"More things in Heaven and Earth…"

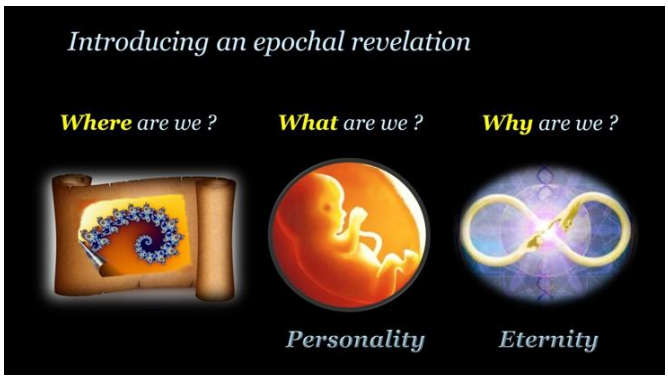
Nigel Nunn, Canberra
Presented at Mooloolaba Conference, QLD - 2012

A few years back, the TV station SBS would often take a moment, between programs, to remind us of something. A deep, raspy voice would simply say: "**The world is an amazing place.**"

Indeed it is. And the more we learn about the world, the more amazing it becomes. In every field, researchers find that things are stranger than they seem. Whether it's sorting out how DNA really works, how mind relates to brain, or what mass and matter really are, at the cutting edge, our prize winning theories, our best philosophies, fall short and fail to explain what's really going on. Even today, more than ever, Shakespeare's famous words still hit the spot. And given what this Urantia Book reveals, there truly are more things, in heaven and on earth, than we could ever imagine.

Of all the unimaginable things these papers reveal, maybe the most surprising is what they say about ourselves; about our relationship with the spirit of our Father within, about our educational ascent to Paradise. But not only do these papers tell us "how we go to heaven", they also say a lot about… "how the heavens go". In fact, they say so much about so many things that when someone asks the question: "Ok, so what's this all about?" it would be nice if we could point them to a simple introduction, something non-trivial, but short, and easy on the eye.

This was my motivation for those videos I've been making, of which there are now three. The first was about "the frames in which we think". Parts 2 and 3 look at "**what**" and "**why**" we are, exploring **Personality** and our potential personal place in **Eternity**.
If you haven't seen these, they're on the web, and we've also put these first 3 on a DVD.



In Part 2, I promised I'd get back to this other question, of "**Where**" we are. Well, the time has come. Over the next few months, I'll be making Part 4, about the more cosmological side of this fifth epochal revelation. Once we have this final part (and after fixing up the first three), hopefully this can serve as an enjoyable and balanced introduction to this extraordinary book.

This morning, I'd like to provoke some feedback about how on earth, in a sceptical, scientific age, we might introduce (and discuss) the cosmology that comes bundled with this book. As you know, this question of UB cosmology is a bit iffy. The revelators themselves state bluntly: "The cosmology of these revelations is *not inspired*." Well, what they actually say (in paper 101) is this: "We full well know that, while the historic facts and religious truths of this series of revelatory presentations will stand on the records of the ages to come, within a few short years many of our statements regarding the physical sciences will stand in need of revision…" (1109.3) 101:4.2

"Will stand in need of revision…"? "Many of our statements." Which ones? Are we to take "**Force Organizers**" seriously? What about **Fandors**, and midwayers who zip around at the speed of light?

Personally, as a **religionist**, as one "**re-joining with God**", I'm not really all that fussed about "how the heavens go". But as a scientist, I'm intrigued. ***Two*** types of material gravity? Space respiration? Seven dimensions? Believe it or not, for cosmologists, such topics are all "burning issues", actively and emotionally discussed!

As a warm-up, let's look at a few particular parts of "UB cosmology" that tickle my fancy: Superuniverses, Force Organizers and Ultimatons. (I should point out that for professional cosmologists, each of these qualify nicely as "... *undreamt of in our philosophies*", so they fit right in with this weekend's theme!)

Let's begin with Superuniverses, and the question of Orvonton: how does the Urantia Book's "7th superuniverse" relate to what we think of as the "Milky Way"?

Ever since Urantia Book readers first looked, with great expectations, to the sky, hoping to see our place in the "Urantia Book" scheme: our system, our constellation, Michael's magnificent local universe of Nebadon, ever since we began to look for superuniverses, dark gravity belts, and tidy levels of creation in outer space, there's been disappointment, even tears before bedtime. "The universe is too young", they cry. "We see no superuniverses." And engineers confirm, "***fandors can't fly***." For over 40 years, this idea of seven tidy superuniverses, clustered around Paradise, just behind the Milky Way, has been getting some bad press. Various readers with a background in physics have jumped through hoops trying to salvage some part of this "Urantia Book" model. They talk about how our entire Milky Way might be just a "minor sector", how Nebadon, Michael's local universe, must really be much bigger than the Revelators say.

So what to do with this idea of a "superuniverse". How does Orvonton, the so called 7th superuniverse, actually relate to (what we think of as) the Milky Way? This idea, of a relatively small and central "**Grand Universe**", of seven superuniverses clustered near "the center of all things"… is this one of those concepts that – "within a few short years" – will stand in need of revision"?

You remember what Bill Sadler used to say about the nature and relative sizes of what the Urantia Book calls the "grand" and "master" universes. This sort of concept was portrayed (beautifully) by Gary Tonge in his movie, "Journey Through the Universe". Here's one of the final frames. Question is: does this "artist's impression" reflect anything real? How well does it portray even what the Revelators say?

Personally, as a reader who tries to keep up with astrophysics, **my** first question was: "Well, what should we **expect** to see?" As a scientist, a better first question is: "What exactly **do** we see?"So before looking at what the Revelators say about "our superuniverse", let's first see what the old "**scientific method**" has revealed. What does NASA see?

