
l":"2021-12-09T01:00:00-05:00","date_precision":"hour","upcoming":false,"cores":
[{"core":"5f57c53d0622a6330279009f","flight":5,"gridfins":true,"legs":true,"reus
ed":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","la
ndpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_libra
ry_id":"dfb2cc3b-8cd8-41b6-a83a-22b2a742ba4b","id":"6161c88d6db1a92bfba85348"},{
"fairings":{"reused":null,"recovery_attempt":true,"recovered":null,"ships":["5ea
6ed30080df4000697c912"]},"links":{"patch":{"small":"https://images2.imgbox.com/1
d/2f/Z0V6iIoM_o.png","large":"https://images2.imgbox.com/0a/63/DSii5T55_o.png"},
"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_g
eneral_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spa
cex/comments/rhvacp/rspacex_starlink_44_launch_discussion_and_updates/","media":
null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_u
pdates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.stati
cflickr.com/65535/51756013766_f664db8097_o.jpg","https://live.staticflickr.com/6
5535/51756656374_59ca8efbab_o.jpg"]},"presskit":null,"webcast":"https://youtu.be
/q4Ed3EBx90s","youtube_id":"q4Ed3EBx90s","article":"https://spaceflightnow.com/2
021/12/18/spacex-launches-starlink-satellites-from-california-on-unusual-coast-
hugging-trajectory/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"stat
ic_fire_date_utc":"2021-12-17T08:31:00.000Z","static_fire_date_unix":1639729860,
"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"fa
ilures":[],"details":"The mission consists in launching 52 Starlink v1.5
satellites to Shell number 4 at 53.2\xc2\xb0. This is unusual as the mission is
launching from Vandenberg as these missions usually launch from the East Coast."
,"crew":[],"ships":["5ea6ed30080df4000697c913","5ea6ed30080df4000697c912","5ea6e
d2f080df4000697c90b"],"capsules":[],"payloads":["61bbac16437241381bf70632"],"lau
nchpad":"5e9e4502f509092b78566f87","flight_number":141,"name":"Starlink 4-4 (v1.
5)","date_utc":"2021-12-18T12:41:40.000Z","date_unix":1639831300,"date_local":"2
021-12-18T12:41:40-08:00","date_precision":"hour","upcoming":false,"cores":[{"co
re":"5e9e28a6f35918c0803b265c","flight":11,"gridfins":true,"legs":true,"reused":
true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpa

d":"5e9e3032383ecb6bb234e7ca"}],"auto_update":false,"tbd":false,"launch_library_
id":"0d4b0c0f-3d72-4cb2-b596-dc526ad178a6","id":"61bba806437241381bf7061e"},{"fa
irings":{"reused":null,"recovery_attempt":true,"recovered":null,"ships":["618fad
7e563d69573ed8caa9"]},"links":{"patch":{"small":"https://images2.imgbox.com/9d/c
9/rmVWqnDr_o.png","large":"https://images2.imgbox.com/e4/6b/fZQllIZ8_o.png"},"re
ddit":{"campaign":"https://www.reddit.com/r/spacex/comments/rfim89/t%C3%BCrksat_
5b_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/r
ja5u0/rspacex_t%C3%BCrksat_5b_launch_discussion_and_updates/","media":null,"reco
very":null},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https
://youtu.be/JBGjE9_aosc","youtube_id":"JBGjE9_aosc","article":"https://spaceflig
htnow.com/2021/12/19/spacex-two-for-two-in-companys-first-falcon-9-launch-double
header/","wikipedia":"https://en.wikipedia.org/wiki/T%C3%BCrksat_5B"},"static_fi
re_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket
":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"The
T\xc3\xbcrksat 5B communication satellite, which its construction work continues
at Airbus Defense and Space\'s facilities in Toulouse, France, will soon be sent
to the Cape Canaveral Space Launch Station located in Florida, United States.
The satellite will be launched into space onboard the Falcon 9 rocket following
pre-launch preparations. With an estimated in-orbit lifetime of 30 years and the
aim of securing Turkey\xe2\x80\x99s orbital and frequency rights, T\xc3\xbcrksat
5B will be launched into an orbital slot at 42 degrees East. With 12 kW power,
T\xc3\xbcrksat 5B will provide TV broadcasting and data communication services
over a wide coverage area that reaches the entire Middle East, the Persian Gulf,
the Red Sea, the Mediterranean, North Africa, East Africa, South Africa and
Nigeria. Apart from that, the satellite will also provide customized services
for airlines and commercial ship operators around the world thanks to the fact
that it operates in Ka-Band.","crew":[],"ships":["618fad7e563d69573ed8caa9","5ee
68c683c228f36bd5809b5"],"capsules":[],"payloads":["5fe3c080b3467846b3242190"],"l
aunchpad":"5e9e4501f509094ba4566f84","flight_number":142,"name":"T\xc3\xbcrksat
5B","date_utc":"2021-12-19T03:58:00.000Z","date_unix":1639886280,"date_local":"2
021-12-18T22:58:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"co
re":"60b800111f83cc1e59f16438","flight":3,"gridfins":true,"legs":true,"reused":t
rue,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad
":"5e9e3033383ecb075134e7cd"}],"auto_update":false,"tbd":false,"launch_library_i
d":"16d0c02e-0bb1-45d5-a3f5-7c4ff6cf6de1","id":"5fe3afc1b3467846b3242164"},{"fai
rings":null,"links":{"patch":{"small":"https://images2.imgbox.com/fe/c3/yV1LnAUT
_o.png","large":"https://images2.imgbox.com/37/fd/AiNV3ldU_o.png"},"reddit":{"ca
mpaign":"https://www.reddit.com/r/spacex/comments/rfisc2/crs24_launch_campaign_t
hread/","launch":"https://www.reddit.com/r/spacex/comments/rktygs/rspacex_crs24_
launch_discussion_and_updates_thread/","media":null,"recovery":null},"flickr":{"
small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/gEv6HLHYhWo
","youtube_id":"gEv6HLHYhWo","article":"https://spaceflightnow.com/2021/12/21/sp
acex-cargo-flight-sets-record-for-most-orbital-launches-from-space-coast-in-a-ye
ar/","wikipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,
"net":false,"window":0,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failu
res":[],"details":"SpaceX\'s 24th ISS resupply mission on behalf of NASA, this
mission brings essential supplies to the International Space Station using the
cargo variant of SpaceX\'s Dragon 2 spacecraft. Cargo includes several science

experiments. The booster for this mission is expected to land on an ASDS. The mission will be complete with return and recovery of the Dragon capsule and down cargo.","crew":[],"ships":["5ea6ed2f080df4000697c910","614251b711a64135defb3654"],"capsules":["60b803421f83cc1e59f1644d"],"payloads":["6161d22a6db1a92bfba85357"],"launchpad":"5e9e4502f509094188566f88","flight_number":143,"name":"CRS-24","date_utc":"2021-12-21T10:06:00.000Z","date_unix":1640081160,"date_local":"2021-12-21T05:06:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"61c1ef45a4a2462678cbf45d","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"878ba32c-5e93-4d2b-95c3-24b60c8b05e7","id":"6161d2006db1a92bfba85356"},{"fairings":{"reused":null,"recovery_attempt":true,"recovered":null,"ships":["614251b711a64135defb3654"]},"links":{"patch":{"small":"https://images2.imgbox.com/8e/e9/MJG9yylu_o.png","large":"https://images2.imgbox.com/e3/1b/r7u0e6SM_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/rwukw5/rspacex_starlink_45_launch_discussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51804559341_730da65003_o.jpg","https://live.staticflickr.com/65535/51804671583_7a1137dd05_o.jpg","https://live.staticflickr.com/65535/51804914844_ee0cd2c3c0_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/4_ePBpwMhns","youtube_id":"4_ePBpwMhns","article":"https://spaceflightnow.com/2022/01/06/spacex-deploys-49-more-starlink-satellites-in-first-launch-of-2022/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":["614251b711a64135defb3654","5ea6ed2d080df4000697c904"],"capsules":[],"payloads":["61d5ece4f88e4c5fc91f1ebb"],"launchpad":"5e9e4502f509094188566f88","flight_number":144,"name":"Starlink 4-5 (v1.5)","date_utc":"2022-01-06T21:49:00.000Z","date_unix":1641505740,"date_local":"2022-01-06T16:49:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c5440622a633027900a0","flight":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"3ddb1934-2b57-489b-b5d2-31d4990604eb","id":"61d5eca1f88e4c5fc91f1eb7"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/d4/7b/iDjUz9US_o.png","large":"https://images2.imgbox.com/94/be/MVwoNNDy_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/s04tw9/transporter3_launch_campaign_thread/","launch":"https://www.reddit.com/r/spacex/comments/s23yav/rspacex_transporter3_launch_discussion_and/","media":null,"recovery":null},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51818737408_435196f856_o.jpg","https://live.staticflickr.com/65535/51819334315_a542f60ca7_o.jpg","https://live.staticflickr.com/65535/51818737428_c969752259_o.jpg","https://live.staticflickr.com/65535/51818622981_a51f8e400e_o.jpg","https://live.staticflickr.com/65535/51818962544_6dc5873faf_o.jpg","https://live.staticflickr.com/65535/51818737463_ab81867074_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/mFBeuSAvhUQ","youtube_id":"mFBeuSAvhUQ","article":"https://spaceflightnow.com/2022/01/13/spacex-

