

ÇEV 361

Coğrafi Bilgi Sistemleri ve Uzaktan Algılama

Uzaktan Algılama Verilerinin Temini

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<http://www.ozgurzeydan.com/>

RASAT Araştırma Uydusu

KULLANIM ALANLARI



Harıtacılık

- 1/25.000 ölçekli haritaların oluşturulması ve güncellenmesi
- Sayısal yükseklik modeli ve ortofoto oluşturma
- Arazi kullanımını haritalama
- Kırsal kadastro



Afet İzleme

- Orman yangını izleme ve tahribinin haritalanması
- Su baskını haritalama ve tahmini
- Heyelan alanlarını haritalama
- Deprem sonrası yıkılmış binaların ve hasarın tespiti
- Afet yönetimi için güncel tematik verilerin oluşturulması



Çevre

- Orman tahribatının ve ormanlaşmanın izlenmesi
- Kıyı lardaki değişimin izlenmesi
- Denizde petrol sızıntılarının belirlenmesi ve kirliliğin haritalanması



Şehircilik ve Planlama

- Kentsel gelişimin izlenmesi
- Kaçak yapılaşmanın tespiti
- 3 boyutlu simulasyon oluşturma

RASAT - Teknik Özellikler

TEKNİK ÖZELLİKLER

Türk Yer Gözlem Uyduları	RASAT
Ağırlık	93 kg
Yörünge	689 km'de dairesel, güneşe eşzamanlı
Yönelim kontrolü	3 eksen kontrollü
Yörünge süresi	98.8 dakika
Ekvator geçişi yerel zamanı	10:30
Uzamsal çözünürlük	Pankromatik: 7.5 m Çok bantlı: 15 m
Tahmini ömür	3 yıl
Tayfsal çözünürlük (µm)	0.42 – 0.73 (Pankromatik) 1. Bant: 0.42 – 0.55 (Mavi) 2. Bant: 0.55 – 0.58 (Yeşil) 3. Bant: 0.58 – 0.73 (Kırmızı)
Radyometrik çözünürlük	8 bit
Zamansal çözünürlük	4 gün
Şerit genişliği	30 km
Faydalı yükler	<ul style="list-style-type: none">• Optik faydalı yük: Stereoskopik görme özelliğine sahip Pushbroom görüntüleyiciden oluşmaktadır.• BİLGE: Spacewire veriyolu kullanabilen uçuş bilgisayarı.• GEZGİN-2: JPEG2000 algoritmaları ile yüksek hızda çok bantlı görüntü sıkıştırma ve şifreleme yapabilen yeni nesil görüntü işleme kartı.• X-Bant Verici Modülü: 100 Mb/s iletim hattına ve 7W çıkışa sahip iletişim sistemi.

Gezgin Portal

The screenshot displays the Gezgin Portal interface. At the top, there are logos for 'UZAY' and 'KGM', and the 'gezgin' logo. The main content area is divided into three sections:

- GEZGİN MENÜ:** A sidebar menu on the left containing a search bar, a 'Sonuçlar' (Results) section with a dropdown menu showing '(1 of 1)' and a page number '15', and a list of search results. The first result is dated '10-10-2019' and includes a small satellite image thumbnail. Below the thumbnail are buttons for 'Harita' (Map) and 'Detaylar ve İndir' (Details and Download).
- Görüntü Detayları:** A central panel displaying a large satellite image of a forested area. To the right of the image, the following metadata is listed:
 - ADI: RST_20191010_d15_1
 - ÇEKİM TARİHİ: 10-10-2019
 - UYDU: RASAT
 - BULUTLULUK: 0.05
 - ÇEKİM AÇISI: 1.04
 - PARÇA NO: 12_1
 - SATIR: 4335
 - SÜTUN: 5985Below the metadata are several processing options: 'Seviye 1', 'Seviye 1 R', 'Seviye 1 RB', 'Seviye 2', 'Seviye 3', 'RGB', 'PanSharp', and 'Vektör'.
- Map:** A map at the bottom right showing the location of the satellite image. Labels include 'Alaplı', 'Ormanlı', and 'Devrek'. The map also shows a red location pin and the 'UZAY' logo.

<https://www.gezgin.gov.tr/>

Dosya indirmek için e-devlet şifresi gerekmektedir.

