BOOKING F	REQ	UEST I	FORM				
	£	£	No. at	No. at	To	Total	
	Adul	t Con.	adult	concess.	£	р	
Sub-total from previous page	-	-	-	-			
Tuesday 6 September							
Pulsars to Porridge	£4	£2					
Mouths of Ewes and Heifers	£4	£2					
Ancient Stones and Comets	£4	£2					
Mathematics of the Neolithic	£4	£2					
From out of the Fire	£4	£2					
Particles Way Beyond	£4	£2					
Genes, Diet, Health	£4	£2					
Farming Gin and Vodka	£8	-					
Arcs & Sparks - the Musical!	£4	£2					
100 Years Underwater	£4	£2					
Wednesday 7 September							
Miniature Whisky School	£12	-					
What Can We Eat?	£4	£2					
The Missing Stuff	£4	£2					
James Petrie Chalmers	£4	£2					
Distilling - Theory and Practice	£6	£4					
The World in a Wave	£4	£2					
The Beautiful Equations	£4	£2					
Big Beautiful Bubble Show	£4	£2					
Distilling the Biofuture	£4	£2					
The Highland Park Ceilidh	£8	-					
(children with parents)	-	£4					
Lasture Doos all C4 talks C	22	604					

# LecturePass - all £4 talks £32 £24

(Please note that admission can only be guaranteed if passholders arrive at least 15 mins before start)

# Total ticket sum enclosed

Address
Telephone

Please send me information on travel to Orkney & accommodation

Please complete in **BLOCK CAPITALS**, post with remittance & s.a.e. to Orkney Science Festival VisitScotland, Tourist Office, Kirkwall, Orkney, KW15 1GU Please make cheques payable to **Orkney Science Festival Ltd** 

Where no ticket or booking details are entered, or admission is free, advance booking is not necessary. If capacity is

limited, you may need to arrive in good time to ensure a place. Our phone is 01343 540844,

our e-mail orkneyscience@gmail.com Book online and get updates at www.oisf.org Follow us on Facebook and Twitter @OrkSciFest!

# **Monday 5 September**

# 10.00 am - 12.00 William Shearer's, Victoria St. Kirkwall **HONEY & HERB WORKSHOP**

Ethnobotanical researcher Anna Canning describes traditional uses of honey's antibacterial properties and shows how to combine it with herbs and kitchen-cupboard ingredients for skin care today.

### 10.00 - 11.00 am Pickaguov Centre, Kirkwall A FAREWELL TO ICE

Prof. Peter Wadhams of Cambridge University, the world's leading expert on sea ice, brings the latest research from the Arctic Ocean showing change is occurring much faster than previously predicted.

## 11.30 am - 12.30 pm Pickaguoy Centre, Kirkwall THE SKY ALL TORN. AND FLYING SPINDRIFT

Dr Maria Pia Casarini of the Silvio Zavatti Polar Research Institute describes the rescue of the Shackleton expedition on 30 August 1916. With their ship Endurance crushed by pack ice, Shackleton sought help from South Georgia, through icy storms and mountainous seas.

# One O'Clock Toast at the Peedie Kirk: James Petrie Chalmers, pioneer of cinema, by Moya McDonald

#### 2.00 - 3.00 pm Town Hall. Kirkwall ICE LAND TO JUTLAND

Ice fatally delayed the Terra Nova's efforts to bring supplies to Scott in the Antarctic. Arriving home, the crew's lives were changed by war with some at the battle of Jutland. Writer Anne Strathie tells their story.

#### 3.30 - 4.30 pm Town Hall. Kirkwall THE MINE, THE STORM, THE MESSAGE ON THE SHORE

Could the messages of the Hampshire's loss have been passed on better? Prof. Tom Stevenson looks at communication systems of the time, on sea and shore, with Sandy Firth of Orkney Wireless Museum and Dorothy Brankin of the Museum of Communication.

#### 5.15 - 6.15 pm Town Hall. Kirkwall THE ORIGIN OF COMETS

Prof. Mark Bailey, Emeritus Director of Armagh Observatory, tells the story of the discovery and search for comets in the dark outskirts of our planetary system, and the central role they play in current theories of our solar system.

#### 7.30 - 8.30 pm King Street Halls, Kirkwall A MESSAGE OF A MILLION YEARS

A 1.2 million-year-old human jawbone from a Spanish cave shows Europe was inhabited much earlier than was thought, with the first Europeans coming from Asia. Dr María Martinón-Torres of University College London describes her discovery and its remarkable implications.

