

LEIDEN, NETHERLANDS - DECEMBER 2015

THE FUTURE OF ISS UTILIZATION: AN INDUSTRY PERSPECTIVE



**BLUE
ORIGIN**



#FUTUREISS

MR. HAMISH TORRIE, DIRECTOR OF CORPORATE SOCIAL RESPONSIBILITY, GLENMORANGI/LVMH

VALUE OF BRANDING ON THE INTERNATIONAL SPACE STATION



Ardbeg

The Ultimate

ISLAY SINGLE MALT
SCOTCH WHISKY



ARDBEG

The *Ultimate* Mission

The Value of Branding with the International Space Station

LEIDEN, 7th DECEMBER 2015

Ardbeg

The Ultimate

ISLAY SINGLE MALT
SCOTCH WHISKY



Ardbeg's Story

Welcome to Islay, off the wild west coast of Scotland

Ardbeg
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ISLAY SINGLE MALT
SCOTCH WHISKY



Islay is an antique land

Ardbeg
The Ultimate
ISLAY SINGLE MALT
SCOTCH WHISKY



Established 1815

Ardbeg

The Ultimate

ISLAY SINGLE MALT
SCOTCH WHISKY

Revered by connoisseurs as the Ultimate Islay Malt Whisky

Ardbeg is reborn

Ardbeg
The Ultimate
ISLAY SINGLE MALT
SCOTCH WHISKY



1997 Ardbeg rescued and restored by The Glenmorangie Company

Phenols in peat used in the malting process



Ardbeg is the peatiest and smokiest of all the Islay malts



PERFECTLY
BALANCED

Perfectly balanced with an intriguing sweetness



JUST A TASTE OF SOME OF ARDBEG'S FLAVOURS!



*Morello cherries, rich sherry,
christmas pudding*



*Marmalade on burnt toast, salted herring,
tarry rope*



Candle wax, soap.....iodine



Soft toffee and vanilla with leather saddles



Welcome to the Tasting tonight!

Ardbeg has a niche, cult following !



“During 2002, I visited the Ardbeg Distillery. I finally discovered my religion, my sect. This Ardbeg cult seized me. I wanted to mark myself for the rest of my life, a true follower of Ardbeg.”

*Martin Brunet,
Montreal, Canada*

The Committee -formed to make sure the doors of Ardbeg never close again!

A dramatic, high-contrast photograph of a rocky coastline. The scene is dominated by dark, jagged rocks in the foreground and middle ground, with white foam from crashing waves. The sky is a mix of dark, heavy clouds and a bright, hazy light source, possibly the sun, creating a strong silhouette effect and highlighting the textures of the water and rocks. The overall mood is wild and untamed.

Our Creative platform

Ardbeg – BIG and Untamed

Established 1815

Ardbeg

The Ultimate

**ISLAY SINGLE MALT
SCOTCH WHISKY**

Ardbeg's a serious business

Yet we never take ourselves too seriously!

Ardbeg
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ISLAY SINGLE MALT
SCOTCH WHISKY



Meet Shortie - the peatiest nose on Islay ...apart from Ardbeg !

Bold, confident, and provocative !

Ardbeg
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ISLAY SINGLE MALT
SCOTCH WHISKY

**ONE'S BIG AND UNTAMED.
THE OTHER'S AN ELEPHANT.**



Bold, confident, and provocative !

Ardbeg
The Ultimate
ISLAY SINGLE MALT
SCOTCH WHISKY

**loads of body,
plenty of legs and
a lovely mouthfeel**

HEARLAIG
WHITE STREET

Ardbeg
The Ultimate
SINGLE ISLAY MALT
SCOTCH WHISKY

beg to differ
The Islay malt that sweetly whacks you.

ardbeg.com

Ardbeg has been 'in Space' since 2009



2009 : Ardbeg Supernova Ltd Edition
> 100 parts per million phenol - a peat explosion!

Getting Noticed!

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SCOTCH WHISKY



ARDBEG

The *Ultimate* Mission

The LVMH 'Galaxy'



Getting noticed!



We joined LVMH in 2005



Fondation Louis Vuitton © Iwan Baan

“Our business model is anchored in a long term vision that builds on the heritage of our Houses and stimulates creativity and excellence. This model drives the success of our Group and ensures its promising future.”

Bernard Arnault

Our Duty : be true to our DNA!