USGS - Glovis

The screenshot displays the USGS Glovis web interface. At the top, there is a navigation bar with links for Home, Take Tour, Release Notes, FAQ, System Messages (1), Feedback, Login, and Help. The main interface is divided into several sections:

- Interface Controls:** A sidebar on the left containing:
 - Choose Your Data Set(s):** A list of data sets with radio buttons for selection:
 - TIRS LISS-3
 - Landsat 1-5 MSS C1 Level-1
 - Landsat 4-5 TM C1 Level-1
 - Landsat 7 ETM+ C1 Level-1 (25 scenes match your criteria.)
 - Landsat 8 OLI/TIRS C1 Level-1
 - OrbView-3
 - Metadata Filter:** A section with three filters:
 - Date Range:** 01.09.2019 to 29.09.2020
 - Cloud Cover:** 0 to 20
 - Months:** Jan, Feb
 - APPLY** and **CLEAR** buttons at the bottom of the filter section.
- Selected Scenes (1):** A dropdown menu above the map.
- Map:** A satellite image of a coastal area with a red bounding box. The map includes a scale bar (0, 10, 20 km), a compass, and a coordinate display (Lat: 41.4818, Lon: 30.9375). The map data is attributed to Leaflet, OpenStreetMap contributors, and USGS/EROS.
- Scene Information:** A text box below the map displaying the scene ID: **Landsat 7 ETM+ C1 Level-1 LE07_L1TP_178031_20200727_20200824_01_T1**.
- Map Controls:** A panel on the right side of the map with buttons for **View Metadata**, **Hide Scene**, and **Share**.

<https://glovis.usgs.gov/>

USGS - Earth Explorer

Search Criteria Data Sets Additional Criteria **Results**

4. Search Results

If you selected more than one data set to search, use the dropdown to see the search results for each specific data set.

Note: You must be logged in to download and order scenes

Show Result Controls

Data Set [Click here to export your results »](#)

Landsat 7 ETM+ C1 Level-1

« First « Previous 1 Next » Last »

Displaying 1 - 100 of 2,876,171

	ID: LE07_L1TP_098073_20200929_20200929_01_RT Acquisition Date: 2020-09-29 Path: 98 Row: 73
	ID: LE07_L1TP_098074_20200929_20200929_01_RT Acquisition Date: 2020-09-29 Path: 98 Row: 74
	ID: LE07_L1TP_098075_20200929_20200929_01_RT Acquisition Date: 2020-09-29 Path: 98

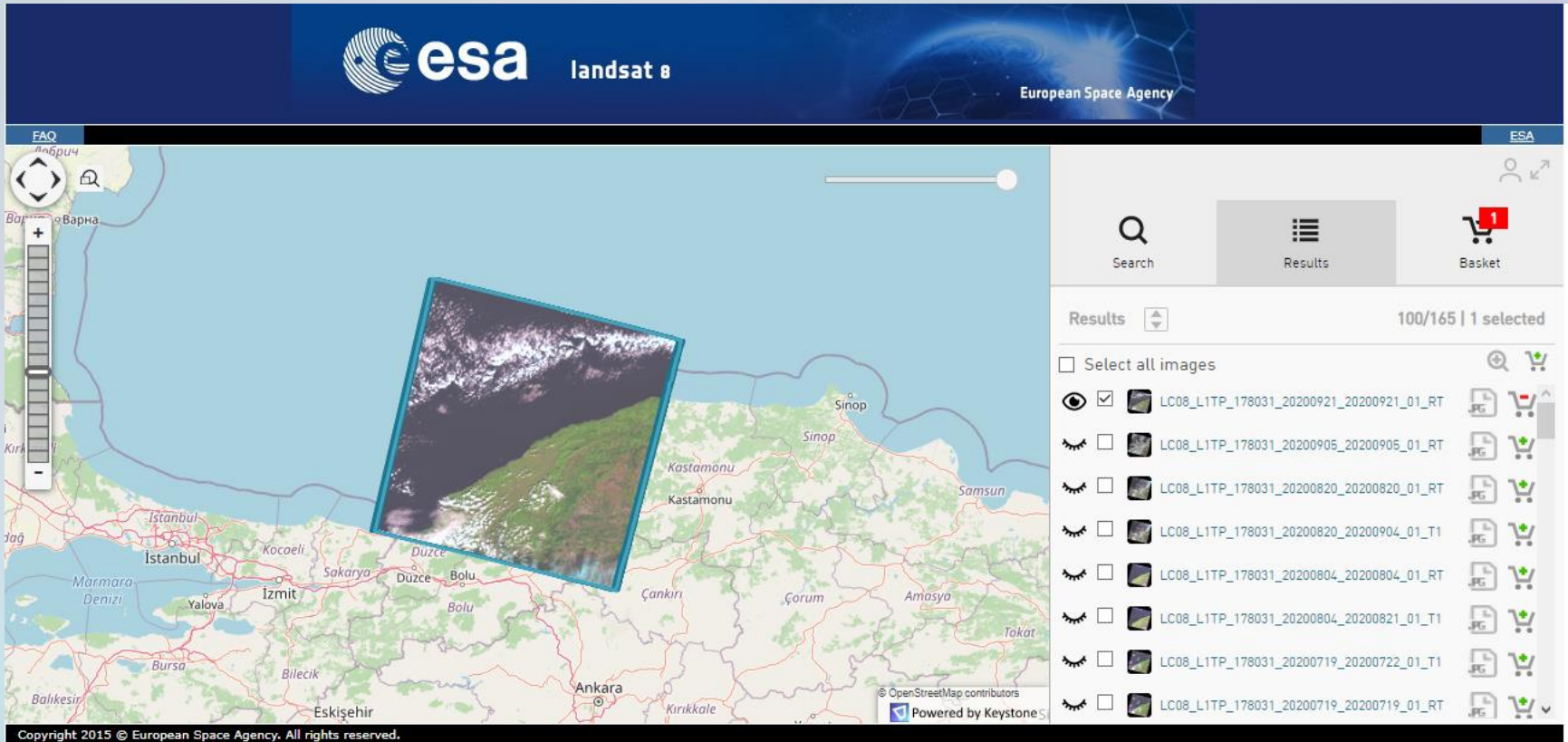
Search Criteria Summary (Show) [Clear Search Criteria](#)