## 9.00 - 10.00 pm King Street Halls, Kirkwall THE PEOPLE OF THE BRITISH ISLES

The most detailed genetic map of any country in the world has been produced by a project funded by the Wellcome Trust. Sir Walter Bodmer from Oxford University, who conceived it and led it, outlines the results and the findings for Orkney.

9 - 11 pm Meet up at the Festival Club at The Reel

# **Tuesday 6 September**

# 10.00 am - 12.00 William Shearer's, Victoria St, Kirkwall PULSARS TO PORRIDGE

World Porridge Making Champion Dr Simon Rookyard shows how to make a perfect pot of porridge, and along the way tells Liz Ashworth about his work in radio astronomy at Jodrell Bank.

#### 10.00 - 11.00 am Pickaguoy Centre, Kirkwall The John D. Mackay Memorial Lecture

# FROM THE MOUTHS OF EWES AND HEIFERS

Dr Ingrid Mainland of the UHI Archaeology Institute, Orkney College UHI, shows how analysis of animal teeth from ancient sites gives clues to early farming in Orkney and elsewhere in Iron Age and Norse times.

### 11.30 am - 12.30 pm Pickaguoy Centre, Kirkwall **ANCIENT STONES AND COMETS**

Prof. Mark Bailey outlines evidence for the arrival of a giant comet around 20,000 years ago. Could its later reappearances have been a motive for ancient societies to erect astronomically-linked stones?

# The One O'Clock Toast at the Peedie Kirk today: writer Eric Linklater, by Dr Ragnhild Liosland

## 2.00 - 3.00 pm Town Hall, Kirkwall THE MATHEMATICS OF THE NEOLITHIC

Ancient stone circles were built in mathematical patterns, sky-aligned - but why? Howie Firth follows an old idea: of the universe as alive.

#### 3.30 - 4.30 pm Town Hall, Kirkwall FROM OUT OF THE FIRE

It took several hundred thousand years for the blazing sea of energy from the Big Bang to cool enough for the first particles of matter to form. Dr Arjun Berera of Edinburgh University describes the process.

#### 5.15 - 6.15 pm Town Hall. Kirkwall PARTICLES WAY BEYOND

Finding the Higgs particle neatly supports existing theory. But hints have come from CERN of something else that may not quite fit - as Dr Victoria Martin of Edinburgh University, just back from CERN, explains.

# 5.15 - 6.15 pm King Street Halls, Kirkwall The Grimond Lecture **GENES. DIET. HEALTH**

The interactions between genes and diet are the key to various diseases. disorders, and food intolerances, says Prof. Jun Wei of UHI's Centre for Health Science - with gut bacteria playing a vital role.

## 7.30 - 8.30 pm Orkney Theatre, KGS, Kirkwall ARCS & SPARKS - THE MUSICAL!

Now featuring Scotland's largest musical lightning generator! An unforgettable not-to-be-missed experience for all ages. Presented by Dr Ken Skeldon, Janet Milne and team from Aberdeen University. Supported by the IET, additional show demos supported by SUPA

#### 7.30 - 9.00 pm The Reel. Kirkwall **FARMING GIN AND VODKA**

Kirsty Black describes the Arbikie Highland Estate's on-farm distillery, with samples. Over-18s only. Tickets £8. Organised by the IBD

#### 9.00 - 10.00 pm Orkney Theatre, KGS, Kirkwall 100 YEARS UNDERWATER

Expedition organiser Emily Turton shows some of the spectacular images from this spring's licensed diving expedition on HMS Hampshire which used the latest techniques. Andrew Hollinrake sets the scene.

9 - 11 pm Meet up at the Festival Club at The Reel

# Wednesday 7 September

# 9.30 am - 12.30 pm Highland Park Distillery, Kirkwall Miniature Whisky School: MAKING MALT

Eric Walker, Marie Stanton and Dr Tim Dolan provide expert insight on the malting process and the conditions that affect the end product. Over-18s only, booking essential. Tickets £12. Organised by the IBD

#### 10.00 - 11.00 am Town Hall. Kirkwall WHAT CAN WE EAT?

Michelle Berriedale-Johnson, editor of the FoodsMatter websites, looks at causes of food allergy and intolerance and what can be done. Prof. Jun Wei and Liz Ashworth join for questions.

