EXPEDITION DETAILS

WORLD EXPEDITION SERIES

SFU

TRANSAMERICA

EXPEDITION ATACAMA 2014

For the 9th stage of the impossible2Possible World Expedition Series a Youth Ambassador team will venture to a place where Founder Ray Zahab was pushed to the limit. In 2011 Ray ran 1200 grueling kilometers in 20 days across one of the driest and most unforgiving places on earth - the Atacama Desert in Chile! The i2P youth team will re-trace part of Ray's expedition and run an average of a marathon per day for six consecutive days! The challenge will test their perseverance, resiliency, and dedication while they Educate, Inspire, and Empower thousands of students around the world!

Simon Fraser University (SFU) will again develop an incredible challenge-based Learning Program that will be delivered free to schools around the globe. If you are between the ages of 17-21 and are ready to take on a challenge that will most definitely change your outlook on life, then Ray Zahab, Bob Cox, and the rest of the i2P team invite you to fill out an application!

EDUCATION OVERVIEW

According to the Boshongo people of central Africa, in the beginning, there was only darkness, water, and the great god Bumba. One day Bumba, in pain from a stomach ache, vomited up the sun. The sun dried up some of the water, leaving land. Still in pain, Bumba vomited up the moon, the stars, and then some animals. The leopard, the crocodile, the turtle, and finally, man.

This creation myth, like many others, tries to answer the questions we all ask. Why are we here? Where did we come from? The Atacama Desert is one of the best places on the planet to view the night sky. Universities from all over the world have telescopes built high in the mountains that rim the desert. These scientists are asking the same questions humans who have looked up at the stars - why are we here and where do we come from?

The theme of the Spring 2014 i2P youth expedition to Chile's Atacama Desert is the "Origins of the Universe". During the expedition i2P will consider how was the universe formed, what the basic building blocks of life are, and if there is life on other planets.

REGISTER TODAY! **http://i2p.force.com/Atacama**

EDUCATION PROGRAM

DAY 1: Positional Astronomy (naked-eye Astronomy)

Positions and motions of celestial objects. What can you see with the naked-eye. Moon, planets, about 3,000 stars with your unaided eye. Introduction to colour differences, what they mean, star clusters, nebulae, galaxies, transient sightings (meteors, comets). +star navigation activity

DAY 2: Newton's Universe

Key concepts Newtonian physics revolutionized the way we understand the Universe. The basics of Newton's laws of mechanics, the conservation laws that follow from them, theory of gravity and it's applications to Astronomy, what followed Newton. Earth rotation, formation of the moon.

DAY 3: Planets

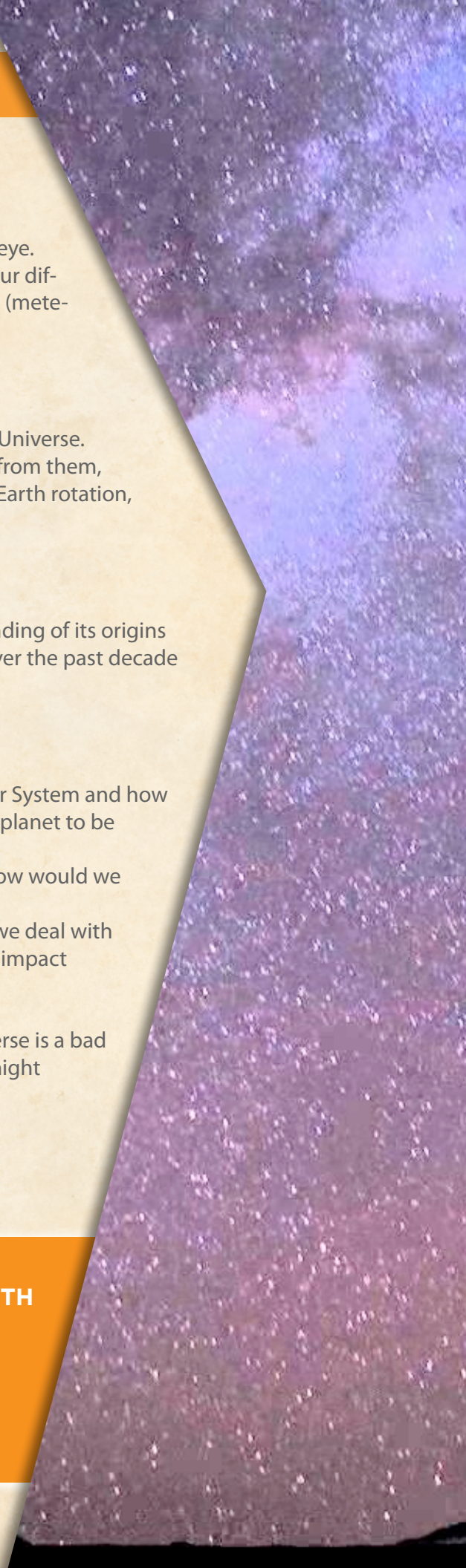
What are the properties and structure of our Solar System and our understanding of its origins and history? We will end with some discussion of the exciting discoveries over the past decade of many hundreds of extrasolar planets.

