

INTRODUCTION

New Zealand is an island country located in the southwestern Pacific Ocean, some 1,500 kilometres (900 mi) east of Australia across the Tasman Sea.

The country geographically comprises two main landmasses – that of the North Island, and the South Island – and numerous smaller islands.

Because of its remoteness, it was one of the last lands to be settled by humans. The relative long isolation suffered in the centuries caused a distinctive biodiversity of animal, fungal and plant life. Polynesians settled New Zealand in 1250–1300 CE and developed a distinctive M ori culture, known in all the world for their distinctive war dance.

Today, New Zealand's culture is mainly derived from M ori and early British settlers, with recent broadening arising from increased immigration. The official languages are English, M ori and New Zealand Sign Language, with English predominant.

The country's varied topography and its sharp mountain peaks, such as the Southern Alps, owe much to the tectonic uplift of land and volcanic eruptions. New Zealand's capital city is Wellington, while its most populous city is Auckland.

OFFER

Brief description of the Astrotourism offer (state of Astrotourism in the destination, zone or region)

As the rest of the world is losing sight of the night sky, astro-tourism is a way for New Zealand businesses to capitalize on the natural beauty of the sky above, educate tourists and visitors about the seriousness of light pollution and to inspire people to take an interest in space with a passion that is only achieved by seeing the sky in its full brilliance.

Moreover, New Zealand presents the southern hemisphere's first - and the world's largest - dark sky reserve, (Aoraki Mackenzie International Dark Sky Reserve).

Stargazing is a year round activity but New Zealand's summer months and autumn (December to April) are when skies are clearest. Unique star features include the Southern Cross and the Magellanic Clouds, satellite galaxies to the Milky Way that are only visible in the southern hemisphere.

Visitors to New Zealand will find many ways to experience and appreciate the southern skies - from simply stepping outside on a fine night to gaze up at the Milky Way, to the complete guided experience and viewing the celestial wonders through giant telescopes at Lake Tekapo's Mt John Observatory.

Inland from Christchurch, the Mt John Observatory offers spectacular viewing - whether that's the alpine landscape during the day or the southern skies. Here, in the South Island's Mackenzie Basin - renowned for New Zealand's clearest night sky - four companies offer personalized day and night sky tours.

Most of the ideas related to the astro tourism in New Zealand are presented in the web page: <http://media.newzealand.com/en/story-ideas/heavens-above-star-gazing-in-new-zealand/>

List of services and activities directly related to Astrotourism

New Zealand Astronomy Resources

Lot of astronomical societies operate observatories on a few nights each month and are very happy to share their knowledge of New Zealand's night skies with visitors.

North Island

- o Auckland Astronomical Society, Auckland
- o Gisborne Astronomical Society, Gisborne
- o Hamilton Astronomical Society, Waikato
- o Hawera Astronomical Society, Taranaki
- o Hawkes Bay Astronomical Society, Napier
- o Horowhenua Astronomical Society, Manawatu
- o New Plymouth Astronomical Society, Taranaki
- o Northland Astronomical Society, Northland
- o Palmerston North Astronomical Society, Manawatu
- o Phoenix Astronomical Society, Wairarapa
- o Planetarium North, Northland
- o Rotorua Astronomical Society, Bay of Plenty
- o Tauranga Astronomical Society, Bay of Plenty
- o Wellington Astronomical Society, Wellington
- o Whakatane Astronomical Society, Bay of Plenty
- o Whanganui Astronomical Society, Manawatu

South Island

- o Ashburton Astronomy Group, Canterbury
- o Astronomy Section, Nelson Science Society, Nelson
- o Canterbury Astronomical Society, Canterbury
- o Central Otago Astronomical Society, Central Otago
- o Dunedin Astronomical Society, Otago
- o North Otago Astronomical Society, Otago
- o Oxford Area School Observatory, Canterbury
- o South Canterbury Astronomy Group, South Canterbury
- o Southland Astronomical Society, Southland

Royal Astronomical Society of New Zealand (<http://rasnz.org.nz/>).

Founded in 1920, and based in Wellington, it promotes knowledge of astronomy and related branches of science. It encourages interest in Astronomy, and is an association of observers and others for mutual help and advancement of science. It has several groups and sections

Institute for Radio Astronomy and Space Research : (<http://www.irasr.aut.ac.nz/>),

Auckland: first (and only) radio astronomical institute in New Zealand. It was founded in 2004.

