



**PLANET
LABS**

Imaging the whole Earth every day

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Planet Labs, Inc.



**Planet Labs helps you
detect and act on
change by imaging the
whole Earth everyday.**



Challenges



Limited
Coverage



Low
Revisit
Rates

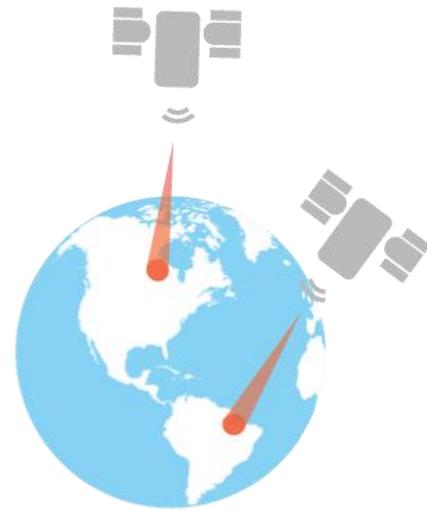


Slow
Access



Traditional Approach

- Tasking
- Low coverage
- Weeks to gain access
- Expensive



Planet Labs Approach

- Monitoring
- Global coverage
- Daily online delivery
- Affordable



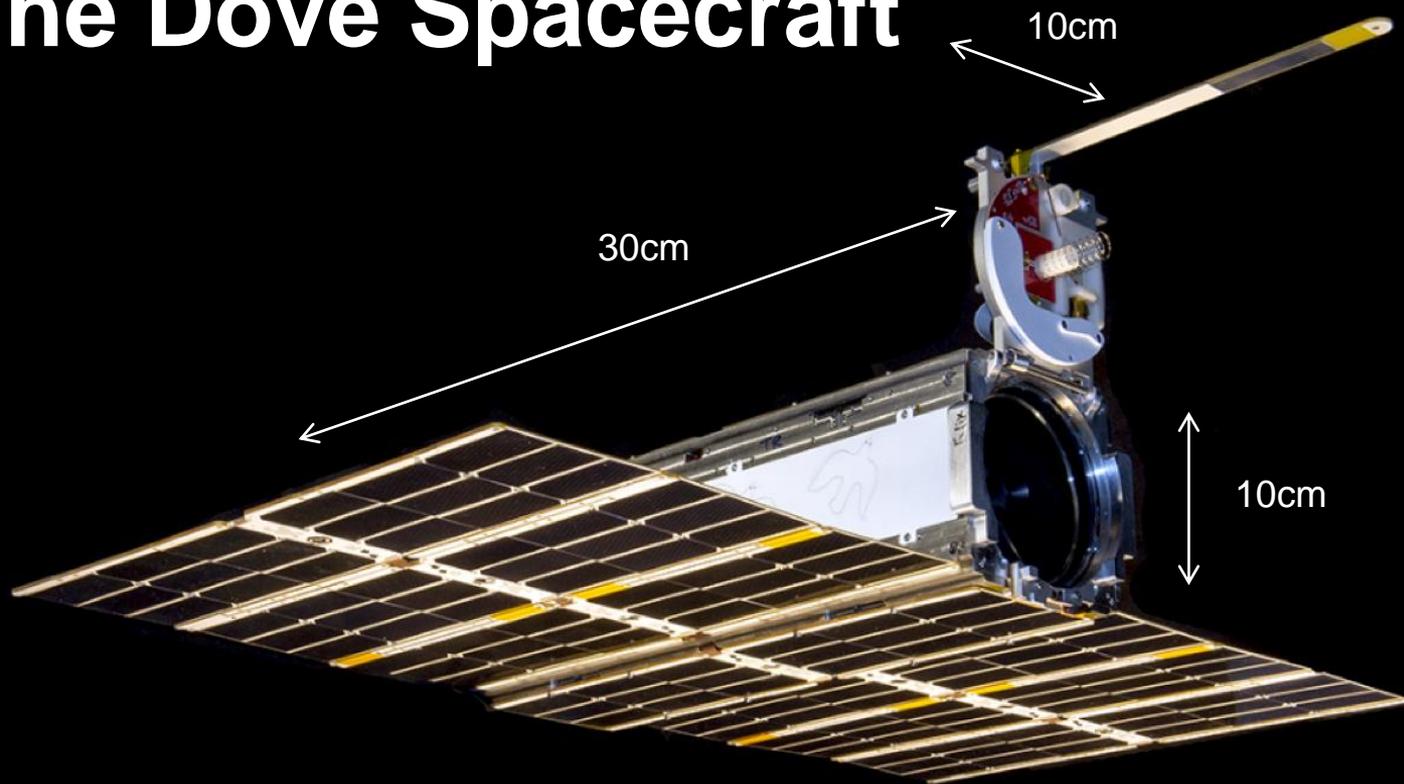


NASA
LANDSAT8

PLANET LABS