The 'duty' of all of the 70 Houses of the group



Ardbeg's DNA

Ardbeg
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ISLAY SINGLE MALT
SCOTCH WHISKY

Native and Symbolic



Authentic and Challenging



Revered and Uncompromising



Unorthodox. Envied. Untamed.



Unorthodox Wit



Dark and Dangerous



Momentous Occasions

Ardbeg – BIG and Untamed



S P A C E



ARDBEG

The *Ultimate* Mission

What is bigger and more untamed than Space?!

A Momentous Occasion!

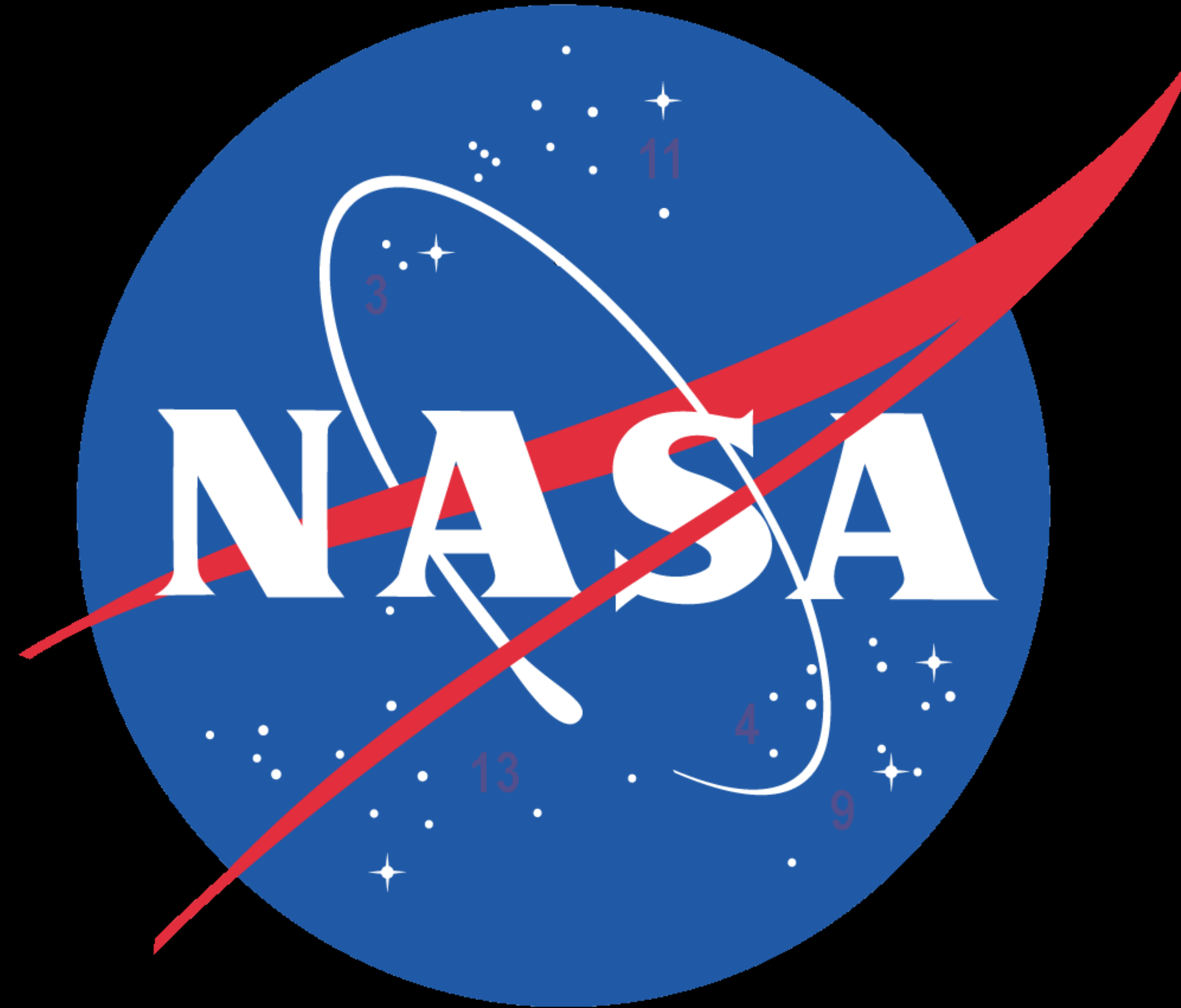


The balance of art and science



Dr Bill Lumsden - Scotch Whisky Industry 'Leader of the Year' 3 times'