Sponsored by e-availability

#### 10.00 - 11.00 am Pickaguov Centre, Kirkwall COSMOLOGY IN CRISIS

Theories of the universe's moving material are failing. Dark matter may enable the maths to work - but can we find direct evidence for it? Prof. Alex Murphy of Edinburgh University tells the story of the search.

## 11.30 am - 12.30 pm Pickaguoy Centre, Kirkwall JAMES PETRIE CHALMERS: PIONEER OF VISION

Born 150 years ago in Tankerness, he started in the US the first-ever film trade journal, and fought for standards that laid foundations for the new cinema industry. Mova McDonald tells his story, with an early film programme from the magazine and readings by Dave Grieve.

Sponsored by Orkney Car Hire - James D Peace & Co

One O'Clock Toast at Peedie Kirk: actor and author Robert Shaw, written by Archie Bevan, read by Graham Bevan

## 2.00 - 5.00 pm from Palace Road, Kirkwall BUS TOUR: DISTILLING - THE THEORY AND PRACTICE

Join experts from Scapa and Highland Park for special tours of both. Advance booking essential: over-18s only. Tickets £6 & £4.

Organised by the Institute of Brewing and Distilling (IBD) and sponsored by the two distilleries and Maynes Coaches

#### 2.00 - 3.00 pm Town Hall. Kirkwall THE WORLD IN A WAVE

Erwin Schrödinger developed his famous wave equation in unusual circumstances - on a Christmas holiday with a mystery woman in a Swiss mountain resort. Pippa Goldschmidt tells the story.

Supported by The Institute of Physics in Scotland

# 3.30 - 4.30 pm Town Hall, Kirkwall THE BEAUTIFUL EQUATIONS

Maxwell's equations are the basis for today's radio, TV, phone and web links. Dr Tim Drysdale of the Open University shows how we can visualise them - thanks to a breakthrough made 50 years ago.

# 5.15 - 6.15 pm

# Orkney Theatre, KGS, Kirkwall THE BIG BEAUTIFUL BUBBLE SHOW

See bubble shapes and find how to make giant colourful bubbles - and tubes! Philip Noble is a scientifically trained visual artist who has given bubble shows in over 20 countries. Something for the whole family. Supported by The Institute of Physics in Scotland

#### 7.30 - 8.30 pm Supper Room, Town Hall, Kirkwall DISTILLING THE BIOFUTURE

By-products of whisky production can feed new bio-industries, using microalgae and renewable energy, says Prof. Alan Wolstenholme of Heriot-Watt University. Over-18s only. Organised by the IBD

# 8.00 pm - 12.00 midnight Peedie Kirk Hall. Kirkwall THE HIGHLAND PARK CEILIDH

with Dave and company. Andy Munro, and Lewis Hou's fiddle and dance steps, for would-be and why-not dancers of all ages. Tickets (including light supper) £8, or £4 for children with parents.

Sponsored by Highland Park

# Special food events during Festival

Daily, from Fri 2 to Wed 7. Lunches in the Peedie Kirk Hall. Soup and Orkney fare daily, £8. From 12.30 pm, with 5-minute Toast at 1 pm.

# Exhibitions

# **FASHION THE FUTURE!**

See the beautiful costumes produce by artists and designers from upsycled clothing and 3D printing, at Festival events and in the window of Age Concern Orkney, Victoria Street, Kirkwall.

# JUST A LITTLE BIT OF NATURE REPEATING

Fractals in nature: Orkney schools and Orkney College artwork Town Hall. Kirkwall Daily except Sun, 10.30 - 5.00

STONE ON STONE: Orkney Camera Club photographs Pickaguoy Centre, Kirkwall Daily except Sun

THE REMARKABLE LIFE OF SAMUEL LAING Orkney Library & Archive, Kirkwall Daily except Sun, Wed