DOVE



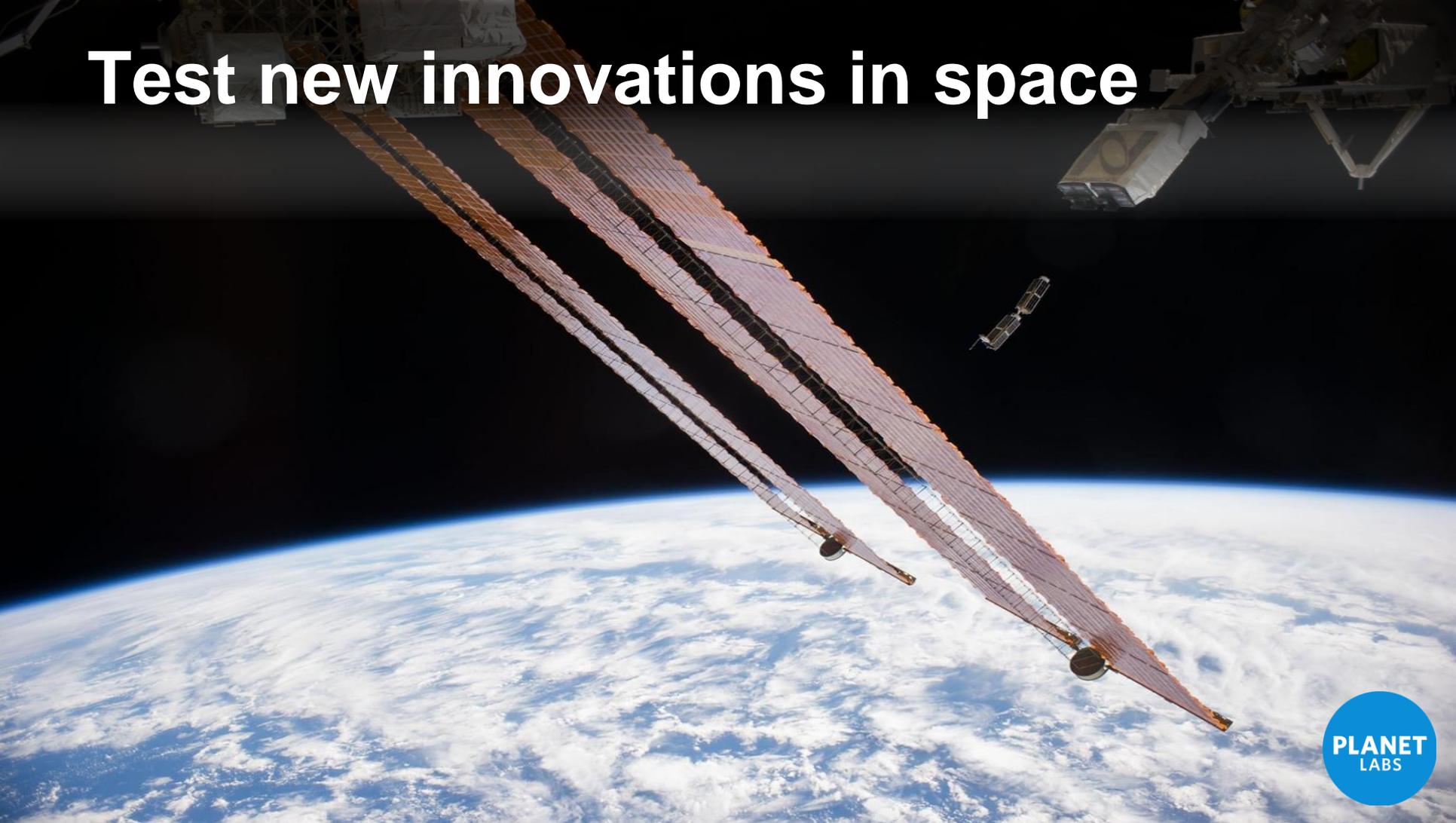
The Dove Spacecraft



Manufacturing (and calibrate) at scale



Test new innovations in space

A satellite with large, rectangular solar panels is shown in space. The solar panels are arranged in two long, parallel rows, extending from the top left towards the bottom right. The satellite's main body is visible at the top left. In the background, the Earth's horizon is visible, showing a blue sky and white clouds. A smaller satellite is visible in the distance, and another satellite component is visible in the top right corner.