launches-105-customer-satellites-on-third-transporter-rideshare-mission/","wikip
edia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false
,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],
"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["6175aaacefa431408
5aa9c56"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":145,"name":"Tra
nsporter-3","date_utc":"2022-01-13T15:25:00.000Z","date_unix":1642087500,"date_l
ocal":"2022-01-13T10:25:00-05:00","date_precision":"hour","upcoming":false,"core
s":[{"core":"5e9e28a7f3591817f23b2663","flight":10,"gridfins":true,"legs":true,"
reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS"
,"landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_l
ibrary_id":"c660df6f-7e33-4c90-a0f5-b27c8cb4c974","id":"61bf3e31cd5ab50b0d936345
"},{"fairings":{"reused":null,"recovery_attempt":true,"recovered":null,"ships":[
"614251b711a64135defb3654"]},"links":{"patch":{"small":"https://images2.imgbox.c
om/5f/23/CAkj0nIZ_o.png","large":"https://images2.imgbox.com/d6/57/1HqOmlpH_o.pn
g"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starli
nk_general_discussion_and_deployment_thread/","launch":null,"media":null,"recove
ry":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discu
ssion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/
65535/51830117595_12bfa3bf5d_o.jpg","https://live.staticflickr.com/65535/5182844
0767_8ce8e10d30_o.jpg","https://live.staticflickr.com/65535/51829734974_ddfe778a
46_o.jpg","https://live.staticflickr.com/65535/51829734959_d68fa43e2a_o.jpg"]},"
presskit":null,"webcast":"https://youtu.be/Yov854ZT1lg","youtube_id":"Yov854ZT1l
g","article":"https://spaceflightnow.com/2022/01/19/spacex-launches-2000th-
starlink-satellite/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"stat
ic_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"r
ocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"c
rew":[],"ships":["5ea6ed2d080df4000697c904","614251b711a64135defb3654"],"capsule
s":[],"payloads":["61e05516be8d8b66799018d4"],"launchpad":"5e9e4502f509094188566
f88","flight_number":146,"name":"Starlink 4-6 (v1.5)","date_utc":"2022-01-19T00:
04:00.000Z","date_unix":1642550640,"date_local":"2022-01-18T19:04:00-05:00","dat
e_precision":"hour","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a826c"
,"flight":10,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"l
anding_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}
],"auto_update":true,"tbd":false,"launch_library_id":"50ac28f2-024f-442f-837d-da
b8107304ec","id":"61e048bbbe8d8b66799018d0"},{"fairings":{"reused":null,"recover
y_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://
images2.imgbox.com/69/be/Y0sIjJ6f_o.png","large":"https://images2.imgbox.com/ea/
26/DjPDzbZl_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/commen
ts/sarr7x/rspacex_csg2_campaign_thread/","launch":"https://www.reddit.com/r/spac
ex/comments/sdtz77/rspacex_csg2_launch_discussion_and_updates_thread/","media":n
ull,"recovery":null},"flickr":{"small":[],"original":["https://live.staticflickr
.com/65535/51856205295_4ec1c21ce3_o.jpg","https://live.staticflickr.com/65535/51
854587612_b30f28ede1_o.jpg","https://live.staticflickr.com/65535/51855875789_b27
465e1f2_o.jpg","https://live.staticflickr.com/65535/51855546836_710848417a_o.jpg
","https://live.staticflickr.com/65535/51855627363_c927574ce4_o.jpg","https://li
ve.staticflickr.com/65535/51854587577_cfe014f0e9_o.jpg","https://live.staticflic
kr.com/65535/51855875759_a4cdc29fbf_o.jpg","https://live.staticflickr.com/65535/
51855546821_7900aed52d_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/AbFo

i68L-GQ","youtube_id":"AbFoi68L-GQ","article":"https://spaceflightnow.com/2022/02/01/italian-radar-satellite-rides-spacex-rocket-into-polar-orbit/","wikipedia":null},"static_fire_date_utc":"2022-01-23T21:22:00.000Z","static_fire_date_unix":1642972920,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Falcon 9 launches to sun-synchronous polar orbit from Florida as part of CSG-2 Mission. The mission lifts off from SLC-40, Cape Canaveral on a southward azimuth and performs a dogleg maneuver. The booster for this mission is expected to return to LZ-1 based on FCC communications filings","crew":[],"ships":[],"capsules":[],"payloads":["6161d3a06db1a92bfba8535a"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":147,"name":"CSG-2","date_utc":"2022-01-31T23:11:12.000Z","date_unix":1643670672,"date_local":"2022-01-31T18:11:12-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f359183c413b265d","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb267a34e7c7"}],"auto_update":false,"tbd":false,"launch_library_id":"23229c2b-abb7-4b94-b624-981a9adc88d2","id":"6161d32d6db1a92bfba85359"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/a8/17/lVuBZTIF_o.png","large":"https://images2.imgbox.com/4c/7a/USlzA8r3_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/si3o0y/rspacex_nrol87_launch_discussion_and_updates/","media":null,"recovery":null},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51860158413_2ebc4d47a4_o.jpg","https://live.staticflickr.com/65535/51860412009_2e15b59fbf_o.jpg","https://live.staticflickr.com/65535/51860158508_793bf779eb_o.jpg","https://live.staticflickr.com/65535/51860411994_584cab0598_o.jpg","https://live.staticflickr.com/65535/51859123422_603c610574_o.jpg","https://live.staticflickr.com/65535/51859122897_637e67a312_o.jpg","https://live.staticflickr.com/65535/51860730685_c8c7f0561e_o.jpg","https://live.staticflickr.com/65535/51859123052_cc5640ef1a_o.jpg","https://live.staticflickr.com/65535/51860412119_8926453a27_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/bVk8XyjhTKo","youtube_id":"bVk8XyjhTKo","article":"https://spaceflightnow.com/2022/02/02/spacex-launches-classified-nro-satellite-from-vandenberg-space-force-base/","wikipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["6175aaacefa4314085aa9c56"],"launchpad":"5e9e4502f509092b78566f87","flight_number":148,"name":"NROL-87","date_utc":"2022-02-02T20:18:00.000Z","date_unix":1643833080,"date_local":"2022-02-02T12:18:00-08:00","date_precision":"hour","upcoming":false,"cores":[{"core":"61fae5947aa67176fe3e0e1e","flight":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb554034e7c9"}],"auto_update":true,"tbd":false,"launch_library_id":"2e650790-ff3e-434a-b028-a6a1a13cfc94","id":"607a34e35a906a44023e085e"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/1c/c9/KfwNHab1_o.png","large":"https://images2.imgbox.com/fa/2d/9bZKP4Lb_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/sfr8l0/rspacex_starlink_47_launch_discussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex

_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51869166852_83ed7030ff_o.jpg","https://live.staticflickr.com/65535/51870446979_a7af58c55a_o.jpg","https://live.staticflickr.com/65535/51870446669_f94575721f_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/UY3fZ6PwuUY","youtube_id":"UY3fZ6PwuUY","article":"https://spaceflightnow.com/2022/02/03/spacex-launches-third-falcon-9-rocket-mission-in-three-days/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["61e05520be8d8b66799018d5"],"launchpad":"5e9e4502f509094188566f88","flight_number":149,"name":"Starlink 4-7 (v1.5)","date_utc":"2022-02-03T18:13:00.000Z","date_unix":1643911980,"date_local":"2022-02-03T13:13:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c53d0622a6330279009f","flight":6,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"de39dd1a-0f72-4afd-a6b9-1b848b246071","id":"61e048ffbe8d8b66799018d1"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/97/24/8byKYtz1_o.png","large":"https://images2.imgbox.com/d0/84/kfEJRH1j_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/sx92uf/rspacex_starlink_48_launch_discussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51897183392_ecee950c6f_o.jpg","https://live.staticflickr.com/65535/51898142206_9dd9dd27e1_o.jpg","https://live.staticflickr.com/65535/51897183382_6f6dcf0fb8_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/eiKOMCRymsw","youtube_id":"eiKOMCRymsw","article":"https://spaceflightnow.com/2022/02/21/spacex-adds-46-more-satellites-to-starlink-fleet/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["61fc02e1e0dc5662b76489b4"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":150,"name":"Starlink 4-8 (v1.5)","date_utc":"2022-02-21T14:44:00.000Z","date_unix":1645454640,"date_local":"2022-02-21T09:44:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":11,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"398e713f-5daa-4fb9-a70a-0b8654baf5d1","id":"61fc01dae0dc5662b76489a7"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/4d/6a/Oh3QT4JI_o.png","large":"https://images2.imgbox.com/e7/37/bWXhCJ8i_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/t0yksi/rspacex_starlink_411_launch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51903390122_fc0acab37a_o.jpg","https://live.staticflickr.com/65

535/51904998190_f8f347c995_o.jpg","https://live.staticflickr.com/65535/51904679574_588b01b22d_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/nnVOfKOzXHE","youtube_id":"nnVOfKOzXHE","article":"https://spaceflightnow.com/2022/02/25/spacex-deploys-another-batch-of-starlink-satellites/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["61fc0334e0dc5662b76489b5"],"launchpad":"5e9e4502f509092b78566f87","flight_number":151,"name":"Starlink 4-11 (v1.5)","date_utc":"2022-02-25T17:12:00.000Z","date_unix":1645809120,"date_local":"2022-02-25T09:12:00-08:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c54a0622a633027900a1","flight":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"b7b24770-f9dd-40eb-adad-da95e917e55d","id":"61fc0203e0dc5662b76489a8"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/cd/cf/dbAM1D7F_o.png","large":"https://images2.imgbox.com/75/11/KTRZPYiQ_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/t5lzm9/rspacex_starlink_49_launch_discussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51924631989_4e0b26f306_o.jpg","https://live.staticflickr.com/65535/51924934610_296c72bf67_o.jpg","https://live.staticflickr.com/65535/51924933910_9627ae096e_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/ypb2sDdUkRo","youtube_id":"ypb2sDdUkRo","article":"https://spaceflightnow.com/2022/03/03/after-another-starlink-mission-spacex-on-pace-for-one-launch-per-week-this-year/","wikipedia":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["61fc0379e0dc5662b76489b6"],"launchpad":"5e9e4502f509094188566f88","flight_number":152,"name":"Starlink 4-9 (v1.5)","date_utc":"2022-03-03T14:35:00.000Z","date_unix":1646318100,"date_local":"2022-03-03T09:35:00-05:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a826c","flight":11,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"861795c5-e694-4d3e-b22f-a356a31cd5d8","id":"61fc0224e0dc5662b76489ab"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/82/8f/qKGTi0s6_o.png","large":"https://images2.imgbox.com/16/33/3M4qJ6Fz_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/t9la7r/rspacex_starlink_410_launch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr.com/65535/51928220502_1a44139be7_o.jpg","https://live.staticflickr.com/65535/51929288928_46decee5db_o.jpg","https://live.staticflickr.com/65535/51929537589_f03fb8c20a_o.jpg"]},"presskit":null,"webcast":"https://youtu.

