

another but it was impossible to do so until the arrival of modern physics. Nuclear reactors produce energy by splitting atoms. Other machines, such as cyclotrons, use energy to add parts of simple atoms onto other, larger atoms, turning them into something else, albeit closely related. These machines are rare, very expensive and hugely difficult to build and control. Not the sort of place that Joe Public gets to see. These machines are held in awe by most working scientists because they and related systems are at the top of the physics research-tree. They are Temples (or Cathedrals) of science. I was just lucky to get an invitation to see one.

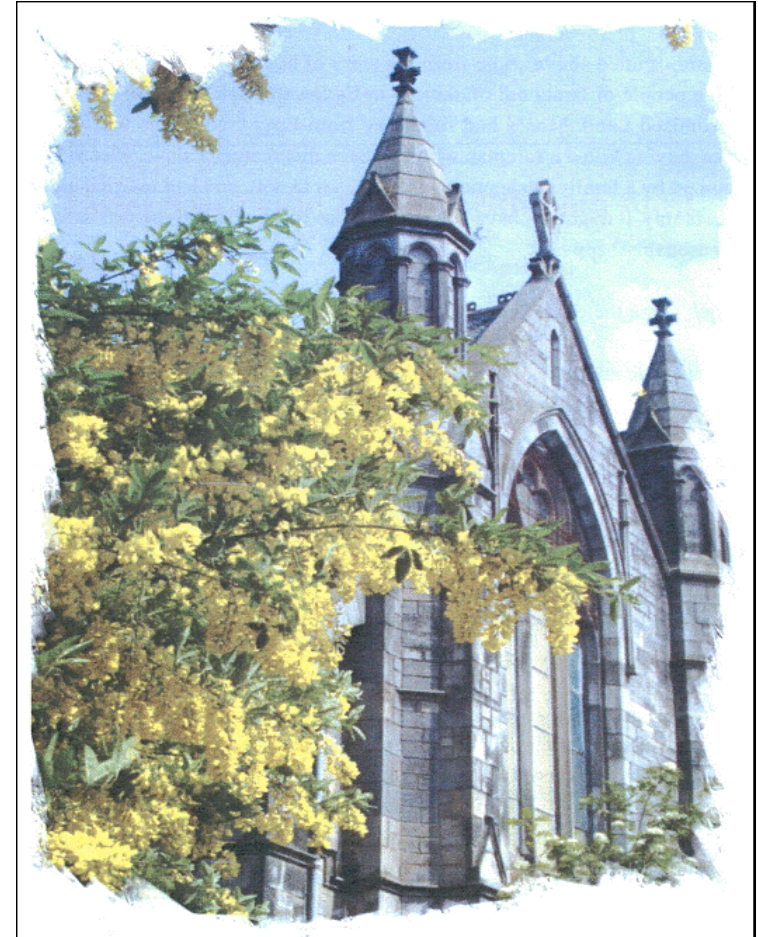
Forget about vast buildings with reverence, windows and sculptures. Think more of a doughnut the floor size and height of the church kitchen, built with huge magnets inside walls made of three feet of concrete and three feet of steel. Think of the most complex engineering you have ever seen and multiply it by any large number you can imagine. Now introduce a few molecules of hydrogen and use the magnets to drive them round and round the doughnut, gradually increasing their speed to build up energy over some hours. Keep things under control so that the super-fast particles stay on the right track, otherwise disaster happens. Then when they have enough energy, bend their pathway (more magnets) and smash them into some target molecules to add protons to the targets' nuclei. Hey presto, new element! In this particular unit, some of the use was for converting oxygen into another element – a special form of fluoride which is useful in medical treatments or diagnoses.

The system I visited was very small by today's standards (for example, when compared with the international CERN facility in Switzerland, where the circular pathway accelerating particles is 15 ½ miles). These machines and systems like the Hubble space telescope do make you realise just how small man is in the universe. They also put you in awe of its complexity and make you ponder how we can learn more about it. Cathedrals of their type, indeed!

Bathgate EU United Reformed Church

(Charity registered in Scotland - SC 014304)

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From the Minister – August 2011

“From the fig tree learn its lesson: as soon as its branch becomes tender and puts out its leaves, so you know that summer is near.” (Mark 13: 28)

Dear friends,

These words of Jesus, and the parallel passages in the Gospels of Matthew and Luke contain the only reference in the New Testament to summer. Unlike our own summer, with its very mixed weather and short hours of darkness, summer in Israel and surrounding areas can be a torrid time of very high temperatures during the daylight hours, with darkness welcomed as a relief. The search for some shady spot in which to rest is never far from people’s minds in such conditions, and we are reminded of this in well-known words from the Old Testament. Using the image of the beating sun to represent a spiritual enemy, the psalmist writes: “The Lord is your shade on your right hand. The sun shall not smite you by day.....” (Psalm 121).

Well, in our northern climes the sun does little if any “smiting”! And few figs grow in Scotland! Yet the meaning of Jesus’ words remains the same, whether we live in Scotland or in the Middle-East. He was warning us to be on the alert for the coming of the Son of Man, and he was reminding us that although the seasons of the year come and go, his words do not pass away. The whole passage concludes at verse 37, where Jesus says “And what I say to you I say to all: Stay awake!”

Summer can be a lazy time, when we tend to relax – and that is no bad thing. But Jesus reminds us to keep a watchful eye open, for we know neither the day nor the hour.

Your friend,

John Bremner

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### Songs of Praise Evening

On September 11th, at 6.30 p.m., Bathgate Music Festival and Bathgate Churches Together will hold a ‘Songs of Praise’ evening at our Church. Requests for hymns and songs are to be with the minister by September 4th.

## New Elders

The Ordination and Inductions of new elders will take place next month. Unfortunately, Anne Reid is not well at present and we may have to postpone her Ordination to the Eldership, but Billy Bowtle and Nan Christie will be ordained (Billy) and inducted (both) on September 11<sup>th</sup>.

## Naomi and Tanko

The post can be rather slow, but Naomi and Tanko have sent greetings and thanks for their Christmas presents. Naomi received a colourful dress, which she used for the Christmas party, and Tanko received a smart new shirt. They both pray God’s blessing on us, and we ask Iona to pass on our greetings and blessings to them both when she next writes.

## Central Heating

As many of you will know, we are to have new gas central heating boilers put in to heat the Church. The timetable for this work is as follows: Monday 8 – Friday 21 August, the new pipe will be put in to bring gas from the main in Marjoribanks Street; a new meter will be attached to the church garden wall on August 17<sup>th</sup>; and during the week beginning September 5<sup>th</sup> the new boilers will be put in to the church cellar. After that we will need to start paying for the new system! Our treasurer, Eilidh Young, will be happy to receive any donations towards the cost of the new system.

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From Billy Bowtle – holidaying in Italy

Last year, Margaret and I were fortunate enough to visit the cathedral in Venice and we wondered where we might end up this year. ‘We’ has turned out to be ‘I’ and the ‘cathedral’ was one of the more earthly types: a ‘cyclotron.’ It’s the sort of thing that young science students read about in physics books or other more sensible people read about in fairytales. Ancient alchemists dreamed up schemes to convert worthless material into gold. Basically, they wanted to change one element into