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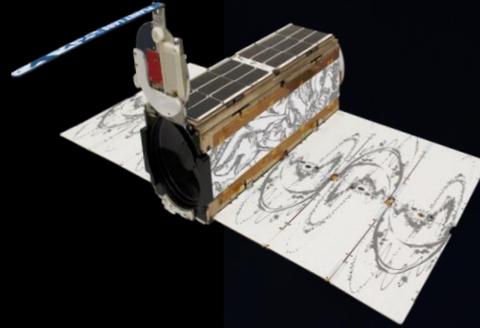
Always on monitoring



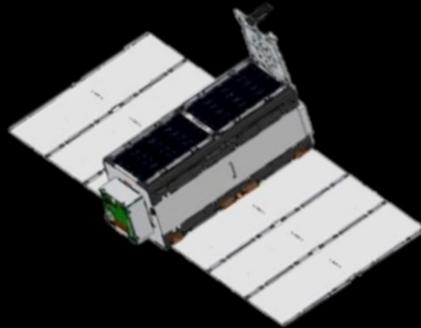
Agile Aerospace



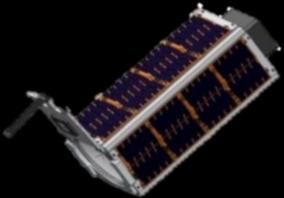
BUILD 13
JUN 2015



BUILD 6
APR 2013



BUILD 1
APR 2012



12 Builds in less than 3 years



End-to-end System

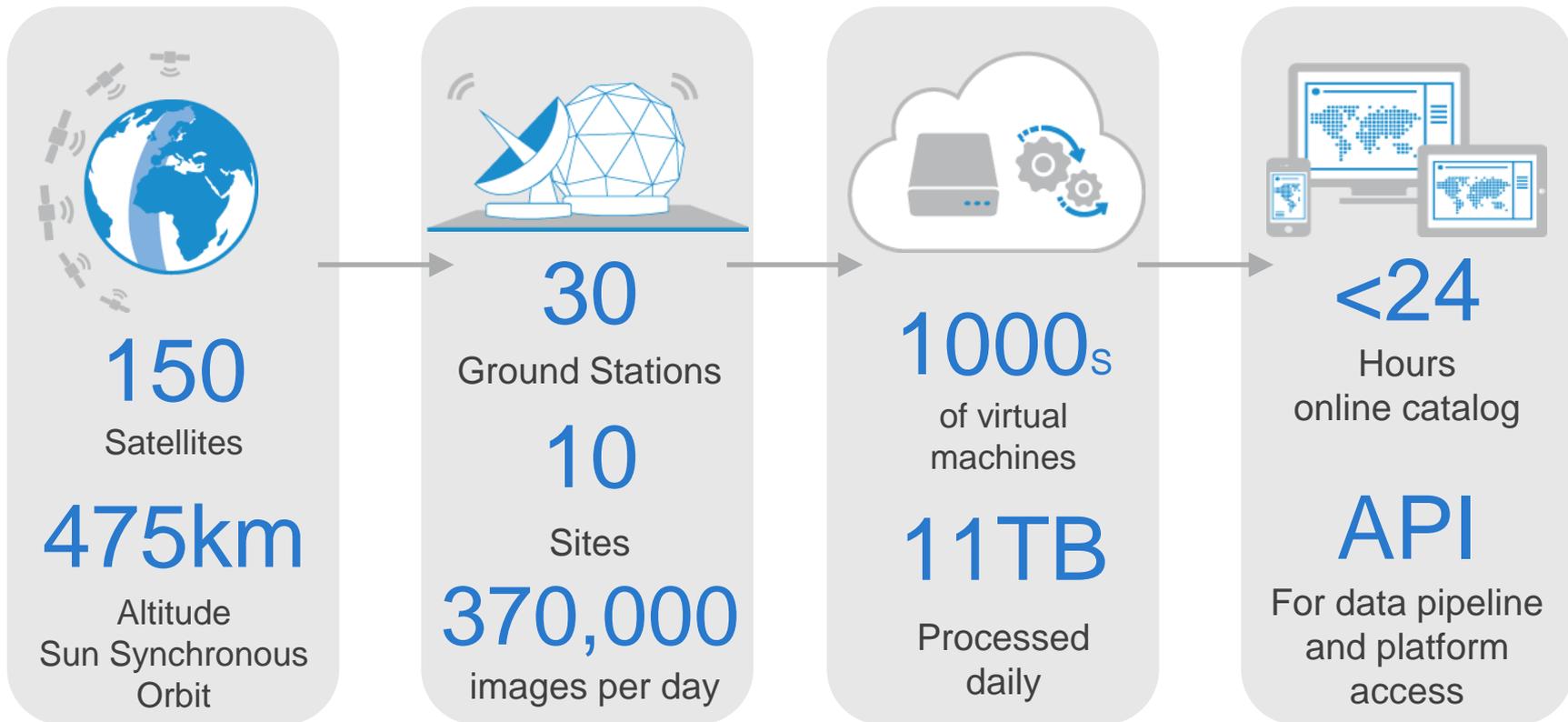


Image whole Earth everyday



Planet Labs acquired BlackBridge September 2015

- 6bn km² archive of RapidEye data
- Valued partner network in over 100 nations
- RapidEye constellation of 5 satellites
- Passionate and experienced team
- Aligned vision and values