ORKNEY WIRELESS MUSEUM

Government

Kiln Corner, Kirkwall Mon - Sat 10 - 4.30, Sun 2.30 - 4.30

THE LOSS OF HMS HAMPSHIRE Stromness Museum, Alfred Street, Stromness

THE BATTLE OF JUTLAND, SCAPA FLOW & THE WAR AT SEA

Orkney Museum, Kirkwall Mon - Sat 10.30 - 5

Look for updates on our website www.oisf.org

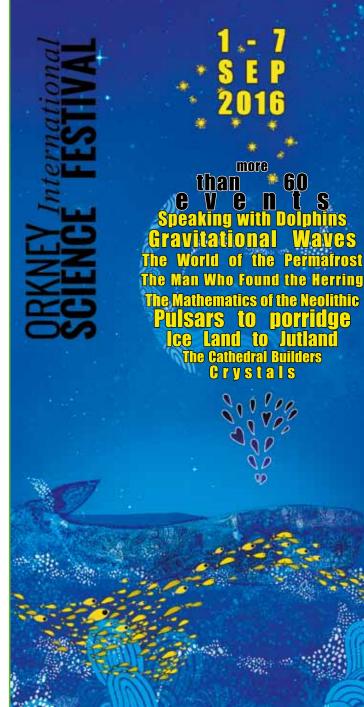
ISLANDS COUNCIL





Daily 10 - 5





# Thursday 1 September

# 12.00 - 1.30 pm Town Hall. Kirkwall **OPENING LUNCH: THE NORTH ISLES**

Dr Marty Jopson of *The One Show* opens the Festival, and introduces a lunch and stories from the North Isles, with writer Amy Liptrot on Papay shores and skies, and Heather and Gavin Woodbridge from North Ronaldsay Bird Observatory on the island's bird migrants. In addition - the launch of the Festival's upcycling project Fashion the Future! Tickets for it all £7 & £4.

#### 2.00 - 3.00 pm Town Hall. Kirkwall HIDDEN LANDSCAPES, LAND AND SEA

Geophysicist Dr Richard Bates of St Andrews University and archaeologist Caroline Wickham-Jones of Aberdeen University show how new ways of reconstructing ancient landscapes are providing fresh insight into the past and its people - from Stonehenge to Orkney.

#### 3.30 - 4.30 pm Town Hall. Kirkwall THE MAN WHO PUT THE BLACKING IN THE BOTTLES

19th-century innovators Day and Martin built the shoe polish industry from an army recipe. The legal battle over Charles Day's estate led to a family history mystery ... to which Neil Price, moving to London from Orkney, has found a most unexpected solution. Dave Grieve reads.

### 5.15 - 6.15 pm Orkney Theatre, KGS, Kirkwall THE PHYSICS OF GOLF

The swing of the shoulders, the rotation of the wrists, the dimples on the ball to build lift from backspin. With forces and motion, the game of golf is based on physics, as Prof. Tom Stevenson explains, with some practical demonstrations - the successful application is up to you!

#### 7.30 - 9.00 pm St Magnus Church, Birsay A FITFUL SEA

A commemoration of HMS Hampshire and all aboard, 100 years after its loss off the Birsay coast, and within sight of St Magnus Church. Performed by Birsay Drama Group with local music.

Admission by donation - proceeds to St Magnus Church Birsay Trust

# Orkney Theatre, KGS, Kirkwall 7.30 - 8.30 pm THE BEST BROADBAND IN THE WORLD High-speed broadband is essential for business today - but rural service

is often poor. What's the very best system available? Dr lan Ritchie, working in informatics developments for more than forty years. looks at what's being achieved elsewhere and possibilities for Orkney.

Sponsored by the Orkney Creamery - Orkney Ice Cream

#### 9.00 - 10.00 pm Orkney Theatre, KGS, Kirkwall **KEEPING THE SKY DARK**

A starry winter sky is a treat - too often restricted by light pollution. Lighting engineer Jim Paterson, who has guided various places to international dark skies status, from Sark and Coll to the town of Moffat, describes how it's done - and how Orkney communities might follow.

Sponsored by Pentland Ferries

# 9.00 - 11.30 pm Meet up at the Festival Club at The Reel

Remember the Molecule Hunt round the Kirkwall shops! See leaflets in the shops and on our website.

# Friday 2 September

## 10.00 - 11.00 am King Street Halls, Kirkwall SNAP! - THE SCIENCE AND ART OF REPEATING PATTERNS

Repeating patterns are everywhere - in rock crystals and snowflakes, pineapples and lichens. Dr Michael Wharmby of Diamond Light Source tells how science uses them to design new materials. Louise Barrington of Orkney College UHI describes how they lead to beautiful art.