'Getting permission'



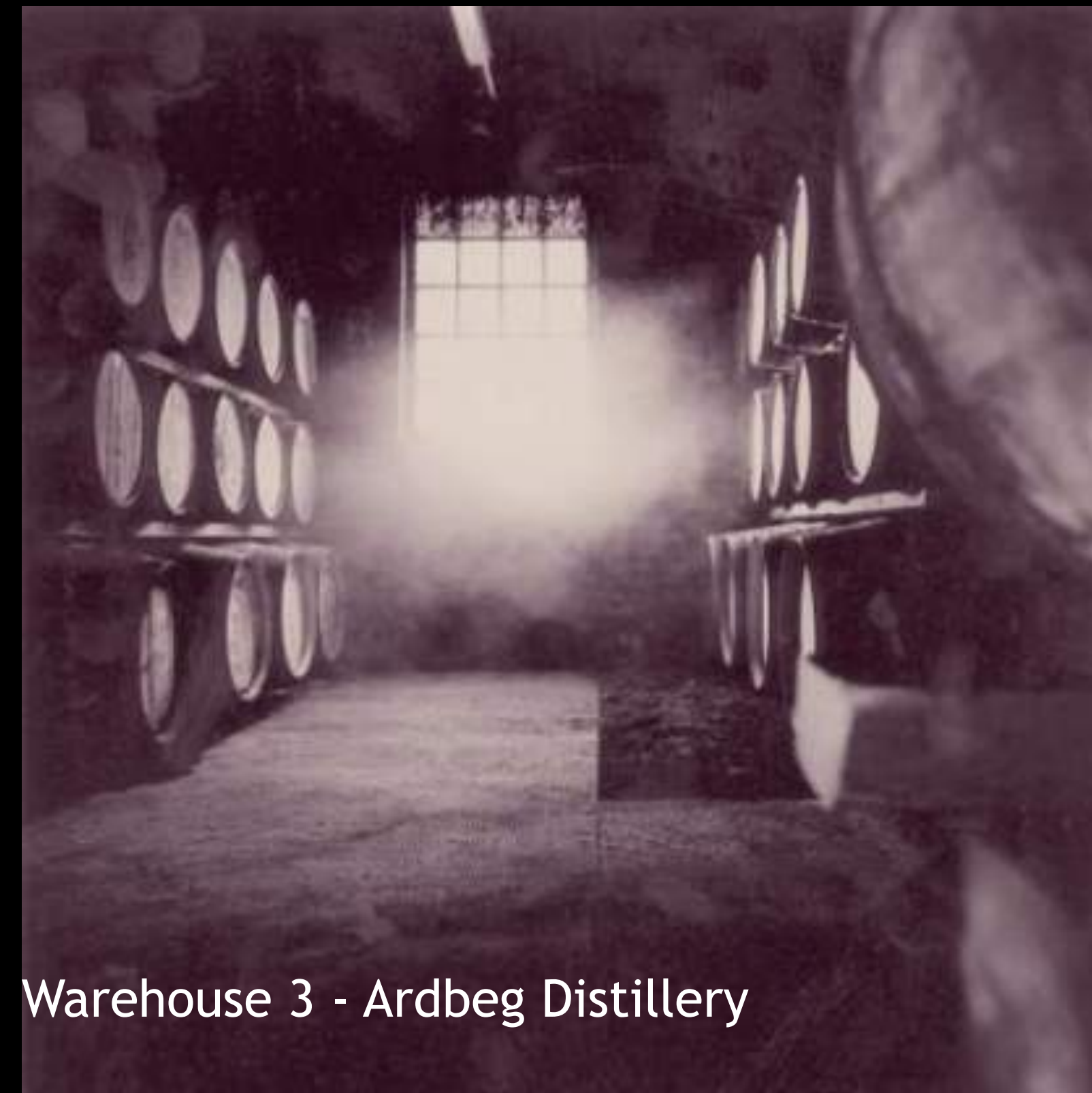