(41° 26' 59" N, 031° 41' 46" E) Options + -

Map showing satellite imagery of the Zonguldak region in Turkey. The map displays terrain, roads, and various districts including Hatiplar, Filyos, Türkali Merkez, Muslu Kayabaşı, Doğancılar, Kuzyaka, Merkez, Karadon, Subatan, Tepebaşı, Baştarla, Zonguldak, Karalimas, On Temmuz, Tepeören Merkez, Kargalar Merkez, Kilimli, Çömekçi, Sarıkum, Çaycuma, and Fatih. The map includes a search criteria summary and a clear search criteria button.

<https://earthexplorer.usgs.gov/>

ESA Landsat 8 Web Portal



esa landsat 8
European Space Agency

FAQ ESA

Search Results Basket

Results 100/165 | 1 selected

Select all images

<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200921_20200921_01_RT		
<input type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200905_20200905_01_RT		
<input type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200820_20200820_01_RT		
<input type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200820_20200904_01_T1		
<input type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200804_20200804_01_RT		
<input type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200804_20200821_01_T1		
<input type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200719_20200722_01_T1		
<input type="checkbox"/>	<input type="checkbox"/>	LC08_L1TP_178031_20200719_20200719_01_RT		

© OpenStreetMap contributors
Powered by Keystone

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<https://landsat8portal.eo.esa.int/portal/>

NASA - EARTHDATA

The screenshot displays the NASA EarthData Search interface. The main content area shows search results for "ASTER Global Digital Elevation Model V003". The interface includes a search bar, a list of granules with their start and end dates, and a map view of the data. The search results are as follows:

Granule Name	Start Date	End Date
ASTGTMV003_N41E030.zip	2000-03-01 00:00:00	2013-11-30 23:59:59
ASTGTMV003_N40E030.zip	2000-03-01 00:00:00	2013-11-30 23:59:59
ASTGTMV003_N40E031.zip		
ASTGTMV003_N40E032.zip		

The interface also shows a sidebar with search filters, including a spatial rectangle with SW: 40.89162,30.99902 and NE: 41.70055,32.41406. The bottom of the interface features a timeline for the month of January 2020.

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

NASA - LAADS DAAC

The screenshot displays the NASA LAADS DAAC search interface. At the top, the NASA logo and 'LAADS DAAC' are visible, along with navigation links for 'About LAADS', 'Find Data', 'Data Discovery', 'Quality', 'Help', and 'Profile'. Below this is a search bar with a 'Search by Product' button and a 'Products (Collection)' dropdown menu. The search bar contains the text 'MODIS:Terra' and 'MODIS Collection 6.1 - Level 1, Atmosphere, Land (A)'. A dropdown menu is open, showing 'Products (Collection)' with an 'x' icon, 'Add product', and 'MOD04_L2 (61)' with an 'x' icon. The search bar also includes filters for 'TIME', 'LOCATION', and 'FILES', each with a 'No [category] selected.' message. A 'reset' button is located to the right of the search bar. Below the search bar, there is a 'keyword' input field and a 'Browse products' checkbox. The main content area is divided into two columns. The left column shows a list of product categories: 'All [25]', 'Level-0 / Level-1 [7]', 'MODIS Terra, Aqua [7]', 'Atmosphere [10]', 'Aerosol [2]', 'Water Vapor [1]', 'Cloud Properties [1]', 'Atmosphere Profiles [1]', 'Cloud Mask [1]', 'Joint L2 Atmosphere Product [1]', and 'L3 Atmosphere Product [3]'. The 'Aerosol [2]' category is highlighted in blue. The right column shows a list of products: 'MOD04_3K' (MODIS/Terra Aerosol 5-Min L2 Swath 3km) and 'MOD04_L2' (MODIS/Terra Aerosol 5-Min L2 Swath 10km). The 'MOD04_L2' product is highlighted in green. At the bottom of the interface, there is a footer with the NASA logo, 'Goddard SPACE FLIGHT CENTER', 'Level-1 and Atmosphere Archive & Distribution System', and a link to 'Privacy Policy and Important Notices'.

