This astronaut image is showing a large area of orange colored sand dunes in Algeria called the Tifernine Dunes. This area is part of the Sahara desert. Drainage channels show where water once flowed through the area when the climate was wetter.

OTHER VISIBLE FEATURE(S): Drainage channels

This astronaut image is taken of an area in northern Egypt almost completely covered in sand dunes. This area, west of Cairo, is part of the Sahara Desert.

OTHER VISIBLE FEATURE(S): Clouds, cloud shadows

This astronaut image is taken of yardangs in an area along the northern coast of Namibia called the Skeleton Coast.

OTHER VISIBLE FEATURE(S): Coastline

This astronaut image is taken of the Sandre de Cristo Mountains and sand dunes located in Great Sand Dunes National Park in Colorado.

The mountains are outlined by dark green forests at lower elevations and white, snow-capped peaks at the highest elevations.

OTHER VISIBLE FEATURE(S): Mountains, forests, snow

This astronaut image is taken of yardangs in the Djado plateau of Niger. This area is located in the Sahara and is heavily eroded by wind.

OTHER VISIBLE FEATURE(S): n/a

This astronaut image is taken of wind eroded ridges (yardangs) that have modified a multi-ringed impact crater called Aorounga. The Aorounga crater is located to the southeast of Emi Koussi (a volcano not seen in this image) on the Tibesti mountains in Chad.

OTHER VISIBLE FEATURE(S): Impact crater

This astronaut image showing numerous wind streaks is taken of an area affected by strong winds in the northern part of Sudan.

OTHER VISIBLE FEATURE(S): Escarpments

This astronaut image is taken of an area where a channel once flowed that is now affected by strong winds on the Tibesti mountains in Chad. This image is dominated by features created by effects of wind erosion.

OTHER VISIBLE FEATURE(S): Channel (visible in the center of image)
Features on Earth: FLUVIAL FEATURES

Expedition Earth and Beyond
ARES Education Program
NASA Johnson Space Center

Images courtesy of:
Image Science & Analysis Laboratory
NASA Johnson Space Center

EARTH
FLUVIAL FEATURES
• This astronaut image is centered on a set of valley or drainage networks in Chad, Africa. In arid regions these drainage networks consist of a network of wadis. Wadis are channel-like features that are dry but have intermittent streamflow during periods of rain.
• OTHER VISIBLE FEATURE(S): n/a

• This astronaut image is centered on the Parana River in northern Argentina just to the south of Paraguay. The Parana River is the third largest river in South America. Sun glint on the river gives it a silvery glow and allows varying currents to be visible.
• OTHER VISIBLE FEATURE(S): Urban area, channel islands, meander scars

• This astronaut image highlights a portion of the Krishna River Delta that flows into the Bay of Bengal in India. Sediment deposits are tan to brownish in color.
• OTHER VISIBLE FEATURE(S): River channel, sediment deposits, bay

• This astronaut image is centered on the Nile River Delta in Egypt. This area is where the Nile River spreads out and drains into the Mediterranean Sea.
• OTHER VISIBLE FEATURE(S): River channel, sea, clouds

• This astronaut image is centered on the Ucayali River east of the Andes Mountains in Peru. This river is one of four rivers considered as the main headwater of the Amazon River.
• OTHER VISIBLE FEATURE(S): Oxbow lakes, meander scars

• This astronaut image is centered on the Selenga River Delta flowing into Lake Baikal in Russia. Sunglint gives a silver-white sheen to the water surface of Lake Baikal. The Selenga River is the main river that stretches between Mongolia and Russia.
• OTHER VISIBLE FEATURE(S): Lake, river channels, clouds
ISS006-E-16068