be/uqAppamdGyo","youtube_id":"uqAppamdGyo","article":"https://spaceflightnow.com
/2022/03/09/spacex-broomstick-launches-40th-starlink-mission/","wikipedia":"http
s://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static_fire_da
te_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","suc
cess":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payl
oads":["61fc0382e0dc5662b76489b7"],"launchpad":"5e9e4501f509094ba4566f84","fligh
t_number":153,"name":"Starlink 4-10 (v1.5)","date_utc":"2022-03-09T13:45:00.000Z
","date_unix":1646833500,"date_local":"2022-03-09T08:45:00-05:00","date_precisio
n":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f359183c413b265d","flight":
4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_succ
ess":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_upd
ate":true,"tbd":false,"launch_library_id":"d8c7fbe0-6a32-42dc-8c24-f1c632adc8b5"
,"id":"61fc0243e0dc5662b76489ae"},{"fairings":{"reused":null,"recovery_attempt":
null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.img
box.com/d6/34/IPIyyiUF_o.png","large":"https://images2.imgbox.com/4e/d5/Mvzpbdfg
_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/s
tarlink_general_discussion_and_deployment_thread/","launch":null,"media":null,"r
ecovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_
discussion_thread/"},"flickr":{"small":[],"original":["https://live.staticflickr
.com/65535/51947052831_3b1599cd70_o.jpg","https://live.staticflickr.com/65535/51
946071252_b51d6839e9_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/0giA6V
ZOICs","youtube_id":"0giA6VZOICs","article":"https://spaceflightnow.com/2022/03/
19/spacex-stretches-rocket-reuse-record-with-another-starlink-launch/","wikipedi
a":"https://en.wikipedia.org/wiki/Starlink"},"static_fire_date_utc":null,"static
_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1
ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":
[],"payloads":["623491e5f051102e1fcedac9"],"launchpad":"5e9e4501f509094ba4566f84
","flight_number":154,"name":"Starlink 4-12 (v1.5)","date_utc":"2022-03-19T03:24
:00.000Z","date_unix":1647660240,"date_local":"2022-03-18T23:24:00-04:00","date_
precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f35918c0803b265c","
flight":12,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"lan
ding_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],
"auto_update":true,"tbd":false,"launch_library_id":"72188aca-810d-40b9-887d-4304
0614dd2c","id":"6234908cf051102e1fcedac4"},{"fairings":{"reused":null,"recovery_
attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://im
ages2.imgbox.com/6f/96/DdGNFAIf_o.png","large":"https://images2.imgbox.com/cb/68
/qmxOMk8e_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/s
pacex/comments/tt5n43/rspacex_transporter4_launch_discussion_and/","media":null,
"recovery":null},"flickr":{"small":[],"original":["https://live.staticflickr.com
/65535/51981688502_0584ac5658_o.jpg","https://live.staticflickr.com/65535/519829
75529_3e1610767a_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/4NqSoHnkKE
M","youtube_id":"4NqSoHnkKEM","article":"https://spaceflightnow.com/2022/04/01/f
orty-payloads-ride-into-orbit-on-spacex-falcon-9-rocket/","wikipedia":null},"sta
tic_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"
rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"
crew":[],"ships":[],"capsules":[],"payloads":["6243af62af52800c6e919260"],"launc
hpad":"5e9e4501f509094ba4566f84","flight_number":155,"name":"Transporter-4","dat
e_utc":"2022-04-01T16:24:00.000Z","date_unix":1648830240,"date_local":"2022-04-0

1T12:24:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f5
7c53d0622a6330279009f","flight":7,"gridfins":true,"legs":true,"reused":true,"lan
ding_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3
033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"335ac
ce9-a35c-436c-9a22-a2505f20957f","id":"6243ad8baf52800c6e919252"},{"fairings":nu
ll,"links":{"patch":{"small":"https://images2.imgbox.com/16/33/EAmegdSP_o.png","
large":"https://images2.imgbox.com/27/1c/FaWQjihE_o.png"},"reddit":{"campaign":"
https://www.reddit.com/r/spacex/comments/t3ez79/axiom1_launch_campaign_thread/",
"launch":"https://www.reddit.com/r/spacex/comments/tyd866/rspacex_axiom1_launch_
discussion_and_updates/","media":null,"recovery":null},"flickr":{"small":[],"ori
ginal":["https://live.staticflickr.com/65535/51991997860_fa865513ec_o.jpg","http
s://live.staticflickr.com/65535/51991997845_85b28ce575_o.jpg","https://live.stat
icflickr.com/65535/51990441472_e16a9f15ff_o.jpg","https://live.staticflickr.com/
65535/51991440466_17111d73b6_o.jpg","https://live.staticflickr.com/65535/5199149
8488_037537ba40_o.jpg","https://live.staticflickr.com/65535/51991498473_0e62ee3c
34_o.jpg","https://live.staticflickr.com/65535/51991440451_209bac2fac_o.jpg","ht
tps://live.staticflickr.com/65535/51991997825_345544ff0a_o.jpg","https://live.st
aticflickr.com/65535/51990441502_7dfa987137_o.jpg","https://live.staticflickr.co
m/65535/51990441532_e9d53093c6_o.jpg"]},"presskit":null,"webcast":"https://youtu
.be/5nLk_Vqp7nw","youtube_id":"5nLk_Vqp7nw","article":null,"wikipedia":"https://
en.wikipedia.org/wiki/Axiom_Mission_1"},"static_fire_date_utc":"2022-04-06T19:13
:00.000Z","static_fire_date_unix":1649272380,"net":false,"window":null,"rocket":
"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":"Axiom Mission
1 (or Ax-1) is a planned SpaceX Crew Dragon mission to the International Space
Station (ISS), operated by SpaceX on behalf of Axiom Space. The flight will
launch no earlier than 31 March 2022 and send four people to the ISS for an
eight-day stay","crew":["61eefc9c9eb1064137a1bd77","61eefcf89eb1064137a1bd79","6
1eefd5b9eb1064137a1bd7a","61eefdbf9eb1064137a1bd7b"],"ships":["5ea6ed2e080df4000
697c909"],"capsules":["5e9e2c5df359188aba3b2676"],"payloads":["61eefb129eb106413
7a1bd74"],"launchpad":"5e9e4502f509094188566f88","flight_number":156,"name":"Ax-
1","date_utc":"2022-04-08T15:17:00.000Z","date_unix":1649431020,"date_local":"20
22-04-08T11:17:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"cor
e":"5f57c5440622a633027900a0","flight":5,"gridfins":true,"legs":true,"reused":tr
ue,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad"
:"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id"
:"a3eeb03b-a209-4255-91b5-772dc0d2150e","id":"61eefaa89eb1064137a1bd73"},{"fairi
ngs":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links"
:{"patch":{"small":"https://images2.imgbox.com/2b/af/npQ6NwKM_o.png","large":"ht
tps://images2.imgbox.com/aa/64/aThfTk9s_o.png"},"reddit":{"campaign":null,"launc
h":null,"media":null,"recovery":null},"flickr":{"small":[],"original":["https://
live.staticflickr.com/65535/52013376989_395092fa4c_o.jpg","https://live.staticfl
ickr.com/65535/52013130121_da63eecbec_o.jpg","https://live.staticflickr.com/6553
5/52013376694_cea1bb1c0b_o.jpg"]},"presskit":null,"webcast":"https://youtu.be/mM
cmf1g4qSA","youtube_id":"mMcmf1g4qSA","article":"https://spaceflightnow.com/2022
/04/17/spacex-launches-and-lands-rocket-on-mission-for-national-reconnaissance-o
ffice/","wikipedia":"https://en.wikipedia.org/wiki/National_Reconnaissance_Offic
e"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window
":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details

":null,"crew":[],"ships":[],"capsules":[],"payloads":["6243b036af52800c6e919262"
],"launchpad":"5e9e4502f509092b78566f87","flight_number":157,"name":"NROL-85","d
ate_utc":"2022-04-17T13:13:00.000Z","date_unix":1650201180,"date_local":"2022-04
-17T06:13:00-07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"6
1fae5947aa67176fe3e0e1e","flight":2,"gridfins":true,"legs":true,"reused":true,"l
anding_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9
e3032383ecb554034e7c9"}],"auto_update":true,"tbd":false,"launch_library_id":"429
32355-c450-4250-a885-2d2709fd7cfc","id":"6243adcaaf52800c6e919254"},{"fairings":
{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"pa
tch":{"small":"https://images2.imgbox.com/60/36/ReA4NxNK_o.png","large":"https:/
/images2.imgbox.com/77/16/dxET2a6z_o.png"},"reddit":{"campaign":"https://www.red
dit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thre
ad/","launch":"https://www.reddit.com/r/spacex/comments/u8hpux/rspacex_starlink_
414_launch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/sp
acex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small
":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/s6yBwQSrtFY","yo
utube_id":"s6yBwQSrtFY","article":null,"wikipedia":"https://en.wikipedia.org/wik
i/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":fals
e,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[]
,"details":null,"crew":[],"ships":["618fad7e563d69573ed8caa9"],"capsules":[],"pa
yloads":["6243af9faf52800c6e919261"],"launchpad":"5e9e4501f509094ba4566f84","fli
ght_number":158,"name":"Starlink 4-14 (v1.5)","date_utc":"2022-04-21T15:16:00.00
0Z","date_unix":1650554160,"date_local":"2022-04-21T11:16:00-04:00","date_precis
ion":"hour","upcoming":false,"cores":[{"core":"5ef670f10059c33cee4a826c","flight
":12,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_s
uccess":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_
update":true,"tbd":false,"launch_library_id":"2c5447d7-36c5-40fd-88de-47ed6b258b
db","id":"6243ada6af52800c6e919253"},{"fairings":null,"links":{"patch":{"small":
"https://images2.imgbox.com/22/94/l0GVrzr2_o.png","large":"https://images2.imgbo
x.com/8f/ce/drbrg4Ky_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spac
ex/comments/u6d5na/rspacex_crew4_campaign_launch_discussion_updates/","launch":n
ull,"media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit"
:null,"webcast":"https://youtu.be/orN0PaqQECs","youtube_id":"orN0PaqQECs","artic
le":null,"wikipedia":"https://en.wikipedia.org/wiki/SpaceX_Crew-4"},"static_fire
_date_utc":"2022-04-20T14:12:00.000Z","static_fire_date_unix":1650463920,"net":f
alse,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures"
:[],"details":null,"crew":["6243bc5baf52800c6e919276","6243bcdcaf52800c6e919277"
,"6243bd7baf52800c6e919278","6243bdf8af52800c6e919279"],"ships":["614251b711a641
35defb3654"],"capsules":["62615d180ec008379be596f1"],"payloads":["6243b1cdaf5280
0c6e919265"],"launchpad":"5e9e4502f509094188566f88","flight_number":159,"name":"
Crew-4","date_utc":"2022-04-27T07:52:00.000Z","date_unix":1651045920,"date_local
":"2022-04-27T03:52:00-04:00","date_precision":"hour","upcoming":false,"cores":[
{"core":"60b800111f83cc1e59f16438","flight":4,"gridfins":true,"legs":true,"reuse
d":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","lan
dpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_librar
y_id":"d786d8fc-862b-45bf-8f7b-9ad862883f67","id":"6243ade2af52800c6e919255"},{"
fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"l
inks":{"patch":{"small":"https://images2.imgbox.com/f2/ba/8LUO26uP_o.png","large