Immediate access to the data

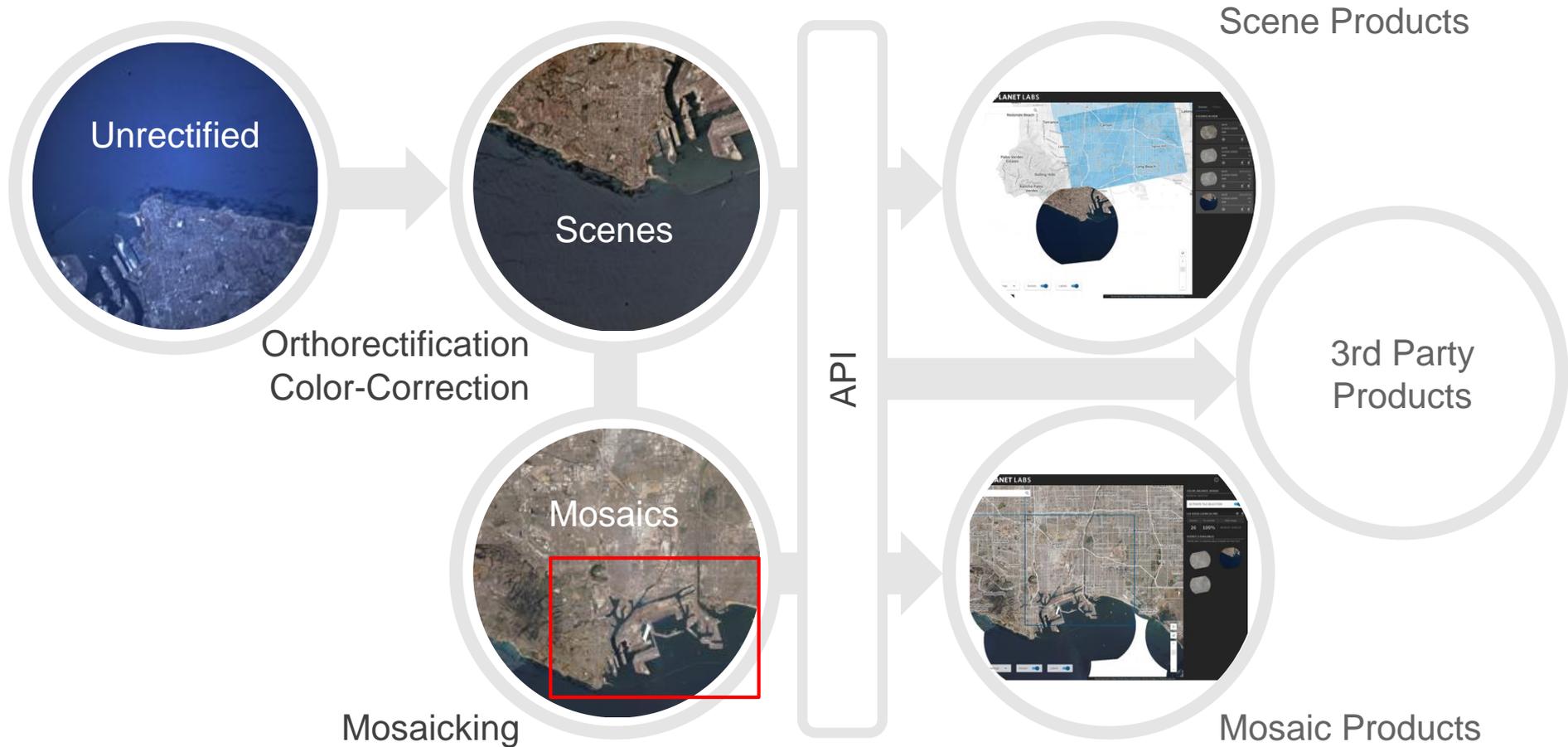


Image Specifications

Resolution	3.7 meter Ground Sampling Distance (GSD)
Bands	3-band (Red-Green-Blue), Near Infrared (NIR) option
Target Capture Capacity	150 million km ² /day (100% Earth land/day)
Processed Image Format	Orthorectified GeoTIFF

Revisit Rate

Quarterly	Q1 2016
Monthly	Q2 2016
Weekly & Sub-weekly	Q3 & Q4 2016

Tools for different use cases

Tools	Description	Options
Planet Mosaics	A seamless cloudless global mosaic that is updated as soon as an image is processed and available.	Cadence: Yearly Quarterly (seasonal) Monthly Weekly/Subweekly
Planet Scenes	Extensible catalog browser that enables instant delivery of images upon request. Users can search, sort, and access individual scenes or geoTIFFs for any area and date range.	Visual (8 bit) Analytic (12 bit) Unrectified
Admin Console	User management for your organization that includes usage logging and reporting.	Access for Admin control



Scenes Explorer