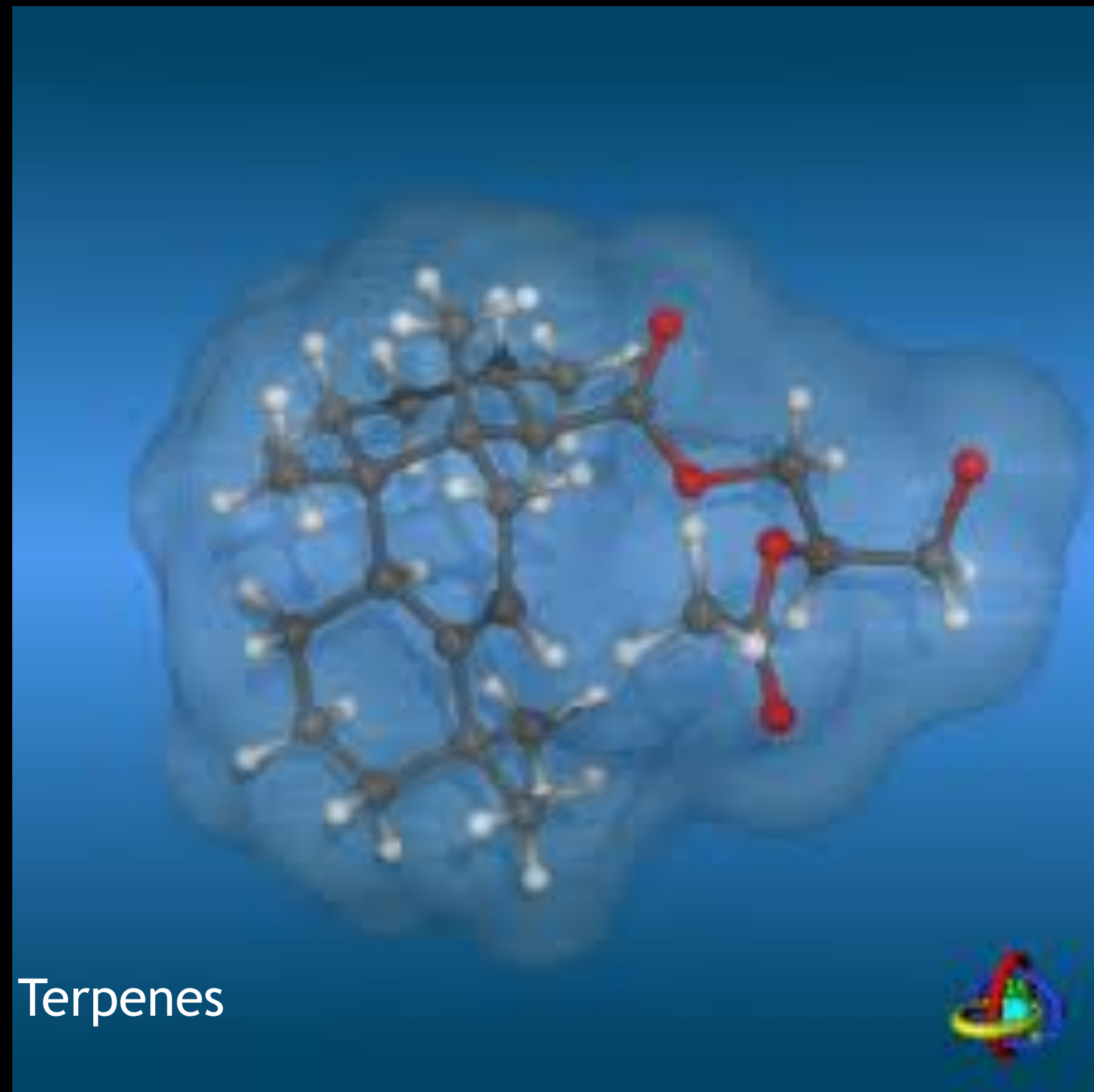
2012 : A lively discussion with NASA!