New Zealand's Aoraki Mackenzie International Dark Sky Reserve: it is the southern hemisphere's first dark sky reserve, and the world's largest. It is a gold-rated dark sky reserve, in recognition of the quality of the almost light-pollution-free skies of the Mackenzie Basin. The dark sky reserve is located in the Mackenzie Basin, in the South Island of New Zealand, and includes Aoraki Mt Cook National Park, and the villages of Lake Tekapo, Twizel and Mt Cook. The 4300sq km area is bounded by a spectacular alpine landscape with the Southern Alps in the west, and the Two Thumb Range in the east.

EARTH & SKY, Tourism Operator specialized in astro-tourism, Lake Tekapo (<http://www.earthandskynz.com/window-to-the-universe/en/>): organization of Night-time – stargazing - Observatory Tours at one of two dedicated locations in the heart of the Aoraki Mackenzie International Dark Sky Reserve; tours at Mt. John University Observatory and Cowan's Observatory; Experienced guides take visitors through an introduction and exploration of the night sky via hands-on experience of telescopes, astro-photography and the summit-top cafe. Mt John offers a unique opportunity to view the Southern Cross constellation, to find the south celestial pole, and to listen to traditional stories around Orion, Scorpius, the Pleiades and Taurus.

Kiwi Observatory (<http://kiwiobservatory.co.nz/>) : a private observatory with public outreach programs. Tuition in telescope use. Entry by donation to South Canterbury Astronomers Group

Tekapo Starlight provides a guided tour of the night sky - exploring the wonders and depth of the solar system, Milky Way galaxy and beyond with the naked eye - in the hands of a passionate, experienced guide.

Star Gazing Tours Twizel (<http://stargazing.co.nz/>) takes small group guided tours into a private out-of-town location for a light-pollution free night sky experience. With the help of a knowledgeable guide, visitors discover hidden gems in the night sky with their own eyes and through high quality binoculars.

Queenstown's Skyline (<http://www.skyline.co.nz/queenstown/>) - on a mountainside above the resort town - also offers winter season star gazing tours. Visitors can take the Skyline Gondola from downtown Queenstown to a special viewing area for a guided tour of the southern night sky.

New Zealand planetariums

Aside from Aoraki Mt Cook, there are two other planetariums in New Zealand: Carter Observatory Wellington and Auckland's Stardome Observatory, both centrally located and easily accessed.

Carter Observatory (Wellington) - a short scenic cable car ride above town - has panoramic views of the city, an historic 23cm refracting telescope, displays and a 30-minute planetarium show. The telescopes are manned by a qualified astronomer who is available to answer questions, and the observatory also offers special events to celebrate Matariki.

Stardome Planetarium (<http://www.stardome.org.nz/astronomy/>), Cornwall Park, Auckland: It organizes planetarium shows every night of the week except Mondays, and telescope views outside; It is present also in tripadvisor;

Stonehenge Aotearoa, (<http://www.stonehenge-aotearoa.co.nz/>) in the Wairarapa wine region north of Wellington - inspired by the original English Stonehenge - highlights the stars and constellations that guided the original Polynesian navigators across the Pacific. Visitors learn about stargazing and how ancient cultures used the heavens to navigate and chart the four seasons.

New Zealand Site resources

Lakeview Tekapo (<http://www.lakeviewtekapo.co.nz/>): Lake Tekapo's newest luxury accommodation offering astro-tourism packages. It offers suites, each with a sky-window for stargazing

Stargazers B&B (<http://www.stargazersbb.com/>) - near Whitianga, on the North Island's Coromandel Peninsula. Stargazers comes complete with its own solar powered observatory dome and deck where passionate hosts offer night time star tours. Accommodation is in an historic gold miners cottage surrounded by native bush.

Other tourism-related services (accommodation, cultural, natural...)

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Astrotourism-related information about the destination currently available (web, social networks...)

Most of the information are available on web sites. The official page is <http://www.newzealand.com/int/>, where you can find a selection of different recommended experiences

Another interesting site is:

<http://www.nzastronomy.co.nz/directory>

which presents a list of astronomy-related tourism attraction (the "big Six").

Other sites have been previously indicated.

There are also some Facebook pages. Earth & Sky Ltd has one of the most active pages., with 4.815 Likes.