Instant browse and delivery of scene archive

- Browse scene archive
- New scenes added as acquired and cleared data pipeline
- Filter by metadata, AOI & TOI
- Save workspaces
- Bulk delivery

planet.com/scenes

The screenshot displays the Planet Labs Scenes Explorer interface. The main map shows a geographic area with several circular scene footprints overlaid. A yellow polygon highlights a specific area of interest (AOI) around Santa Barbara. The interface includes a search bar at the top, a list of 14 scenes on the right, and a detailed metadata panel for the selected scene. The metadata panel shows the scene ID, acquisition date, and various technical specifications.

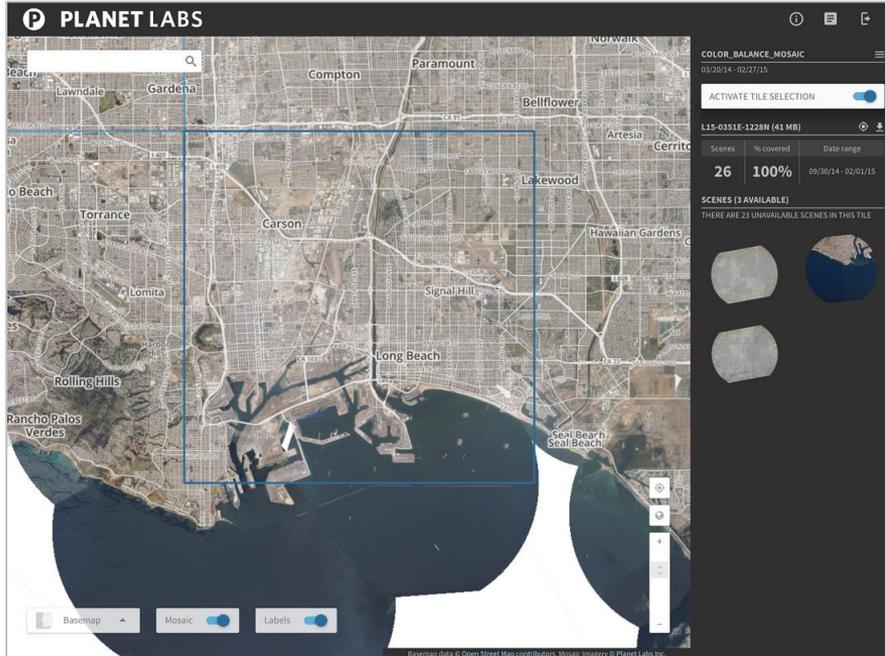
Scene ID	Acquisition Date
3/30/2015	3/30/2015
4/23/2015	4/23/2015
4/23/2015	4/23/2015
5/15/2015	5/15/2015
5/15/2015	5/15/2015
6/2/2015	6/2/2015
6/2/2015	6/2/2015
6/7/2015	6/7/2015
6/7/2015	6/7/2015
6/7/2015	6/7/2015
6/10/2015	6/10/2015
6/27/2015	6/27/2015
6/27/2015	6/27/2015
7/28/2015	7/28/2015