":"https://images2.imgbox.com/17/93/FKLGOiaH_o.png"},"reddit":{"campaign":"https
://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deplo
yment_thread/","launch":null,"media":null,"recovery":"https://www.reddit.com/r/s
pacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"smal
l":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/skNrXnubpwA","y
outube_id":"skNrXnubpwA","article":null,"wikipedia":"https://en.wikipedia.org/wi
ki/Starlink"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":fal
se,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[
],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["62582aa55988f15
9024b964d"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":160,"name":"S
tarlink 4-16 (v1.5)","date_utc":"2022-04-29T21:27:00.000Z","date_unix":165126762
0,"date_local":"2022-04-29T17:27:00-04:00","date_precision":"hour","upcoming":fa
lse,"cores":[{"core":"5f57c5440622a633027900a0","flight":6,"gridfins":true,"legs
":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type
":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"
launch_library_id":"b79a9332-4c0c-42a2-a59b-aafcd5d4721d","id":"62582a6f5988f159
024b964b"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"
ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/1c/64/JbkoahWh_
o.png","large":"https://images2.imgbox.com/c3/f5/xpg9K0hk_o.png"},"reddit":{"cam
paign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discuss
ion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/u
j5ina/rspacex_starlink_417_launch_discussion_and/","media":null,"recovery":"http
s://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thr
ead/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://yo
utu.be/KzpVUXxdc68","youtube_id":"KzpVUXxdc68","article":null,"wikipedia":null},
"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":nu
ll,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":nu
ll,"crew":[],"ships":[],"capsules":[],"payloads":["62582aad5988f159024b964e"],"l
aunchpad":"5e9e4502f509094188566f88","flight_number":161,"name":"Starlink 4-17 (
v1.5)","date_utc":"2022-05-06T09:42:00.000Z","date_unix":1651830120,"date_local"
:"2022-05-06T05:42:00-04:00","date_precision":"hour","upcoming":false,"cores":[{
"core":"5e9e28a7f3591817f23b2663","flight":12,"gridfins":true,"legs":true,"reuse
d":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","lan
dpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_librar
y_id":"4f25c927-6a49-4472-814f-4f1a20d93604","id":"62582a855988f159024b964c"},{"
fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"l
inks":{"patch":{"small":"https://images2.imgbox.com/46/a4/j5tV5LLx_o.png","large
":"https://images2.imgbox.com/45/88/6grEBZra_o.png"},"reddit":{"campaign":"https
://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deplo
yment_thread/","launch":null,"media":null,"recovery":"https://www.reddit.com/r/s
pacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"smal
l":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/bG6AwvGPd-E","y
outube_id":"bG6AwvGPd-E","article":null,"wikipedia":null},"static_fire_date_utc"
:null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95e
da69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[
],"capsules":[],"payloads":["625829d75988f159024b9649"],"launchpad":"5e9e4502f50
9092b78566f87","flight_number":162,"name":"Starlink 4-13 (v1.5)","date_utc":"202
2-05-13T22:07:00.000Z","date_unix":1652479620,"date_local":"2022-05-13T15:07:00-

07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c54a0622a6
33027900a1","flight":5,"gridfins":true,"legs":true,"reused":true,"landing_attemp
t":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6b
b234e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"0bc91464-1d61-45
45-95c8-01040dc5eec9","id":"6258290d5988f159024b9644"},{"fairings":{"reused":nul
l,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small"
:"https://images2.imgbox.com/45/9f/Na8zs6V4_o.png","large":"https://images2.imgb
ox.com/13/f0/tUIAS2tH_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spa
cex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch"
:"https://www.reddit.com/r/spacex/comments/upk6t3/rspacex_starlink_415_launch_di
scussion_and/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments
/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"origina
l":[]},"presskit":null,"webcast":"https://youtu.be/nFDkWL2Hmh8","youtube_id":"nF
DkWL2Hmh8","article":null,"wikipedia":null},"static_fire_date_utc":null,"static_
fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1e
c","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[
],"payloads":["625829cf5988f159024b9648"],"launchpad":"5e9e4501f509094ba4566f84"
,"flight_number":163,"name":"Starlink 4-15 (v1.5)","date_utc":"2022-05-14T20:40:
00.000Z","date_unix":1652560800,"date_local":"2022-05-14T16:40:00-04:00","date_p
recision":"hour","upcoming":false,"cores":[{"core":"627843db57b51b752c5c5a54","f
light":1,"gridfins":true,"legs":true,"reused":false,"landing_attempt":true,"land
ing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"
auto_update":true,"tbd":false,"launch_library_id":"b418d984-a9d1-4fa3-953d-c684a
079714c","id":"625828f25988f159024b9643"},{"fairings":{"reused":null,"recovery_a
ttempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://ima
ges2.imgbox.com/b8/49/OVeV3xJg_o.png","large":"https://images2.imgbox.com/60/48/
jFYGyCf9_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/
jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www
.reddit.com/r/spacex/comments/urv8l4/rspacex_starlink_418_launch_discussion_and/
","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspac
ex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]},"press
kit":null,"webcast":"https://youtu.be/dQTgX40R-IQ","youtube_id":"dQTgX40R-IQ","a
rticle":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_date_uni
x":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":
true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":
["62615ee40ec008379be596fd"],"launchpad":"5e9e4502f509094188566f88","flight_numb
er":164,"name":"Starlink 4-18 (v1.5)","date_utc":"2022-05-18T10:40:00.000Z","dat
e_unix":1652870400,"date_local":"2022-05-18T06:40:00-04:00","date_precision":"ho
ur","upcoming":false,"cores":[{"core":"5e9e28a6f359183c413b265d","flight":5,"gri
dfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":t
rue,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":t
rue,"tbd":false,"launch_library_id":"27795b91-eb0e-43f1-898b-a23d9ff332db","id":
"62615ebc0ec008379be596fa"},{"fairings":{"reused":null,"recovery_attempt":null,"
recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.co
m/fc/73/QpGKqpvV_o.png","large":"https://images2.imgbox.com/a1/0b/Hj2nGHdQ_o.png
"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/
uxafkb/rspacex_transporter5_launch_discussion_and/","media":null,"recovery":null
},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.b

e/KHt3MyimuqU","youtube_id":"KHt3MyimuqU","article":null,"wikipedia":null},"stat
ic_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"r
ocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"c
rew":[],"ships":[],"capsules":[],"payloads":["6243b39daf52800c6e919267"],"launch
pad":"5e9e4501f509094ba4566f84","flight_number":165,"name":"Transporter-5","date
_utc":"2022-05-25T18:27:00.000Z","date_unix":1653503220,"date_local":"2022-05-25
T14:27:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57
c53d0622a6330279009f","flight":8,"gridfins":true,"legs":true,"reused":true,"land
ing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e30
32383ecb267a34e7c7"}],"auto_update":true,"tbd":false,"launch_library_id":"949421
ac-3802-499b-b383-d8274de7e147","id":"6243ae24af52800c6e919258"},{"fairings":{"r
eused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch
":{"small":"https://images2.imgbox.com/6d/f7/ZJKXRNzL_o.png","large":"https://im
ages2.imgbox.com/32/10/Mb5CLqt8_o.png"},"reddit":{"campaign":null,"launch":"http
s://www.reddit.com/r/spacex/comments/v7hxph/rspacex_nilesat_301_launch_discussio
n_and_updates/","media":null,"recovery":null},"flickr":{"small":[],"original":[]
},"presskit":null,"webcast":"https://youtu.be/UpCZu89zb5Y","youtube_id":"UpCZu89
zb5Y","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Nilesat"},"stati
c_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"ro
cket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"cr
ew":[],"ships":[],"capsules":[],"payloads":["6243b286af52800c6e919266"],"launchp
ad":"5e9e4501f509094ba4566f84","flight_number":166,"name":"Nilesat-301","date_ut
c":"2022-06-08T21:04:00.000Z","date_unix":1654722240,"date_local":"2022-06-08T17
:04:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c54
40622a633027900a0","flight":7,"gridfins":true,"legs":true,"reused":true,"landing
_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e30333
83ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"62fb58f6-
1d43-4b24-862f-6ac5bee5f723","id":"6243ae0aaf52800c6e919257"},{"fairings":{"reus
ed":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{
"small":"https://images2.imgbox.com/ea/40/slQKbK6Y_o.png","large":"https://image
s2.imgbox.com/24/85/xcpbpqqZ_o.png"},"reddit":{"campaign":"https://www.reddit.co
m/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","
launch":"https://www.reddit.com/r/spacex/comments/vdue2y/rspacex_starlink_419_la
unch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/spacex/c
omments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"
original":[]},"presskit":null,"webcast":"https://youtu.be/oCN-
BMU9-hM","youtube_id":"oCN-BMU9-hM","article":null,"wikipedia":null},"static_fir
e_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket"
:"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[
],"ships":[],"capsules":[],"payloads":["6278484e57b51b752c5c5a63"],"launchpad":"
5e9e4502f509094188566f88","flight_number":167,"name":"Starlink 4-19 (v1.5)","dat
e_utc":"2022-06-01T17:08:50.000Z","date_unix":1654103330,"date_local":"2022-06-0
1T13:08:50-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5ef
670f10059c33cee4a826c","flight":13,"gridfins":true,"legs":true,"reused":true,"la
nding_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e
3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"1797
89f0-9380-4182-8ea2-676504c2f890","id":"6278481757b51b752c5c5a5f"},{"fairings":{
"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"pat