<https://ladsweb.modaps.eosdis.nasa.gov/search/>

Giovanni Web Araci

The screenshot shows the Giovanni web interface with the following elements:

- Header:** EARTHDATA logo, "Find a DAAC", and "Giovanni The Bridge Between Data and Science v 4.34".
- Navigation:** "Feedback", "Help", and "Log out (ozgurzeydan)".
- Alert:** "NLDAS data in Giovanni have been temporarily disabled ... [1 of 1 messages] Read More".
- Filters:**
 - Select Plot:** "Time Averaged Map".
 - Select Date Range (UTC):** "2018 - 10 - 16 00 : 00 to 2018 - 10 - 16 23 : 59".
 - Select Region (Bounding Box or Shape):** "24.6973,34.9805,46.1426,43.3301".
- Select Variables:**
 - Observations:** "Observation (10)".
 - Disciplines:** "Aerosols (10)", "Atmospheric Chemistry (2)", "Atmospheric Dynamics (46)", "Water and Energy Cycle (2)".
 - Measurements:** (empty).
 - Platform / Instrument:** "AMSR-E (4)", "MERRA-2 Model (76)", "MISR (2)", "MODIS-Aqua (12)", "MODIS-Terra (10)".
- Search Results:**
 - Number of matching Variables: 10 of 1418. Total Variable(s) included in Plot: 1.
 - Keyword search bar with "Search" and "Clear" buttons.
 - Table of results with columns: Variable, Units, Source, Temp.Res., Spat.Res., Begin Date, End Date.
- Footer:** "Responsible NASA Official: Angela Li", "Web Curator: M. Hegde", "Privacy", "Powered By", "Contact Us", "Reset", "Plot Data", "Go to Results".

Variable	Units	Source	Temp.Res.	Spat.Res.	Begin Date	End Date
<input checked="" type="checkbox"/> Combined Dark Target and Deep Blue AOD at 0.55 micron for land and ocean: Mean (MOD08_D3 v6.1)	-	MODIS-Terra	Daily	1 °	2000-02-24	2020-09-28
<input type="checkbox"/> Aerosol Optical Depth 550 nm (Deep Blue Land-only) (MOD08_D3 v6.1)	-	MODIS-Terra	Daily	1 °	2000-02-24	2020-09-28
<input type="checkbox"/> Deep Blue Angstrom Exponent for land (0.412-0.47 micron): Mean of Daily Mean (MOD08_D3 v6.1)	-	MODIS-Terra	Daily	1 °	2000-02-24	2020-09-28
<input type="checkbox"/> Scattering Angle: Mean of Daily Mean (MOD08_D3 v6.1)	degrees	MODIS-Terra	Daily	1 °	2000-02-24	2020-09-28
<input type="checkbox"/> Aerosol Optical Depth 550 nm (Dark Target) (MOD08_D3 v6.1)	-	MODIS-Terra	Daily	1 °	2000-02-24	2020-09-28
<input type="checkbox"/> Combined Dark Target and Deep Blue AOD at 0.55 micron for land and ocean (MOD08_M3 v6.1)	-	MODIS-Terra	Monthly	1 °	2000-02-01	2020-08-31
<input type="checkbox"/> Aerosol Optical Depth 550 nm (Deep Blue Land-only) (MOD08_D3 v6.1)	-	MODIS-Terra	Daily	1 °	2000-02-24	2020-09-28

<https://giovanni.gsfc.nasa.gov/giovanni/>

Giovanni Web Araci

Time Averaged Map of Combined Dark Target and Deep Blue AOD at 0.55 micron for land and ocean: Mean daily 1 deg. [MODIS-Terra MOD08_D3 v6.1] over 2018-10-16, Region 24.6973E, 34.9805N, 46.1426E, 43.3301N