Supported by The Institute of Physics in Scotland

### 11.30 am - 12.30 pm King Street Halls, Kirkwall A GHOST IN THE FAMILY

Our nearest human relatives were thought to be Neanderthals. But in 2010 a Siberian cave revealed traces of a previously unknown group - the Denisovans. Dr María Martinón-Torres of University College London tells the story of the discovery - and the guestions it raises.

The One O'Clock Toast at the Peedie Kirk today: geologist Sir John Flett, by Dr John Flett Brown

#### 2.00 - 3.00 pm Town Hall. Kirkwall LOOKING FOR MRS LIVINGSTONE

She crossed the Kalahari twice with her explorer husband, gave birth under the stars, and died on the mosquito-infested banks of the Zambezi. Writer Julie Davidson travelled in the couple's footsteps to build up a picture of courage in the face of hardship and rejection.

## 3.30 - 4.30 pm Town Hall. Kirkwall THE GENE THAT CRACKED THE CANCER CODE

Science writer Sue Armstrong tells the remarkable story of the discovery of the role of p53, the protein that protects our cells against cancer. I repairs DNA and kills damaged cells - but when it is itself harmed, our resistance is lowered, with dangerous consequences.

## 5.15 - 6.15 pm Orkney Theatre, KGS, Kirkwall THE SCIENCE OF EVERYDAY LIFE SHOW

Why do soap bubbles burst? How do you get the quartz out of a clock using a hammer? Join Dr Marty Jopson of The One Show in this brilliant family tour of household science. Answers will be provided, electrical devices dismantled, and mess created in the name of science.

#### 5.15 - 6.15 pm Town Hall, Kirkwall ETHICS FOR THE END OF LIFE

Are bioethics important when someone is terminally ill? Professor Robin Taylor, a medical doctor and ordained minister, is joined by Rev. Dr Hamilton Inbadas of the University of Glasgow to speak on ethics, faith and belief in the face of death.

Organised by University of Glasgow End of Life Studies Group

# Town Hall, Kirkwall COMPASSIONATE COMMUNITIES AND PALLIATIVE CARE

Medical anthropologist Dr Shahaduz Zaman of the University of Glasgow describes how volunteers are delivering palliative care to dying people in communities around the world. To be followed by a panel discussion including Kate Jackson of ehospice international.

Organised by University of Glasgow End of Life Studies Group

Disclaimer: Orkney International Science Festival reserves the right to alter, amend or cancel the contents of this programme at its discretion or as circumstances may necessitate.

#### 7.30 - 8.30 pm Orkney Theatre, KGS, Kirkwall HOUSES AND HEAT

Orkney has Scotland's highest fuel poverty - but produces energy surpluses dumped at peaks. Can we use this energy to make homes cheaper to heat? Stephen Kemp of Orkney Builders and Mark Hamilton of Solo Energy outline one possible approach - in-house storage. Hosted by Orkney Housing Association

## 9.00 - 10.00 pm Orkney Theatre, KGS, Kirkwall POWER FROM THE SEA

Neil Kermode of EMEC with news of the latest marine renewable developments in Orkney waters and using hydrogen to store energy. Hosted by OREF and sponsored by Clark Thomson Insurance

9.00 - 11.30 pm Meet up at the Festival Club at The Reel

# Island events (see www.oisf.org for full details)

Fri 2 Sept. Hov Kirk: 5.45 pm Stromness ferry for night-sky photographs shown by Stewart Watt, Maciej Winiarczyk, Gordon Mackie, Eric Walker. Supper (free) as well - back by 10.30!

Sat 3 Sept, Gable End Theatre, Lyness: 8 pm Ice Land to Jutland Sat 3 Sept, North Ronaldsay: 8 pm Dark skies and astronomy Mon 5 Sept, Crafthub, Rousay: 2 pm Art/science patterns workshop Shapinsay, Papay, Eday: advertised locally and on www.oisf.org

# Saturday 3 September

# 10.00 am - 4.00 pm King Street Halls, Kirkwall FAMILY DAY - DON'T MISS IT!

Make a noisy drawing, a porridge poultice, a geometric lantern, an ancient animal, a modern molecule ... See 3D printing, pemmicanmaking, broch-building, sea creatures ... Learn about living in space scientific detection, flowers for native bees, marine renewables ... Try a Raspberry Pi, astronomy activities, electric paint, a robot arm. Freshly prepared rolls, Orkney ice cream available. £4 & £2 for the day. Supported by many kind people and lively organisations

### 10.00 - 11.30 am from Warehouse, Pierhead, Stromness STROMNESS OLD AND NEW

Join Bryce Wilson to visit the Warehouse Building and the Pier Arts Centre to see and hear about their restoration and development Numbers limited: booking essential, £3 & £1.