ch":{"small":"https://images2.imgbox.com/c4/49/D1B0f2cg_o.png","large":"https://images2.imgbox.com/9e/a6/Vc7LrFG8_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/vf0x9v/rspacex_sarah1_launch_discussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/lCX-KUCn4A4","youtube_id":"lCX-KUCn4A4","article":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["5fe3b2abb3467846b3242172"],"launchpad":"5e9e4502f509092b78566f87","flight_number":168,"name":"SARah 1","date_utc":"2022-06-18T14:19:00.000Z","date_unix":1655561940,"date_local":"2022-06-18T07:19:00-07:00","date_precision":"hour","upcoming":false,"cores":[{"core":"61fae5947aa67176fe3e0e1e","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"RTLS","landpad":"5e9e3032383ecb554034e7c9"}],"auto_update":true,"tbd":false,"launch_library_id":"4ca945f6-981f-4ee9-8a79-f1204b785f8c","id":"5fe3af43b3467846b324215e"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/8b/bd/1cZPPs46_o.png","large":"https://images2.imgbox.com/3c/8b/Ck1Ona0s_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/vfcq6f/rspacex_globalstar_fm15_launch_discussion_and/","media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/94cClvOFWH4","youtube_id":"94cClvOFWH4","article":null,"wikipedia":"https://en.wikipedia.org/wiki/Globalstar"},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["62adecbcd26f4f711fa53848"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":169,"name":"Globalstar FM15","date_utc":"2022-06-19T04:27:00.000Z","date_unix":1655612820,"date_local":"2022-06-19T00:27:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c53d0622a6330279009f","flight":9,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"33223258-614c-449c-8af7-a9f75cc036b2","id":"62a9f08b20413d2695d88711"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/32/84/oJzvzmvd_o.jpg","large":"https://images2.imgbox.com/c8/1c/MnTYr16O_o.jpg"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/spacex/comments/vnc3uu/rspacex_ses22_launch_discussion_and_updates_thread/","media":null,"recovery":null},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/ZjUvXWg2_fE","youtube_id":"ZjUvXWg2_fE","article":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["6243b93caf52800c6e91926f"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":170,"name":"SES-22","date_utc":"2022-06-29T21:04:00.000Z","date_unix":1656536640,"date_local":"2022-06-29T17:04:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"627843db57b51b752c5c5a54","flight":2,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e303

3383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"86a3010
e-f8ef-4b64-a029-f4f92829772d","id":"6243aea5af52800c6e91925c"},{"fairings":{"re
used":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch"
:{"small":"https://images2.imgbox.com/b4/ad/i3KVeFRA_o.png","large":"https://ima
ges2.imgbox.com/4a/e6/kCnNdivV_o.png"},"reddit":{"campaign":"https://www.reddit.
com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/"
,"launch":"https://www.reddit.com/r/spacex/comments/vsz5s5/rspacex_starlink_421_
launch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/spacex
/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[]
,"original":[]},"presskit":null,"webcast":"https://youtu.be/u_A7xdnVllM","youtub
e_id":"u_A7xdnVllM","article":null,"wikipedia":null},"static_fire_date_utc":null
,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda699
73a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"ca
psules":[],"payloads":["630bccc6d36448026ab01639"],"launchpad":"5e9e4501f509094b
a4566f84","flight_number":171,"name":"Starlink 4-21 (v1.5)","date_utc":"2022-07-
07T13:11:00.000Z","date_unix":1657199460,"date_local":"2022-07-07T09:11:00-04:00
","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23
b2663","flight":13,"gridfins":true,"legs":true,"reused":true,"landing_attempt":t
rue,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534
e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"ac4ce8e1-fd76-4654-8
809-5500ba792a8a","id":"62a9f0c920413d2695d88712"},{"fairings":{"reused":null,"r
ecovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"ht
tps://images2.imgbox.com/8a/bc/C3bBWOQN_o.png","large":"https://images2.imgbox.c
om/e6/b5/PT6yjfOt_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/
comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"ht
tps://www.reddit.com/r/spacex/comments/vvwx9k/rspacex_starlink_31_launch_discuss
ion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/comme
nts/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"orig
inal":[]},"presskit":null,"webcast":"https://youtu.be/_c738Z_zQR0","youtube_id":
"_c738Z_zQR0","article":null,"wikipedia":null},"static_fire_date_utc":null,"stat
ic_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809
d1ec","success":null,"failures":[],"details":null,"crew":[],"ships":[],"capsules
":[],"payloads":["630bccd6d36448026ab0163a"],"launchpad":"5e9e4502f509092b78566f
87","flight_number":172,"name":"Starlink 3-1 (v1.5)","date_utc":"2022-07-11T01:3
9:00.000Z","date_unix":1657503540,"date_local":"2022-07-10T18:39:00-07:00","date
_precision":"hour","upcoming":false,"cores":[{"core":"5f57c54a0622a633027900a1",
"flight":6,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"lan
ding_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7ca"}],
"auto_update":true,"tbd":false,"launch_library_id":"051c4c90-a89d-4a86-a77f-c7e2
2b9cb458","id":"62a9f0e320413d2695d88713"},{"fairings":null,"links":{"patch":{"s
mall":"https://images2.imgbox.com/4a/8a/XVjJ2BKD_o.png","large":"https://images2
.imgbox.com/80/e2/15AFwnRv_o.png"},"reddit":{"campaign":null,"launch":"https://w
ww.reddit.com/r/spacex/comments/vyw3eo/rspacex_crs25_launch_discussion_and_updat
es_thread/","media":null,"recovery":null},"flickr":{"small":[],"original":[]},"p
resskit":null,"webcast":"https://youtu.be/mnowEqqMiFs","youtube_id":"mnowEqqMiFs
","article":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_date
_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","succe
ss":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloa

ds":["6243b835af52800c6e91926d"],"launchpad":"5e9e4502f509094188566f88","flight_
number":173,"name":"CRS-25","date_utc":"2022-07-15T00:44:00.000Z","date_unix":16
57845840,"date_local":"2022-07-14T20:44:00-04:00","date_precision":"hour","upcom
ing":false,"cores":[{"core":"60b800111f83cc1e59f16438","flight":5,"gridfins":tru
e,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landi
ng_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":
false,"launch_library_id":"2773613e-58eb-4b99-8120-595c92aa3390","id":"6243ae40a
f52800c6e919259"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered"
:null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/ba/9b/IN
F3SG3k_o.png","large":"https://images2.imgbox.com/32/8f/HPsvsuG9_o.png"},"reddit
":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_
discussion_and_deployment_thread/","launch":null,"media":null,"recovery":"https:
//www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_threa
d/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://yout
u.be/7VWcjgYfJ9U","youtube_id":"7VWcjgYfJ9U","article":null,"wikipedia":null},"s
tatic_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null
,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null
,"crew":[],"ships":[],"capsules":[],"payloads":["630bce10d36448026ab0163b"],"lau
nchpad":"5e9e4501f509094ba4566f84","flight_number":174,"name":"Starlink 4-22 (v1
.5)","date_utc":"2022-07-17T14:50:00.000Z","date_unix":1658069400,"date_local":"
2022-07-17T10:50:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"c
ore":"5e9e28a6f35918c0803b265c","flight":13,"gridfins":true,"legs":true,"reused"
:true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landp
ad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_
id":"84f9bbdd-0e2c-468e-b1d0-73d640745c13","id":"62a9f0f820413d2695d88714"},{"fa
irings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"lin
ks":{"patch":{"small":"https://images2.imgbox.com/74/7b/F8vvXC49_o.png","large":
"https://images2.imgbox.com/a4/4e/55EPx43e_o.png"},"reddit":{"campaign":"https:/
/www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deploym
ent_thread/","launch":null,"media":null,"recovery":"https://www.reddit.com/r/spa
cex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small"
:[],"original":[]},"presskit":null,"webcast":"https://youtu.be/BuXdtORWrpg","you
tube_id":"BuXdtORWrpg","article":null,"wikipedia":null},"static_fire_date_utc":n
ull,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda
69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],
"capsules":[],"payloads":["630bce49d36448026ab0163c"],"launchpad":"5e9e4502f5090
92b78566f87","flight_number":175,"name":"Starlink 3-2 (v1.5)","date_utc":"2022-0
7-21T17:13:00.000Z","date_unix":1658423580,"date_local":"2022-07-21T10:13:00-07:
00","date_precision":"hour","upcoming":false,"cores":[{"core":"61fae5947aa67176f
e3e0e1e","flight":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":
true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb23
4e7ca"}],"auto_update":true,"tbd":false,"launch_library_id":"4ddf282b-94a1-418e-
b3f6-7d8e753fdfec","id":"62a9f10b20413d2695d88715"},{"fairings":{"reused":null,"
recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"h
ttps://images2.imgbox.com/8b/5a/zJ1W8QIE_o.png","large":"https://images2.imgbox.
com/d2/64/JxeOTPRl_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex
/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":nu
ll,"media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspa

cex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]},"pres
kit":null,"webcast":null,"youtube_id":null,"article":null,"wikipedia":null},"st
atic_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,
"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,
"crew":[],"ships":[],"capsules":[],"payloads":["630bce79d36448026ab0163d"],"laun
chpad":"5e9e4501f509094ba4566f84","flight_number":176,"name":"Starlink 4-25 (v1.
5)","date_utc":"2022-07-24T00:00:00.000Z","date_unix":1658620800,"date_local":"2
022-07-23T20:00:00-04:00","date_precision":"day","upcoming":false,"cores":[{"cor
e":"5f57c5440622a633027900a0","flight":8,"gridfins":true,"legs":true,"reused":tr
ue,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad"
:"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id"
:null,"id":"62a9f12820413d2695d88716"},{"fairings":{"reused":null,"recovery_atte
mpt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images
2.imgbox.com/9a/11/gjRM9dTi_o.png","large":"https://images2.imgbox.com/ca/23/Q8I
8SwKv_o.png"},"reddit":{"campaign":null,"launch":"https://www.reddit.com/r/space
x/comments/wfohz0/rspacex_kplo_launch_discussion_updates_thread/","media":null,"
recovery":null},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"h
ttps://youtu.be/rTrkHZjiO_8","youtube_id":"rTrkHZjiO_8","article":null,"wikipedi
a":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"w
indow":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"de
tails":null,"crew":[],"ships":[],"capsules":[],"payloads":["630bcfe1d36448026ab0
1641"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":177,"name":"KPLO",
"date_utc":"2022-08-04T23:08:00.000Z","date_unix":1659654480,"date_local":"2022-
08-04T19:08:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":
"5e9e28a6f359183c413b265d","flight":6,"gridfins":true,"legs":true,"reused":true,
"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5
e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"7
5d7306e-1d76-4c0b-9dc4-98dee7b9af59","id":"62a9f86420413d2695d88719"},{"fairings
":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"
patch":{"small":"https://images2.imgbox.com/db/0c/Qrfi4lgd_o.png","large":"https
://images2.imgbox.com/6f/13/SnfNAbpz_o.png"},"reddit":{"campaign":"https://www.r
eddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_th
read/","launch":"https://www.reddit.com/r/spacex/comments/wk8dua/rspacex_starlin
k_426_launch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/
spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"sma
ll":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/ck5z0uMGz8s","
youtube_id":"ck5z0uMGz8s","article":null,"wikipedia":null},"static_fire_date_utc
":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95
eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":
[],"capsules":[],"payloads":["630bcea1d36448026ab0163e"],"launchpad":"5e9e4502f5
09094188566f88","flight_number":178,"name":"Starlink 4-26 (v1.5)","date_utc":"20
22-08-09T22:57:00.000Z","date_unix":1660085820,"date_local":"2022-08-09T18:57:00
-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"627843db57b51
b752c5c5a54","flight":3,"gridfins":true,"legs":true,"reused":true,"landing_attem
pt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb0
75134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"a6b9deb4-f78d-4
b57-8e47-98c5aea99d9e","id":"62a9f8b320413d2695d8871b"},{"fairings":{"reused":nu
ll,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small