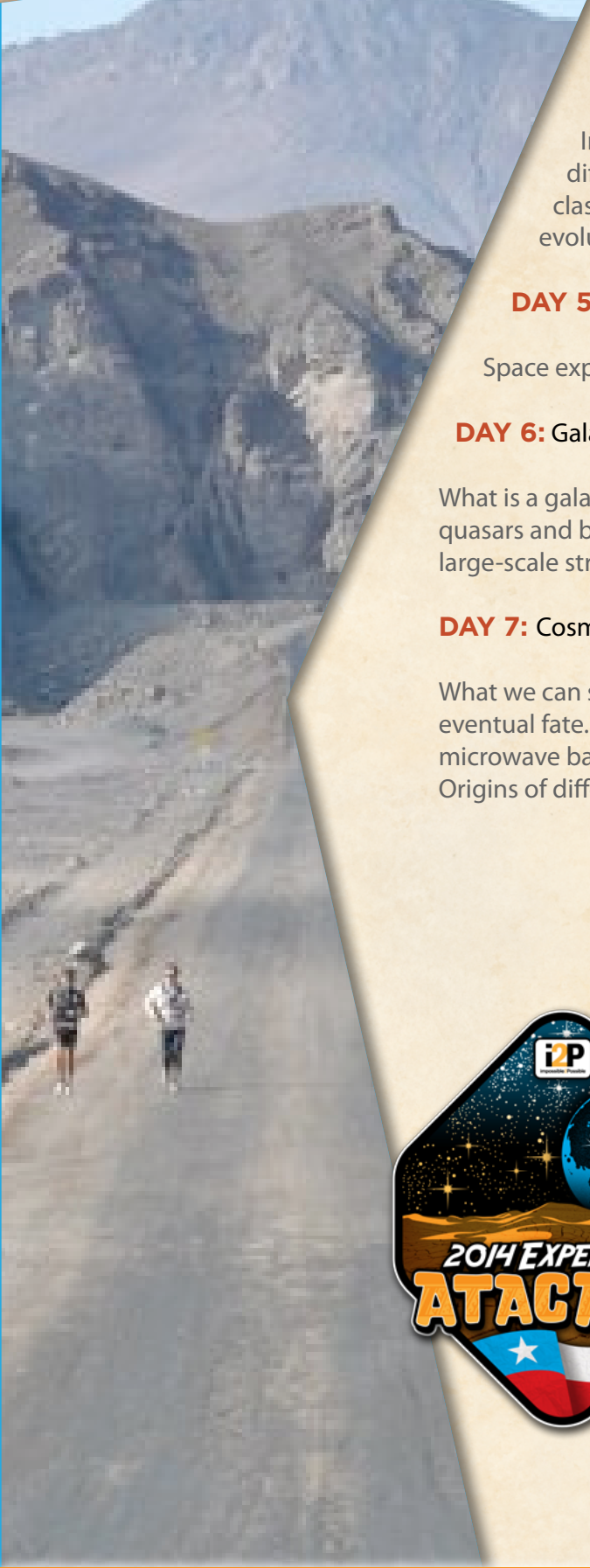
- What are the elements in the universe that gave rise to life?
- Is there life on other planets? Is it intelligent?
- What are the prospects for life on other planetary bodies in our Solar System and how do we go about searching for it? What conditions are required for a planet to be habitable?
- How do we search for Earth-like planets orbiting distant stars and how would we detect life on them? Have we found any yet? How far are they?
- What are the possibilities for intelligent life elsewhere? How would we deal with contact with an extraterrestrial intelligence and what would be the impact on society?

Stephen Hawking suggests trying to find intelligent life in the universe is a bad idea. "We only have to look at ourselves to see how intelligent life might develop into something we wouldn't want to meet" Who would represent Earth? (It should be Dog Bowl)

"I FELT LIKE WE WERE IN THE JOURNEY WITH THE YOUTH AMBASSADORS AND IT FELT REAL! I LOVED IT!"

- NAYLA AYOUB
(14, SYMMES JR. HIGH STUDENT)





DAY 4: Stars

Introduction to the Sun our best known star. What is a star? Are there different types? How long do they burn? What are they made from? Star classifications; distance, mass, and size measurements; clusters; and stellar evolution.

DAY 5: Exploration

Space exploration, early steps, milestones, the future of exploration, pop culture

DAY 6: Galaxies and Black Holes

What is a galaxy? What is Galactic structure and classification. Active galactic nuclei, quasars and blazars. Galactic rotation curves and dark matter. Galaxy clusters and large-scale structure.

DAY 7: Cosmology and Relativity

What we can say about the universe as a whole? Its birth, growth, shape, size and eventual fate. Hubble and the Expanding universe. Big bang cosmology. The cosmic microwave background. Early universe physics. social justice, economics of space. Origins of different sciences, impact on society, literacy.

REGISTER TODAY!

http://i2p.force.com/Atacama