ISS012-E-15881

ISS014-E-11841

ISS014-E-15775

ISS014-E-19496

ISS015-E-17360

ISS018-E-14908

ISS018-E-023713
**IMPACT FEATURE: CRATER**

**Geographic Location:** CANADA
**Image ID:** ISS012-E-15881

- This astronaut image is centered on the Manacouagan Impact Crater located in Quebec, Canada. The rim of the crater is now filled with water and referred to as the Manacouagan reservoir. Part of the central mound of the crater is still visible.
- **OTHER VISIBLE FEATURE(S):** Reservoir or lakes

**IMPACT FEATURE: CRATER**

**Geographic Location:** NAMIBIA
**Image ID:** ISS006-E-16068

- This astronaut image is taken of the Roter Kamm Impact Crater, found in the Namib Desert in Namibia.
- **OTHER VISIBLE FEATURE(S):** Sand dunes, mountains

**IMPACT FEATURE: CRATER**

**Geographic Location:** UNITED STATES
**Image ID:** ISS014-E-15775

- This astronaut image is centered on Barringer Crater (also know as Meteor Crater) located in northern Arizona. It is one of the best-known impact craters in the world.
- **OTHER VISIBLE FEATURE(S):** River channel, wind streak

**IMPACT FEATURE: CRATER**

**Geographic Location:** LIBYA
**Image ID:** ISS014-E-11841

- This astronaut image is centered on the Oasis Impact Crater found in the Sahara Desert in Libya.
- **OTHER VISIBLE FEATURE(S):** n/a

**IMPACT FEATURE: CRATER**

**Geographic Location:** AUSTRALIA
**Image ID:** ISS015-E-17360

- This astronaut image is centered on Gosses Bluff, an impact crater located in Australia’s Northern Territory.
- **OTHER VISIBLE FEATURE(S):** River channel

**IMPACT FEATURE: CRATER**

**Geographic Location:** ALGERIA
**Image ID:** ISS014-E-19496

- This astronaut image shows the Quarkziz Impact Crater and sedimentary layers located in western Algeria close to the border of Morocco.
- **OTHER VISIBLE FEATURE(S):** Sedimentary rocks & layers, small circular hills

**IMPACT FEATURE: CRATER**

**Geographic Location:** INDIA
**Image ID:** ISS018-E-023713

- This astronaut image is centered on the Lonar Impact Crater located in Central India. The central portion of this crater is now filled with water.
- **OTHER VISIBLE FEATURE(S):** Lake, agricultural fields, urban area

**IMPACT FEATURE: CRATER**

**Geographic Location:** MAURITANIA
**Image ID:** ISS018-E-14908

- This astronaut image is centered on the Tenourmer Impact Crater located in the Sahara Desert in Mauritania.
- **OTHER VISIBLE FEATURE(S):** n/a
• This astronaut image includes two of more than 100 volcanoes that exist in this region. These snow covered volcanoes are located in the Kamchatka Peninsula in Russia. This area is part of the “Ring of Fire” and has many active volcanoes.
• OTHER VISIBLE FEATURE(S): Caldera, lava drainage channels, snow, lake

• This astronaut image shows the Emi Koussi Volcano located at the south end of the Tibesti Mountains in Chad. Extensive lava flows are visible all around the volcano.
• OTHER VISIBLE FEATURE(S): n/a

• This astronaut image shows lava flows on either side of the summit caldera of the tallest volcano on Earth. Mauna Loa, located on the Big Island of Hawaii rises 49 km (30.4 mi) above the sea floor.
• OTHER VISIBLE FEATURE(S): Clouds

• This astronaut images is taken of the Deriba Caldera, a dormant volcanic structure located at the top of the Marra Mountains in western Sudan. Numerous drainage networks are visible around the caldera. Within the caldera are two inner volcanic depressions called craters.
• OTHER VISIBLE FEATURE(S): Drainage networks, inner crater lakes

• This astronaut image shows distinct, dark lava flows of the Toussidé Peak Volcano in Chad. The Toussidé Peak Volcano (not shown in this image) is the westernmost volcano of the Tibesti Mountains in northwestern Chad.
• OTHER VISIBLE FEATURE(S): n/a