":"https://images2.imgbox.com/d0/90/pKNXVgeG_o.png","large":"https://images2.img
box.com/33/50/ZK6KD7kE_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/sp
acex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch
":"https://www.reddit.com/r/spacex/comments/wmgtiu/rspacex_starlink_33_launch_di
scussion_and_updates/","media":null,"recovery":"https://www.reddit.com/r/spacex/
comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],
"original":[]},"presskit":null,"webcast":"https://youtu.be/SU5FbiCbjic","youtube
_id":"SU5FbiCbjic","article":null,"wikipedia":null},"static_fire_date_utc":null,
"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda6997
3a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"cap
sules":[],"payloads":["630bceb8d36448026ab01640"],"launchpad":"5e9e4502f509092b7
8566f87","flight_number":179,"name":"Starlink 3-3 (v1.5)","date_utc":"2022-08-12
T21:30:00.000Z","date_unix":1660339800,"date_local":"2022-08-12T14:30:00-07:00",
"date_precision":"hour","upcoming":false,"cores":[{"core":"5f57c53d0622a63302790
09f","flight":10,"gridfins":true,"legs":true,"reused":true,"landing_attempt":tru
e,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3032383ecb6bb234e7
ca"}],"auto_update":true,"tbd":false,"launch_library_id":"4f2c5733-5019-4f7a-840
3-15a1a270bf96","id":"62f3b4ff0f55c50e192a4e6b"},{"fairings":{"reused":null,"rec
overy_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"http
s://images2.imgbox.com/ba/c7/O1spe4aF_o.png","large":"https://images2.imgbox.com
/d1/10/0u6LdCUH_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/co
mments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"http
s://www.reddit.com/r/spacex/comments/wsde1t/rspacex_starlink_427_launch_discussi
on_and/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1
q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]}
,"presskit":null,"webcast":"https://youtu.be/M018DAaNd_E","youtube_id":"M018DAaN
d_E","article":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_d
ate_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","su
ccess":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"pay
loads":["630bceadd36448026ab0163f"],"launchpad":"5e9e4501f509094ba4566f84","flig
ht_number":180,"name":"Starlink 4-27 (v1.5)","date_utc":"2022-08-19T19:24:00.000
Z","date_unix":1660937040,"date_local":"2022-08-19T15:24:00-04:00","date_precisi
on":"hour","upcoming":false,"cores":[{"core":"5f57c5440622a633027900a0","flight"
:9,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_suc
cess":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_up
date":true,"tbd":false,"launch_library_id":"4a114237-e8c5-4248-8d30-7a9026b86430
","id":"62f3b5200f55c50e192a4e6c"},{"fairings":{"reused":null,"recovery_attempt"
:null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.im
gbox.com/12/42/5T8I9wZL_o.png","large":"https://images2.imgbox.com/f4/bc/5iJ5j1J
u_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/
starlink_general_discussion_and_deployment_thread/","launch":null,"media":null,"
recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates
_discussion_thread/"},"flickr":{"small":[],"original":[]},"presskit":null,"webca
st":"https://youtu.be/07RGJ04HRns","youtube_id":"07RGJ04HRns","article":null,"wi
kipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":fa
lse,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":
[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["631614d7ffc78f
3b85670716"],"launchpad":"5e9e4502f509094188566f88","flight_number":181,"name":"

Starlink 4-23 (v1.5)","date_utc":"2022-08-28T02:22:00.000Z","date_unix":16616533
20,"date_local":"2022-08-27T22:22:00-04:00","date_precision":"hour","upcoming":f
alse,"cores":[{"core":"61c1ef45a4a2462678cbf45d","flight":2,"gridfins":true,"leg
s":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_typ
e":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,
"launch_library_id":"67158b3c-201d-4450-be8a-990010c05b40","id":"62f3b5290f55c50
e192a4e6d"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,
"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/72/07/PtgYfiFT
_o.png","large":"https://images2.imgbox.com/fc/18/97AKS1XR_o.png"},"reddit":{"ca
mpaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discus
sion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/
x1t7gd/rspacex_starlink_34_launch_discussion_and_updates/","media":null,"recover
y":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discus
sion_thread/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"ht
tps://youtu.be/zSJWK_pmXVw","youtube_id":"zSJWK_pmXVw","article":null,"wikipedia
":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"wi
ndow":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"det
ails":null,"crew":[],"ships":[],"capsules":[],"payloads":["630f63bf18702d4844fb5
391"],"launchpad":"5e9e4502f509092b78566f87","flight_number":182,"name":"Starlin
k 3-4 (v1.5)","date_utc":"2022-08-31T05:40:00.000Z","date_unix":1661924400,"date
_local":"2022-08-30T22:40:00-07:00","date_precision":"hour","upcoming":false,"co
res":[{"core":"5f57c54a0622a633027900a1","flight":7,"gridfins":true,"legs":true,
"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS
","landpad":"5e9e3032383ecb6bb234e7ca"}],"auto_update":true,"tbd":false,"launch_
library_id":"576b04d6-1962-4bda-b43f-0da4138d192d","id":"62f3b53a0f55c50e192a4e6
f"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":
[]},"links":{"patch":{"small":"https://images2.imgbox.com/dc/a0/erKL6HGq_o.png",
"large":"https://images2.imgbox.com/57/42/trORYoRc_o.png"},"reddit":{"campaign":
"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and
_deployment_thread/","launch":null,"media":null,"recovery":"https://www.reddit.c
om/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":
{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/NONM-
xsKMSs","youtube_id":"NONM-xsKMSs","article":null,"wikipedia":null},"static_fire
_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":
"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[]
,"ships":[],"capsules":[],"payloads":["631614e9ffc78f3b85670717","631617fbffc78f
3b8567071d"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":183,"name":"
Starlink 4-20 (v1.5) & Sherpa LTC-2/Varuna-TDM","date_utc":"2022-09-05T02:09:00.
000Z","date_unix":1662343740,"date_local":"2022-09-04T22:09:00-04:00","date_prec
ision":"hour","upcoming":false,"cores":[{"core":"5e9e28a6f359183c413b265d","flig
ht":7,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_
success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto
_update":true,"tbd":false,"launch_library_id":null,"id":"62f3b5330f55c50e192a4e6
e"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":
[]},"links":{"patch":{"small":"https://images2.imgbox.com/a9/9a/NXVkTZCE_o.png",
"large":"https://images2.imgbox.com/e3/cc/hN96PmST_o.png"},"reddit":{"campaign":
"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and
_deployment_thread/","launch":null,"media":null,"recovery":"https://www.reddit.c

om/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":null,"youtube_id":null,"article":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["63161610ffc78f3b85670718","63161872ffc78f3b8567071e"],"launchpad":"5e9e4502f509094188566f88","flight_number":184,"name":"Starlink 4-2 (v1.5) & Blue Walker 3","date_utc":"2022-09-11T01:10:00.000Z","date_unix":1662858600,"date_local":"2022-09-10T21:10:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"5e9e28a7f3591817f23b2663","flight":14,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecb075134e7cd"}],"auto_update":true,"tbd":false,"launch_library_id":"992823ad-f843-4a4a-beca-882b8ce8773a","id":"62a9f89a20413d2695d8871a"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/a9/9a/NXVkTZCE_o.png","large":"https://images2.imgbox.com/e3/cc/hN96PmST_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/xd8vhj/rspacex_starlink_434_launch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/ZlQHF_yBkMQ","youtube_id":"ZlQHF_yBkMQ","article":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["63161699ffc78f3b85670719"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":185,"name":"Starlink 4-34 (v1.5)","date_utc":"2022-09-17T01:05:00.000Z","date_unix":1663376700,"date_local":"2022-09-16T21:05:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"60b800111f83cc1e59f16438","flight":6,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landing_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":true,"tbd":false,"launch_library_id":"9ba04064-c329-40bf-b477-ff468d7d8058","id":"63161329ffc78f3b8567070b"},{"fairings":{"reused":null,"recovery_attempt":null,"recovered":null,"ships":[]},"links":{"patch":{"small":"https://images2.imgbox.com/a9/9a/NXVkTZCE_o.png","large":"https://images2.imgbox.com/e3/cc/hN96PmST_o.png"},"reddit":{"campaign":"https://www.reddit.com/r/spacex/comments/jhu37i/starlink_general_discussion_and_deployment_thread/","launch":"https://www.reddit.com/r/spacex/comments/xn028t/rspacex_starlink_435_launch_discussion_and/","media":null,"recovery":"https://www.reddit.com/r/spacex/comments/k2ts1q/rspacex_fleet_updates_discussion_thread/"},"flickr":{"small":[],"original":[]},"presskit":null,"webcast":"https://youtu.be/VVu2bSJJhgI","youtube_id":"VVu2bSJJhgI","article":null,"wikipedia":null},"static_fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rocket":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew":[],"ships":[],"capsules":[],"payloads":["631616a7ffc78f3b8567071a"],"launchpad":"5e9e4501f509094ba4566f84","flight_number":186,"name":"Starlink 4-35 (v1.5)","date_utc":"2022-09-24T23:30:00.000Z","date_unix":1664062200,"date_local":"2022-09-24T19:30:00-04:00","date_precision":"hour","upcoming":false,"cores":[{"core":"627843d657b51b752c5c5a53","flight":4,"gridfins":true,"legs":true,"reused":true,"landing_attempt":true,"landi