Pioneers in maturation of whisky for over 30 years



‘ Over 60% of the flavour of a whisky comes from the barrel’

Terpenes - A Controlled Maturation Experiment



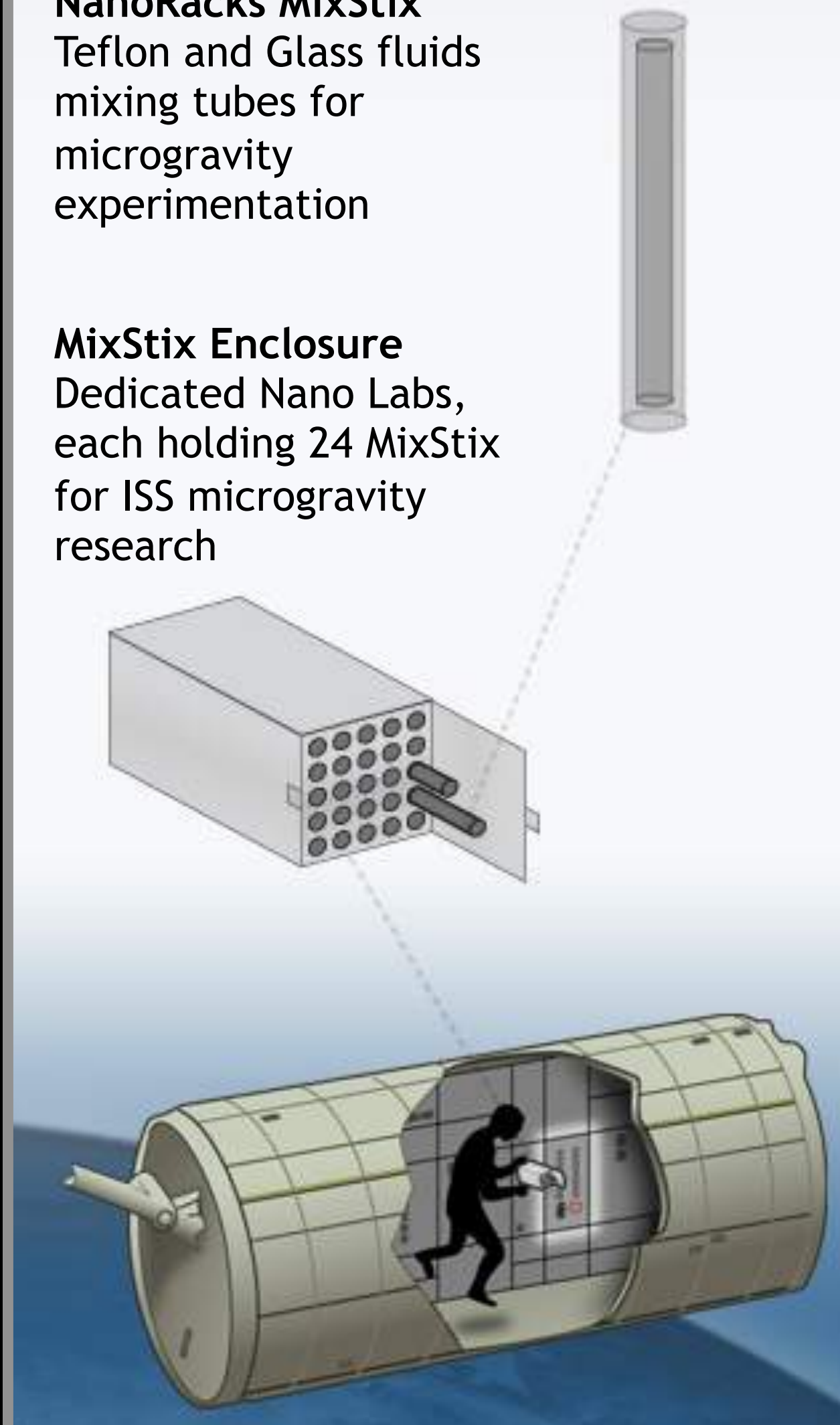
Ardbeg New Make Spirit and shards of Ardbeg charred wood from our casks were combined in *MixStix* and sent to the ISS in 2011

MixStix on the ISS + at Ardbeg



NanoRacks MixStix
Teflon and Glass fluids
mixing tubes for
microgravity
experimentation

MixStix Enclosure
Dedicated Nano Labs,
each holding 24 MixStix
for ISS microgravity
research



The Experiment returned in 2014 after 2 ½ years on the ISS



Carrying vials of
Ardbeg-crafted molecules



Take off late 2011



Ardbeg's first experiment
in space



Travelling at 17,227mph



Measuring effects of zero
gravity on maturing spirit



Now aboard the
International Space
Station





Worldwide announcement : April 2012

After nearly 16000 orbits



ARDBEG RETURNS

Sold Out

2014

The Return of the Experiment: 12th September 2014



The Results of the Experiment

Ardbeg
The Ultimate
ISLAY SINGLE MALT
SCOTCH WHISKY



The Pier Review - August 2015

The Results - The Pier Review



02

Peer review of results from experiment

0.15 to 6.34 (6m 19s)

(Seated right to left)