#### 10.00 - 11.00 am Baptist Church, Kirkwall THE CATHEDRAL BUILDERS

Maarten de Vries describes how cathedrals soared more than 300 feet high. George McPhee plays music of the time on digital church organ and harpsichord, with the sound of individual churches.

Sponsored by Loganair

### 11.30 am - 12.30 pm Baptist Church, Kirkwall THE RADIANT HEAT, THE GLOWING LIGHT

Dr Edvard Kobal tells how Slovenian physicist Jožef Stefan determined the sun's temperature and developed theories of polar cold. Dave Grieve reads some of Stefan's poems. George McPhee plays music

The One O'Clock Toast at the Peedie Kirk today: filmmaker and poet Dr Margaret Tait, by Dr Charles Tait

#### 1.00 - 4.00 pm Broad Street, Kirkwall VINTAGE RALLY

Orkney Vintage Club with cars, motorbikes, tractors and stationary engines; tractor run starts off at 1.30 pm. Plus electric cars (drop-in information in Town Hall between 10 am and 12) - test drives available Street food from 12 noon, and Willowburn Valley Stompers at 2 pm.

# 2.00 pm - 3.00 pm MacGillivray Room, Library, Kirkwall SING ALONG WITH MR BOOM

From the moon his ship he'll bring - just to see you dance and sing! Sponsored by Pentland Ferries

# 2.00 - 3.00 pm Baptist Church, Kirkwall NO WEEL BIT COMAN AT NOO

A look back at health approaches in Orkney, from ancient folk remedies to early hospitals and modern medical services, with some thoughts from George Corrigall and John Firth along the way. Dr Tom Rendall is joined by Dr Ingrid Norquay. Emma Grieve and Neil Leask.

# 2.00 - 3.00 pm Pier Arts Centre. Stromness **TIDAL POWER**

Orkney has some of the world's best sites - plus the world's most powerful tidal machine, developed locally, Prof. Clive Greated explains the basic science behind tidal power generation and shows film clips of some of the latest Orkney developments. Tickets £3 & £1.

# 3.30 - 4.30 pm Pier Arts Centre. Stromness UNRAVELLING THE HAMPSHIRE

James Irvine. Andrew Hollinrake and Tom Muir tell the story of Kitchener and the Hampshire and the tales and mysteries that have grown up around its loss 100 years ago. Tickets £3 & £1.

# 5.30 - 6.30 pm Orkney Theatre, KGS, Kirkwall AURORA: IN SEARCH OF THE NORTHERN LIGHTS

Plasma physicist and explorer Dr Melanie Windridge describes an Arctic journey of discovery through Scandinavia, Canada and Svalbard interweaving the underlying science with background history, folklore and landscape - and spectacular images of the Northern Lights.

## 7.00 - 7.30 pm Broad Street, Kirkwal KIRKWALL CITY PIPE BAND

with their final parade of the season.

### 7.45 - 10.00 pm Town Hall, Stromness WEST SIDE CINEMA: FOLLOWING THE FLEET DRIFTERS

A tour of Scotland's major herring fishing ports with beatboxer and composer Jason Singh performing his live vocal score to John Grierson's monumental silent film Drifters (1929). Doors open 7.15. Tickets at door £5 & £3 (under 16), Certificate PG.

### 8.00 - 9.00 pm Orkney Theatre, KGS, Kirkwall DOLPHIN COMMUNICATION

What do dolphins communicate about? Prof. Vincent Janik, the Director of the Scottish Oceans Institute at the University of St Andrews, explains how we can study dolphin communication and intelligence and whether dolphins are smarter than other animals.

8.00 - 12.00 midnight Meet up at the Festival Club at The Reel

# **Sunday 4 September**

## 11.15 am - 12.15 pm St Magnus Cathedral SCIENCE FESTIVAL SERVICE

led by Rev. Fraser Macnaughton, with St Magnus Cathedral Choir.