ng_success":true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"a
uto_update":true,"tbd":false,"launch_library_id":"1c903b65-6667-4fd5-944d-296c5f
13e01f","id":"63161339ffc78f3b8567070c"},{"fairings":null,"links":{"patch":{"sma
ll":"https://images2.imgbox.com/eb/d8/D1Yywp0w_o.png","large":"https://images2.i
mgbox.com/33/2e/k6VE4iYl_o.png"},"reddit":{"campaign":null,"launch":"https://www
.reddit.com/r/spacex/comments/xvm76j/rspacex_crew5_launchcoast_docking_discussio
n_and/","media":null,"recovery":null},"flickr":{"small":[],"original":[]},"press
kit":null,"webcast":"https://youtu.be/5EwW8ZkArL4","youtube_id":"5EwW8ZkArL4","a
rticle":null,"wikipedia":"https://en.wikipedia.org/wiki/SpaceX_Crew-5"},"static_
fire_date_utc":null,"static_fire_date_unix":null,"net":false,"window":null,"rock
et":"5e9d0d95eda69973a809d1ec","success":true,"failures":[],"details":null,"crew
":["62dd7196202306255024d13c","62dd71c9202306255024d13d","62dd7210202306255024d1
3e","62dd7253202306255024d13f"],"ships":[],"capsules":["617c05591bad2c661a6e2909
"],"payloads":["62dd73ed202306255024d145"],"launchpad":"5e9e4502f509094188566f88
","flight_number":187,"name":"Crew-5","date_utc":"2022-10-05T16:00:00.000Z","dat
e_unix":1664985600,"date_local":"2022-10-05T12:00:00-04:00","date_precision":"ho
ur","upcoming":false,"cores":[{"core":"633d9da635a71d1d9c66797b","flight":1,"gri
dfins":true,"legs":true,"reused":false,"landing_attempt":true,"landing_success":
true,"landing_type":"ASDS","landpad":"5e9e3033383ecbb9e534e7cc"}],"auto_update":
true,"tbd":false,"launch_library_id":"f33d5ece-e825-4cd8-809f-1d4c72a2e0d3","id"
:"62dd70d5202306255024d139"}]'

[10]:
```
###Task 1: Request and parse the SpaceX launch data using the GET request
static_json_url='https://cf-courses-data.s3.us.cloud-object-storage.appdomain.
  ↪cloud/IBM-DS0321EN-SkillsNetwork/datasets/API_call_spacex_api.json'
```

[11]:
```
response.status_code
```

[11]: 200

[12]:
```
# Use json_normalize meethod to convert the json result into a dataframe
respjson = response.json()
data = pd.json_normalize(respjson)
```

[13]:
```
# Get the head of the dataframe
data.head()
```

[13]:

	static_fire_date_utc	static_fire_date_unix	net	window	\
0	2006-03-17T00:00:00.000Z	1.142554e+09	False	0.0	
1	None	NaN	False	0.0	
2	None	NaN	False	0.0	
3	2008-09-20T00:00:00.000Z	1.221869e+09	False	0.0	
4	None	NaN	False	0.0	

	rocket	success	\
0	5e9d0d95eda69955f709d1eb	False	
1	5e9d0d95eda69955f709d1eb	False	

```
2  5e9d0d95eda69955f709d1eb   False
3  5e9d0d95eda69955f709d1eb    True
4  5e9d0d95eda69955f709d1eb    True

                           failures  \
0                                                [{'time': 33, 'altitude': None,
'reason': 'merlin engine failure'}]
1            [{'time': 301, 'altitude': 289, 'reason': 'harmonic oscillation
leading to premature engine shutdown'}]
2  [{'time': 140, 'altitude': 35, 'reason': 'residual stage-1 thrust led to
collision between stage 1 and stage 2'}]
3
[]
4
[]

                details  \
0
Engine failure at 33 seconds and loss of vehicle
1  Successful first stage burn and transition to second stage, maximum altitude
289 km, Premature engine shutdown at T+7 min 30 s, Failed to reach orbit, Failed
to recover first stage
2
Residual stage 1 thrust led to collision between stage 1 and stage 2
3                        Ratsat was carried to orbit on the first successful
orbital launch of any privately funded and developed, liquid-propelled carrier
rocket, the SpaceX Falcon 1
4
None

  crew ships capsules                                                 payloads  \
0   []    []       []                              [5eb0e4b5b6c3bb0006eeb1e1]
1   []    []       []                              [5eb0e4b6b6c3bb0006eeb1e2]
2   []    []       []  [5eb0e4b6b6c3bb0006eeb1e3, 5eb0e4b6b6c3bb0006eeb1e4]
3   []    []       []                              [5eb0e4b7b6c3bb0006eeb1e5]
4   []    []       []                              [5eb0e4b7b6c3bb0006eeb1e6]

                  launchpad  flight_number         name  \
0  5e9e4502f5090995de566f86              1    FalconSat
1  5e9e4502f5090995de566f86              2      DemoSat
2  5e9e4502f5090995de566f86              3  Trailblazer
3  5e9e4502f5090995de566f86              4       RatSat
4  5e9e4502f5090995de566f86              5     RazakSat

                   date_utc   date_unix                 date_local  \
0  2006-03-24T22:30:00.000Z  1143239400  2006-03-25T10:30:00+12:00
1  2007-03-21T01:10:00.000Z  1174439400  2007-03-21T13:10:00+12:00
```

```
2  2008-08-03T03:34:00.000Z  1217734440  2008-08-03T15:34:00+12:00
3  2008-09-28T23:15:00.000Z  1222643700  2008-09-28T11:15:00+12:00
4  2009-07-13T03:35:00.000Z  1247456100  2009-07-13T15:35:00+12:00

  date_precision  upcoming  \
0           hour     False
1           hour     False
2           hour     False
3           hour     False
4           hour     False

                              cores  \
0  [{'core': '5e9e289df35918033d3b2623', 'flight': 1, 'gridfins': False, 'legs':
False, 'reused': False, 'landing_attempt': False, 'landing_success': None,
'landing_type': None, 'landpad': None}]
1  [{'core': '5e9e289ef35918416a3b2624', 'flight': 1, 'gridfins': False, 'legs':
False, 'reused': False, 'landing_attempt': False, 'landing_success': None,
'landing_type': None, 'landpad': None}]
2  [{'core': '5e9e289ef3591814873b2625', 'flight': 1, 'gridfins': False, 'legs':
False, 'reused': False, 'landing_attempt': False, 'landing_success': None,
'landing_type': None, 'landpad': None}]
3  [{'core': '5e9e289ef3591855dc3b2626', 'flight': 1, 'gridfins': False, 'legs':
False, 'reused': False, 'landing_attempt': False, 'landing_success': None,
'landing_type': None, 'landpad': None}]
4  [{'core': '5e9e289ef359184f103b2627', 'flight': 1, 'gridfins': False, 'legs':
False, 'reused': False, 'landing_attempt': False, 'landing_success': None,
'landing_type': None, 'landpad': None}]

   auto_update    tbd launch_library_id                         id  \
0         True  False              None  5eb87cd9ffd86e000604b32a
1         True  False              None  5eb87cdaffd86e000604b32b
2         True  False              None  5eb87cdbffd86e000604b32c
3         True  False              None  5eb87cdbffd86e000604b32d
4         True  False              None  5eb87cdcffd86e000604b32e

  fairings.reused fairings.recovery_attempt fairings.recovered fairings.ships  \
0           False                     False              False             []
1           False                     False              False             []
2           False                     False              False             []
3           False                     False              False             []
4           False                     False              False             []

                               links.patch.small  \
0  https://images2.imgbox.com/94/f2/NN6Ph45r_o.png
1  https://images2.imgbox.com/f9/4a/ZboXReNb_o.png
2  https://images2.imgbox.com/6c/cb/na1tzhHs_o.png
3  https://images2.imgbox.com/95/39/sRqN7rsv_o.png
```

```
4  https://images2.imgbox.com/ab/5a/Pequxd5d_o.png

                              links.patch.large links.reddit.campaign  \
0  https://images2.imgbox.com/5b/02/QcxHUb5V_o.png                  None
1  https://images2.imgbox.com/80/a2/bkWotCIS_o.png                  None
2  https://images2.imgbox.com/4a/80/k1oAkY0k_o.png                  None
3  https://images2.imgbox.com/a3/99/qswRYzE8_o.png                  None
4  https://images2.imgbox.com/92/e4/7Cf6MLY0_o.png                  None

  links.reddit.launch links.reddit.media links.reddit.recovery  \
0                None               None                  None
1                None               None                  None
2                None               None                  None
3                None               None                  None
4                None               None                  None

  links.flickr.small links.flickr.original  \
0                 []                    []
1                 []                    []
2                 []                    []
3                 []                    []
4                 []                    []

          links.presskit  \
0
None
1
None
2
None
3
None
4  http://www.spacex.com/press/2012/12/19/spacexs-falcon-1-successfully-
delivers-razaksat-satellite-orbit

                              links.webcast links.youtube_id  \
0  https://www.youtube.com/watch?v=0a_00nJ_Y88      0a_00nJ_Y88
1  https://www.youtube.com/watch?v=Lk4zQ2wP-Nc      Lk4zQ2wP-Nc
2  https://www.youtube.com/watch?v=v0w9p3U8860      v0w9p3U8860
3  https://www.youtube.com/watch?v=dLQ2tZEH6G0      dLQ2tZEH6G0
4  https://www.youtube.com/watch?v=yTaIDooc8Og      yTaIDooc8Og

                                                                links.article
\
0  https://www.space.com/2196-spacex-inaugural-falcon-1-rocket-lost-launch.html
1      https://www.space.com/3590-spacex-falcon-1-rocket-fails-reach-orbit.html
2       http://www.spacex.com/news/2013/02/11/falcon-1-flight-3-mission-summary
```

```
3                                          https://en.wikipedia.org/wiki/Ratsat
4                        http://www.spacex.com/news/2013/02/12/falcon-1-flight-5

                                          links.wikipedia  fairings
0                  https://en.wikipedia.org/wiki/DemoSat       NaN
1                  https://en.wikipedia.org/wiki/DemoSat       NaN
2  https://en.wikipedia.org/wiki/Trailblazer_(satellite)       NaN
3                   https://en.wikipedia.org/wiki/Ratsat       NaN
4                 https://en.wikipedia.org/wiki/RazakSAT       NaN
```