Dr Bill Lumsden

Director of Distilling, Whisky Creation & Whisky Stocks, Ardbeg

Jeffrey Manber

CEO of NanoRacks

Charles MacLean

Whisky Expert

00:00:00:00

The Results - 4 stage analysis



1. GC - Gas Chromatography
2. GCMS - Gas Chromatography mass spectrometry
3. HPLC - High Pressure Liquid Chromatography
4. Organoleptic - Nosing and tasting

Big Difference in Microgravity

1. Phenols inhibited in space samples
2. Allows new flavours to reveal themselves
3. This is also confirmed in Organoleptic tests



The Results



‘When I nosed and tasted the space samples, it became clear that much more of Ardbeg’s smoky, phenolic character shone through - to reveal a different set of smoky flavours which I have not encountered here on earth before.

Ardbeg already has a complex character, but the results of our experiment show that there is potentially even more complexity that we can uncover, to reveal a different side to the whisky.”



Organoleptic

The Results



“Our findings may also one day have significant implications for the whisky industry as a whole. In the future, the altered range of wood extractions could lead scientists to be able to detail the ratios of compounds expected in whiskies of a certain age.”

2012 - Launch - 'Space Platform' has reached millions



It's whisky, Jim, but not as we know it

AN ISLAND distillery is carrying out experiments in space - to find out how its product matures without gravity.

Ardbeg distillery on Islay sent compounds of unaged malt - known as new make spirit - to the International Space Station in an unmanned cargo spacecraft in October.

It also sent up particles of charred oak and, once the spacecraft docked at the ISS, the two sets of molecules were mixed.

Scientists want to understand how the two sets of compounds interact at close-to-zero gravity.

The molecules are key parts of the two substances known as terpenes - a set of chemicals which are often aromatic and flavour-active.

It is believed the experiment is the first of its kind.

The team are also measuring the molecules' interaction at normal gravity on Earth so they can compare the way the particles mature.

The molecules will stay on the ISS for at least two years.

Dr Bill Lamden, head of distilling and whisky creation at Ardbeg, said: "This experiment will throw new light on the effect of gravity on the maturation process."

"We are all tremendously excited by this experiment who knows where it will lead?"

The experiment, which orbited at the Edinburgh International Science Festival today, is led by US-based space research company NanoRacks LLC.

The results could be used for different...



Forbes

The Daily Telegraph

Whisky particles sent to space for research on maturation process



Whisky distiller sends malt into space

Samples of unaged malt and charred oak have been sent to the International Space Station for a gravity experiment.

10 April 2012 00:01 GMT



Spirit in the sky. The International Space Station. Pic: © Nasa

An island distillery is carrying out experiments in space to find out how its product matures without gravity.

The Ardbeg Distillery on Islay blasted compounds of unaged malt - known as new make spirit - to the International Space Station (ISS) in an unmanned cargo spacecraft on October 30 last year.

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Dr Bill Lamden, head of distilling at Ardbeg, studies the 'NASA experiment'

Ardbeg unveils experiment in space

ARDBEG distillery on the Hebrides island of Islay is to unveil a pioneering research project on board the International Space Station at Edinburgh's International Science Festival today.

A specialty was launched via a Strat launcher rocket last autumn carrying vials containing a class of terpenoids known as "terpenes" - a set of chemicals which

and other very aromatic and flavour-active - as well as other molecules.

The experiment, led by US-based space research company NanoRacks LLC, will test how molecules of the Ardbeg molecules interact with charred oak. This will take place in normal gravity on Earth and also with gravity.

It is believed to be the first time anyone has ever studied terpenes and other molecules in near zero-gravity. They remain on the International Space Station for at least two years and help scientists learn about the changes molecules undergo.

The team could also have applications for a variety of commercial and research projects, including future generations of Ardbeg.

And in between it has created a 'big and untamed' platform to activate Ardbeg across our major markets



The US Ardbeg Rocket Tour

The Ardbeg Space Tour - 10ml vial goes round the world



Ardbeg Galileo - 2012



Allowed us to introduce some very successful limited editions

Our Partnership - Next Steps!



Model a further stage of research

Our Partnership - a summary (so far!)



- Created excitement across our group (LVMH)
- A frisson of envy from our immediate competitors
- Delivered a compelling activation platform
- Underpinned yet again Ardbeg's reputation for big, bold innovation

.....and above all again demonstrated

Ardbeg

The Ultimate

ISLAY SINGLE MALT
SCOTCH WHISKY



THANK YOU!