Parameter	Value
Scene ID	20150602_183226_0908
Acquired	Jun 2, 2015 at 11:32:26
Zoom to scene	Add to cart
Image Quality	Standard
Cloud Cover	0.00%
GSD	4.18 m
SNR	76.41
Off-Nadir Angle	1.78°
Sun Altitude	67.63°
Sun Azimuth	117.93°
Camera bit depth	12
Camera color mode	RGB
Camera exposure time	1170 μs
Camera gain	100

Mosaic Explorer

Seamless, timely and frequent mosaics

planet.com/mosaics



- Specify timeframe for mosaics
- “Best Pixel” methodology for optimal results
- See change happen over time
- Scene traceability
- Monthly and weekly built

External APIs

Programmatic access to search and download data

api.planet.com

```
{
  "count": 246949,
  "features": [
    {
      "geometry": {
        "coordinates": [
          [
            [
              -112.01199644534657,
              51.52382092213006
            ],
            [
              -112.05334017493483,
              51.62412824358945
            ],
            [
              -112.29502363203866,
              51.58545226339255
            ],
            [
              -112.25316038721022,
              51.48520895431129
            ],
            [
              -112.01199644534657,
              51.52382092213006
            ]
          ]
        ],
        "type": "Polygon"
      },
      "id": "20150228_173505_0907",
      "properties": {
        "acquired": "2015-02-28T17:35:05.119369+00:00",
        "cloud_cover": {
          "estimated": 30.12
        }
      },
      "data": {
        "products": {
          "analytic": {
            "full": "https://api.planet.com/v0/scenes/ortho/20150228_173505_0907/full?product=analytic"
          },
          "visual": {
            "full": "https://api.planet.com/v0/scenes/ortho/20150228_173505_0907/full?product=visual"
          }
        }
      }
    }
  ]
}
```

planet.com/docs

The screenshot shows the Planet Labs documentation website. The top navigation bar includes the Planet Labs logo, a search bar, and a menu with items like 'Introduction', 'API Documentation', 'Home', 'API V0', 'General Concepts', 'Scenes API', 'Mosaics API', 'Tutorials', 'Support', 'Terms of Service', and 'planet.com'. The main content area is titled 'Introduction' and contains text explaining that a 'scene' is a single image taken by one of Planet's satellites. It also mentions that the Scenes API offers REST API access to listing, searching, and downloading available scenes and their associated metadata. Below this is a section titled 'Metadata Properties' which contains a table with two columns: 'Field' and 'Description'. The table lists three fields: 'acquired' (The time that image was taken in ISO 8601 format, in UTC), 'cloud_cover.estimated' (The estimated percentage of the image covered by clouds. Decimal 0-100), and 'file_size' (The size of the full image in bytes). To the right of the table, there is a dark box containing the text 'Example of a metadata dictionary response' and a JSON snippet showing the structure of the metadata response.

Field	Description
acquired	The time that image was taken in ISO 8601 format , in UTC.
cloud_cover.estimated	The estimated percentage of the image covered by clouds. Decimal 0-100.
file_size	The size of the full image in bytes.

```
{
  "properties": {
    "acquired": "2014-09-07T03:40:30.933001+00:00",
    "cloud_cover": {
      "estimated": 1.85
    }
  },
  "data": {
    "products": {
```



Come talk to us at JACIE 2016

Ignacio – Imaging Operations

Joe Warga and Nick Konidakis – Ground
Calibration and Optics

Jen Kyle – On-orbit Calibration

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