# One O'Clock Toast at Peedie Kirk: Mary Lauchline McNeill, WWI doctor in Salonika and Serbia, by Patricia Long

# 2.00 - 3.00 pm Orkney Theatre, KGS, Kirkwall **Eoin F. Scott Memorial Lecture** GRAVITY SANG AND LIGO WAS LISTENING

Prof. Martin Hendry of Glasgow University with the inside story of how we made the first direct detection of gravitational waves - widely hailed as the scientific breakthrough of the century.

Sponsored by Loganair

# Pier Arts Centre, Stromness 2.00 - 3.00 pm MAKING UP THE RENAISSANCE

Frankincense, dragon's blood, onions, olive leaves .... Ethnobotanical researcher Anna Canning displays the world of make-up for women of the Renaissance. Booking essential. Tickets £3 & £1. Sponsored by e-availability

# 3.30 - 4.30 pm Orkney Theatre, KGS, Kirkwall LOCHABER TO THE COSMOS

Dr Alex MacKinnon of Glasgow University tells of CTR Wilson, the first Scot to win the Nobel Prize in Physics - for the particle-detecting cloud chamber. It started from Brocken Spectre observations on Ben Nevis. Sponsored by the Orkney Creamery - Orkney Ice Cream

#### 3.30 - 4.30 pm Pier Arts Centre, Stromness ARTISTS FOR THE WILD

Prof. Roy Burdon, scientist and painter, looks at how wildlife artists in recent years have inspired environmental movements and conservation activity. Booking essential. Tickets £3 & £1.

Supported by the Royal Society of Edinburgh

# 6.00 - 7.15 pm Skaill House, Sandwick **Dr John Cumming Memorial Lecture** THE MAN WHO FOUND THE HERRING

Dr Simon Hall tells how Samuel Laing, soldier and merchant and later saga translator, opened up a new industry for Orkney 200 years ago. Liz Ashworth provides a Georgian afternoon tea. Tickets £8 & £5. With the support of The Cuminga Trust

#### 7.30 - 9.00 pm Pier Arts Centre. Stromness FILM: LESSONS IN ARCHITECTURE

The story of the remarkable creative partnership of Andy Macmillan from Maryhill and Isi Metzstein from Berlin and the development of some of their most famous buildings. Booking essential. Tickets £3 & £1.

#### 8.00 - 9.30 pm St Magnus Cathedral, Kirkwall THE WEST IN WIND AND SUN

Take a musical road to adventure with the Mayfield Singers, Paisley Abbey organist George McPhee, and readings of some of Bessie Skea's island journeys by two generations of her family. Sponsored by Loganair

9 - 11 pm Meet up at the Festival Club at The Reel

**BOOKING REQUEST FORM** £ £ No. at No. at Total Adult Con. adult concess. £ p Thursday 1 September Opening Lunch & talks £7 £4 Hidden Landscapes £4 £2 Man Who Put the Blacking £4 £2 The Physics of Golf £4 £2 The Best Broadband £4 £2 £4 £2 Keeping the Sky Dark Friday 2 September Snap! Repeating Patterns £4 £2 £4 £2 A Ghost in the Family Looking for Mrs Livingstone £4 £2 Gene Cracked Cancer Code £4 Science of Everyday Life £4 £2 Ethics for the End of Life £4 £2 Compassionate Communities £4 £2 £4 £2 Houses and Heat £4 £2 Power from the Sea Saturday 3 September Stromness Old and New £3 £1 The Cathedral Builders £4 £2 Radiant Heat, Glowing Light £4 £2 Singalong with Mr Boom £4 £2 No Weel Bit Coman At Noo £4 £2 Tidal Power £3 £1 Unravelling the Hampshire £3 £1 £4 £2 Aurora: Northern Lights £4 £2 Dolphin Communication Sunday 4 September Gravity Sang, LIGO Listening £4 £2 £3 Making up the Renaissance £1 £4 £2 Lochaber to the Cosmos Artists for the Wild £3 £1 £8 £5 Man Who Found the Herring £3 £1 Lessons in Architecture £4 £2 The West in Wind and Sun Monday 5 September £4 £2 Honey & Herb Workshop £4 £2 A Farewell to Ice £4 £2 The Sky All Torn £4 £2 Ice Land to Jutland £4 £2 The Mine, the Storm £4 £2 The Origin of Comets £4 £2 A Message of a Million Years The People of the British Isles £4 £2 continued overleaf