

PROMOTING A WORLD HERITAGE PARK IN THE SKY AT LAKE TEKAPO in the Mt Cook Region of New Zealand and developing Astro-Tourism at Mt John Observatory

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On about a similar latitude to Portugal but down in the Southern Pacific Ocean lies two islands, together about the size of Great Britain – they are called New Zealand.

Apart from the Maori, it was discovered by Abel Tasman in 1642 and explored further by Captain Cook in 1769 when he was on a voyage to study the transit of Venus. Descendants of our Maori first found and settled New Zealand in the late tenth century and they called it “*Aotearoa*”, the land of the long white cloud.

Surrounded by ocean and with Antarctica way to the south, those early Polynesian explorers were amongst the most skilled navigators in the world using the great stars of our southern skies.

We are a member of the British Commonwealth and have a population of about four million people. Our big passion is “rugby”. The “All-Blacks”.

I would like to think that New Zealand has another passion and that is Mother Nature and the beautiful environment in which we live. But as typical humans we often pay but



lip service to such passions and then rush on with our lives and hope someone else will look after it while we work, play and have fun.

And New Zealanders like many other people look around them and enjoy the spectacular scenery before them - and in turn encourage lots of visitors to come and do the same. They call this tourism; it is one of our most import industries.

But while we are aware we have a beautiful, starry dark sky above us, it is only recently someone has taken us by the hand saying – look upwards, as well as around you. This clear, unpolluted, dark sky that we still have is one of our great assets – one so very easily taken for granted, one so easily lost.

And quickly you become aware that most of us mere mortals have a fascination with the heavens above. And that there is a deep yearning to learn, see and understand more of this incredibly boundless last frontier, plus a noticeable desire, where possible, to try to play their part in helping better to protect it.

The gateway to our Southern Island is Christchurch, and three hours driving south is the geometrical centre, Lake Tekapo and the Mount John observatory, latitude 44° South and 170° East, Mount John is New Zealand's base for astronomical research and is operated by the university of Canterbury. Recently through the initiative of Professor Muraki of Nagoya University in Japan, a large microlensing telescope was installed on Mt John to search for dark matter and new planets – maybe another earth, as it was considered the best site to explore the southern sky. I understand that their first exciting microlensing event of 2007 will be reported very shortly.

Vast tussock grasslands where farmers grow fine wool on their merino sheep surround Mount John and just forty kilometres to the north is Mount Cook; 3750 metres



above sea level and New Zealand's highest mountain. Where on crisp; clear nights the stars stand out to touch you in every sense of the word.

But because of our area's alpine beauty and recreational attractions it encourages "development". The population base is quickly expanding. While our district council welcomes and indeed encourages development it also has shown great initiative in trying to protect the dark sky, and is indeed leading New Zealand in this regard. As early as 1981 it began writing rules and regulations into its district plan: lights must all shine downwards; street lights are to be low pressure sodium.

The spirit is indeed there and at a local meeting residents unanimously agreed that protecting our night sky was a major priority. Hence we need to strive to find the most suitable and practical mechanism to encase our dark sky area for the sake of future generations.

Existing basic rules and regulations will not be enough. So we are in touch with UNESCO. The dream of course is a Heritage Park or Reserve, in the sky! Because it is a unique sky with the Southern Cross and the Milky Way silently laid over us like a giant mantle. And this land below which is also special, already encompasses part of a New Zealand National Park.

The challenge

We would like our unique area to be part of the world heritage family – we want people to respect, protect, admire and embrace that concept. We want future generations to be able to experience, and enjoy our special dark sky.

In a fast changing world so conscious of climate change and the environment we need world heritage to embrace our cause, to help create something New Zealanders can aspire to, something we can lift up our heads and hearts to. And in amongst all of this quietly sits the words "astro tourism", a new and exciting phenomenon finding its feet - where you proudly can share with countless others the resultant, very special natural resource.

One and a quarter million visitors pass through Lake Tekapo each year – not big numbers in European terms, but large in our scene. So many of these visitors, who are both national and international would welcome the opportunity to experience and explore the wonder and mystery of our dark sky. So about three years ago Canterbury University along with Nagoya University invited a small local company, called "Earth and Sky" to help open the closed gates to Mount John Observatory so that people could come, see and learn - both by day and night.

We are just beginning. Funding is very difficult, being part commercial, part university but we are literally "reaching for the stars". By day you can now drive up the mountain and enjoy a cup of coffee in the new astro-café with one of the most beautiful 360° views imaginable. And tour the facilities or look at the solar spots on the sun or search the blue skies for hidden stars. You can learn about astronomy as well as geology and local history. At night you can have a unique opportunity to starwatch – to explore planets and distant solar systems. To learn how to navigate by the southern cross or perhaps one day see a giant comet light up the sky. So much potential, so much to do and so important we play our part in educating people to appreciate and protect their night sky.

Mount John is a unique partnership built on common objectives and trust. The four corner stones are research, education, environment and ‘astro tourism’. In this spirit of partnership the University of Canterbury have recently offered us their precious 1897 brashear 18-inch (45-cm) refractor telescope.

Over eight metres long, it will need a big dome. We plan to create a special heritage facility down on the edge of our beautiful turquoise blue Lake Tekapo where the mass of passing visitor traffic will have easier access to the world of astronomy, and to better understand not only what is around them but particularly what is above them.

We have the will, the desire and the dreams, and most of all the unique opportunity.



Comet McNaught seen from Lake Tekapo. A spectacular phenomenon which graced our southern sky this year, and not due back for 85,000 years.