[14]:
```
# Lets take a subset of our dataframe keeping only the features we want and the␣
 ↪flight number, and date_utc.
data = data[['rocket', 'payloads', 'launchpad', 'cores', 'flight_number',␣
 ↪'date_utc']]

# We will remove rows with multiple cores because those are falcon rockets with␣
 ↪2 extra rocket boosters and rows that have multiple payloads in a single␣
 ↪rocket.
data = data[data['cores'].map(len)==1]
data = data[data['payloads'].map(len)==1]

# Since payloads and cores are lists of size 1 we will also extract the single␣
 ↪value in the list and replace the feature.
data['cores'] = data['cores'].map(lambda x : x[0])
data['payloads'] = data['payloads'].map(lambda x : x[0])

# We also want to convert the date_utc to a datetime datatype and then␣
 ↪extracting the date leaving the time
data['date'] = pd.to_datetime(data['date_utc']).dt.date

# Using the date we will restrict the dates of the launches
data = data[data['date'] <= datetime.date(2020, 11, 13)]
```

[15]:
```
#Global variables
BoosterVersion = []
PayloadMass = []
Orbit = []
LaunchSite = []
Outcome = []
Flights = []
GridFins = []
Reused = []
Legs = []
LandingPad = []
Block = []
ReusedCount = []
Serial = []
```

```
Longitude = []
Latitude = []
```

[16]:
```
BoosterVersion
```

[16]:
```
[]
```

[17]:
```
# Call getBoosterVersion
getBoosterVersion(data)
```

[18]:
```
BoosterVersion[0:5]
```

[18]:
```
['Falcon 1', 'Falcon 1', 'Falcon 1', 'Falcon 1', 'Falcon 9']
```

[19]:
```
# Call getLaunchSite
getLaunchSite(data)
```

[20]:
```
# Call getPayloadData
getPayloadData(data)
```

[21]:
```
# Call getCoreData
getCoreData(data)
```

[22]:
```
launch_dict = {'FlightNumber': list(data['flight_number']),
'Date': list(data['date']),
'BoosterVersion':BoosterVersion,
'PayloadMass':PayloadMass,
'Orbit':Orbit,
'LaunchSite':LaunchSite,
'Outcome':Outcome,
'Flights':Flights,
'GridFins':GridFins,
'Reused':Reused,
'Legs':Legs,
'LandingPad':LandingPad,
'Block':Block,
'ReusedCount':ReusedCount,
'Serial':Serial,
'Longitude': Longitude,
'Latitude': Latitude}
```

[23]:
```
# Create a data from launch_dict
df = pd.DataFrame(launch_dict)
```

[24]:
```
# Show the head of the dataframe
df.head()
```

[24]:
```
   FlightNumber        Date BoosterVersion  PayloadMass Orbit  \
0             1  2006-03-24       Falcon 1         20.0   LEO
1             2  2007-03-21       Falcon 1          NaN   LEO
2             4  2008-09-28       Falcon 1        165.0   LEO
3             5  2009-07-13       Falcon 1        200.0   LEO
4             6  2010-06-04       Falcon 9          NaN   LEO

        LaunchSite    Outcome  Flights  GridFins  Reused   Legs LandingPad  \
0  Kwajalein Atoll  None None        1     False   False  False       None
1  Kwajalein Atoll  None None        1     False   False  False       None
2  Kwajalein Atoll  None None        1     False   False  False       None
3  Kwajalein Atoll  None None        1     False   False  False       None
4     CCSFS SLC 40  None None        1     False   False  False       None

   Block  ReusedCount    Serial   Longitude   Latitude
0    NaN            0  Merlin1A  167.743129   9.047721
1    NaN            0  Merlin2A  167.743129   9.047721
2    NaN            0  Merlin2C  167.743129   9.047721
3    NaN            0  Merlin3C  167.743129   9.047721
4    1.0            0     B0003  -80.577366  28.561857
```

[25]:
```
##Task 2: Filter the dataframe to only include Falcon 9 launches
# Hint data['BoosterVersion']!='Falcon 1'
filt =  df['BoosterVersion']!=  'Falcon 1'
data_falcon9 = df.loc[filt]
data_falcon9.head()
```

[25]:
```
   FlightNumber        Date BoosterVersion  PayloadMass Orbit    LaunchSite  \
4             6  2010-06-04       Falcon 9          NaN   LEO  CCSFS SLC 40
5             8  2012-05-22       Falcon 9        525.0   LEO  CCSFS SLC 40
6            10  2013-03-01       Falcon 9        677.0   ISS  CCSFS SLC 40
7            11  2013-09-29       Falcon 9        500.0    PO   VAFB SLC 4E
8            12  2013-12-03       Falcon 9       3170.0   GTO  CCSFS SLC 40

       Outcome  Flights  GridFins  Reused   Legs LandingPad  Block  \
4    None None        1     False   False  False       None    1.0
5    None None        1     False   False  False       None    1.0
6    None None        1     False   False  False       None    1.0
7  False Ocean        1     False   False  False       None    1.0
8    None None        1     False   False  False       None    1.0

   ReusedCount Serial   Longitude   Latitude
4            0  B0003  -80.577366  28.561857
5            0  B0005  -80.577366  28.561857
6            0  B0007  -80.577366  28.561857
7            0  B1003 -120.610829  34.632093
8            0  B1004  -80.577366  28.561857
```

[26]:
```
data_falcon9.loc[:,'FlightNumber'] = list(range(1, data_falcon9.shape[0]+1))
data_falcon9
```

```
/home/jupyterlab/conda/envs/python/lib/python3.7/site-
packages/pandas/core/indexing.py:1773: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-
docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
  self._setitem_single_column(ilocs[0], value, pi)
```

[26]:

	FlightNumber	Date	BoosterVersion	PayloadMass	Orbit	LaunchSite
4	1	2010-06-04	Falcon 9	NaN	LEO	CCSFS SLC 40
5	2	2012-05-22	Falcon 9	525.0	LEO	CCSFS SLC 40
6	3	2013-03-01	Falcon 9	677.0	ISS	CCSFS SLC 40
7	4	2013-09-29	Falcon 9	500.0	PO	VAFB SLC 4E
8	5	2013-12-03	Falcon 9	3170.0	GTO	CCSFS SLC 40
..	…	…	…	…	…	…
89	86	2020-09-03	Falcon 9	15600.0	VLEO	KSC LC 39A
90	87	2020-10-06	Falcon 9	15600.0	VLEO	KSC LC 39A
91	88	2020-10-18	Falcon 9	15600.0	VLEO	KSC LC 39A
92	89	2020-10-24	Falcon 9	15600.0	VLEO	CCSFS SLC 40
93	90	2020-11-05	Falcon 9	3681.0	MEO	CCSFS SLC 40

	Outcome	Flights	GridFins	Reused	Legs	LandingPad
4	None None	1	False	False	False	None
5	None None	1	False	False	False	None
6	None None	1	False	False	False	None
7	False Ocean	1	False	False	False	None
8	None None	1	False	False	False	None
..	…	…	…	…	…	…
89	True ASDS	2	True	True	True	5e9e3032383ecb6bb234e7ca
90	True ASDS	3	True	True	True	5e9e3032383ecb6bb234e7ca
91	True ASDS	6	True	True	True	5e9e3032383ecb6bb234e7ca
92	True ASDS	3	True	True	True	5e9e3033383ecbb9e534e7cc
93	True ASDS	1	True	False	True	5e9e3032383ecb6bb234e7ca

	Block	ReusedCount	Serial	Longitude	Latitude
4	1.0	0	B0003	-80.577366	28.561857
5	1.0	0	B0005	-80.577366	28.561857
6	1.0	0	B0007	-80.577366	28.561857
7	1.0	0	B1003	-120.610829	34.632093
8	1.0	0	B1004	-80.577366	28.561857
..	…	…	…	…	…
89	5.0	12	B1060	-80.603956	28.608058
90	5.0	13	B1058	-80.603956	28.608058

```
91    5.0           12  B1051  -80.603956  28.608058
92    5.0           12  B1060  -80.577366  28.561857
93    5.0            8  B1062  -80.577366  28.561857

[90 rows x 17 columns]
```

[27]:
```
##Data Wrangling
data_falcon9.isnull().sum()
```

[27]:
```
FlightNumber       0
Date               0
BoosterVersion     0
PayloadMass        5
Orbit              0
LaunchSite         0
Outcome            0
Flights            0
GridFins           0
Reused             0
Legs               0
LandingPad        26
Block              0
ReusedCount        0
Serial             0
Longitude          0
Latitude           0
dtype: int64
```

[28]:
```
##Task 3: Dealing with Missing Values
# Calculate the mean value of PayloadMass column
value = data_falcon9['PayloadMass'].mean()
# Replace the np.nan values with its mean value
data_falcon9['PayloadMass'].replace(np.nan,value, inplace=True)
```

```
/home/jupyterlab/conda/envs/python/lib/python3.7/site-
packages/pandas/core/generic.py:6619: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-
docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
  return self._update_inplace(result)
```

[29]:
```
value
```

[29]:
```
6123.547647058824
```

[30]:
```
data_falcon9['PayloadMass'].isnull().sum()
```

[30]:
```
0
```

[31]:
```
data_falcon9.head()
```

[31]:
```
   FlightNumber        Date BoosterVersion  PayloadMass Orbit    LaunchSite  \
4             1  2010-06-04       Falcon 9  6123.547647   LEO  CCSFS SLC 40
5             2  2012-05-22       Falcon 9   525.000000   LEO  CCSFS SLC 40
6             3  2013-03-01       Falcon 9   677.000000   ISS  CCSFS SLC 40
7             4  2013-09-29       Falcon 9   500.000000    PO   VAFB SLC 4E
8             5  2013-12-03       Falcon 9  3170.000000   GTO  CCSFS SLC 40

       Outcome  Flights  GridFins  Reused   Legs LandingPad  Block  \
4    None None        1     False   False  False       None    1.0
5    None None        1     False   False  False       None    1.0
6    None None        1     False   False  False       None    1.0
7  False Ocean        1     False   False  False       None    1.0
8    None None        1     False   False  False       None    1.0

   ReusedCount Serial   Longitude   Latitude
4            0  B0003  -80.577366  28.561857
5            0  B0005  -80.577366  28.561857
6            0  B0007  -80.577366  28.561857
7            0  B1003 -120.610829  34.632093
8            0  B1004  -80.577366  28.561857
```

[32]:
```
data_falcon9.to_csv('dataset_part_1.csv', index=False)
```

[ ]:
```

```