Moreover, there is an interesting app for android and iphone smartphones:

<http://www.newzealand.com/int/utilities/essential-new-zealand-app/>

Communication channels for the offered services (main channels in which the activities and services are sold)

Services are offered mainly online: it is possible to book for a tour or a simple visit/participation to an event by online forms or by email contacts. Earth & Sky Ltd offers payments processed via a Secure Server provided by DPS Payment Express

Phone numbers are available for special events, short deadlines or general info.

Tourism resources of special interest for Astrotourism (infrastructure, natural resources, education...)

New Zealand's Aoraki Mackenzie International Dark Sky Reserve: it is the southern hemisphere's first dark sky reserve, and the world's largest. It is a gold-rated dark sky reserve, in recognition of the quality of the almost light-pollution-free skies of the Mackenzie Basin. The dark sky reserve is located in the Mackenzie Basin, in the South Island of New Zealand, and includes Aoraki Mt Cook National Park, and the villages of Lake Tekapo, Twizel and Mt Cook. The 4300sq km area is bounded by a spectacular alpine landscape with the Southern Alps in the west, and the Two Thumb Range in the east.

As a result of astro- tourism tours the general public are introduced astronomical equipment, solar-system features, stars, constellations, telescopes and astro- photography. The general public also have free access to the Astro-Café at Mt John Observatory during the day.

At Mt Cook Village the digital planetarium offers a huge scope for education including real-time data, documentary-style movies and space-travel software. The Sir Edmund Hillary Alpine Centre is a dedicated education facility which

Integrates astronomy and mountaineering in both historical and present day contexts.

All astro-tourism tours in the Mackenzie discuss light pollution with tourists as that is necessary to explain what makes the skies in the Mackenzie so exceptional for viewing night sky. With the tours people are being informed and inspired at the same time

Events related with Astrotourism.

Near the end of May, when mid-winter nights are long and dark, Aotearoa New Zealand celebrates the rising of the Matariki star cluster - seven stars that first appear on the north east horizon, signaling M ori New Year in the southern night skies. To astronomers this constellation is known as Pleiades, but to the M ori people of New Zealand it is Matariki - a celestial reminder of the most important event on the M ori cultural calendar.

The new year is marked at the sighting of the next new moon which occurs at the midwinter solstice, and Matariki is celebrated over four weeks with many events that bring families and communities together to celebrate new beginnings. Public and private events include everything from family feasts, to kite-making workshops, films, art exhibitions and night sky star-gazing events - all celebrating New Zealand's M ori heritage, nature, creativity and expression.

Starlight Certification or similar ones.

In the Mackenzie Basin, nestled in the foothills of New Zealand's Southern Alps, where the stars twinkle brightly in a crystal-clear night sky that makes the heavens appear closer to earth, astro-tourism is booming.

The skies above the surrounding region, which includes the country's highest peak Aoraki Mt Cook, have been officially declared an 'International Dark Sky Reserve' with a gold rating. Covering 4300sq km over Aoraki / Mt Cook National Park and the Mackenzie Basin, the Aoraki Mackenzie International Dark Sky Reserve forms the world's largest such reserve. There are also plans afoot to have the region declared as a 'Starlight Heritage Reserve' - recognised by UNESCO as a world heritage site but this is a lengthy process and, as yet, the international organisation has not declared any starlight reserves.

The Lighting Ordinance applies to a large area in the Mackenzie Basin around Lake Tekapo and Mt John Observatory. See also:

<http://www.newrules.org/environment/rules/light-pollution/light-pollution-tucsonpima-county-az>

http://www.darksky.org/assets/Night_Sky_Conservation/New_Zealand_IDSP_app.pdf

DEMAND

Average visitors per year that perform the activity.

No specific data are available on the web

Profile of the tourist who engages in Astrotourism-related activities (where available)

No specific data are available on the web. Official data from the Ministry of Business, Innovation show that most of the New Zealand visitors comes from Australia, the UK, the USA and China.

Evolution of visits to Astrotourism-related activities in the last three years.

Some sites claim for an increase of the number of tourist of 10% due to the increase of astro-tourism resources, but no official data are available.

LOCATION GENERAL INFORMATION

- Brief description of the overall supply of the destination (indicating other touristic products offered at the destination).
- Average visitors per year of the destination.
- Connectivity of the destination (how to access the destination: boat, lane, train...)
- Accessibility of the destination (signposting, degree of universal accessibility)
- Degree of protection of the destination (the area where the activities takes place, has any protection?, natural protected areas, national parks, Geoparks)
- Other Certifications