[Movie: extract from: "**Inside the Milky Way**", National Geographic, 2010]

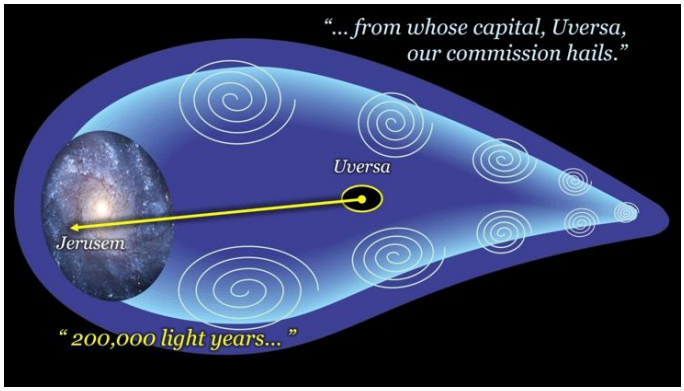
As James Bullock said (in the video): "It takes light 100,000 years to cross our galaxy".100,000 years. We used to think that light was FAST! But on this galactic scale, we see how "**finite**", even slow, material light can seem. More like **snail-mail**. Even **seraphim** travel 3 times as fast! But for scientists, it's all we have to work with, so let's see what light can show.

From paper 15 section 3: "as you look through the cross section of near-by systems to the great Milky Way, you observe that the spheres of Orvonton are travelling in a vast elongated plane, the breadth being far greater than the thickness… " (167.18) 15:3.2

"the breadth being far greater than the thickness." So far so good: this matches nicely with what we see. But hang on, how much greater? Well, astronomers agree this disc is about 100,000 light years across, and the main disc is about 1,000 light years thick. Remember in that clip, astronomer Bob Kirshner said the Milky Way is "**a bit like a pizza**". Well, this is not your deep dish, thick crust kind. Oh no. This pizza is **thin**. How thin? 100:1. That's like a DVD, 10 centimetres across, but just one **millimetre** thick!

Here's another look. As that other astronomer in the clip, James Bullock said: "the Milky Way, **we believe**, is a spiral galaxy."This is what astronomers believe the Milky Way would look like, if we could see it from above. And remember, this pizza is thin. Keep in mind that DVD, here seen face on. So far so good; not even a hint of controversy.

But then things go a bit wobbly. Having agreed that the breadth of this (super-galactic) pizza is far greater than its thickness, they go on, without missing a beat, to say:"… and the length far greater than the breadth." (167.18) 15:3.2. Length *far greater* than breadth. Hmm.



Later, in paper 32, they imply a scale for this structure:"From Jerusem, […] it is over two hundred thousand light-years to the physical center of the superuniverse of Orvonton, …""From the outermost system of inhabited worlds to the center of the superuniverse is a trifle less than two hundred and fifty thousand light-years." (359.8) 32:2.11.

Ok, who ordered that. This is not what astronomers have in mind when they model the Milky Way. They think of a nice, middleweight spiral. But recall that Uversa is "from where this commission hails" (1:5). These Revelators should know a thing or two about from where, and how far, they've come.

200,000 light years. Pause to consider… Where else do the authors offer this sort of astronomical distance? When speaking of Messier 31, the great spiral in Andromeda, they say:

"…, and when you view it, pause to consider that the light you behold left those distant suns almost one million years ago." (170.1) 15:4.7

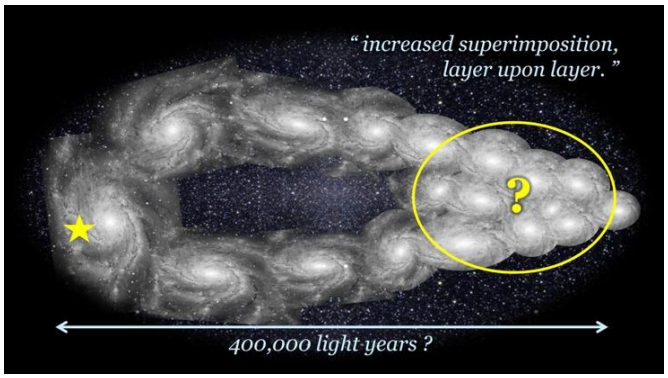
One million years? A million light years away? Astronomers now put Andromeda at about 2.5 million light years away, so if their distance to Andromeda is so far off, what about their estimate to Uversa? I see it like this: clearly we'd learn to use variables stars to estimate the distance to Andromeda, so the revelators were not allowed to pre-empt that discovery. But if we can never measure the distance to Uversa, are they free to tell us? I'll look at this in a minute.

But back to Andromeda, and that "… almost one million years". I've always read this as just another quote from a human source. Picture the scene: a room in 1924, Edwin Hubble puffing on his pipe, Harlow Shapley on the edge of his seat, Arthur Eddington looking pensive. All trying to wrap their minds around the idea that some spiral nebulae **really are** millions of light years away. Then Sir Arthur (Eddington), almost unable to believe what the numbers imply, says to no one in particular, "That light from Andromeda. It must have left, what, a million years ago?" Given those pesky "limitations of revelation", this very human thought might be all they could include. "Pause to consider".

Moving along. In paper 30, they say something else about Uversa. Speaking of the colony of "Star Students" (celestial astronomers, based on the capital) they say:

"Uversa is favorably situated for the work of this colony, not only because of its central location, but also because there are no gigantic living or dead suns near at hand" (338.20) 30:3.2

Does this imply vast empty spaces inside Orvonton? In paper 15, section 3, they add more detail to this sketch:"The local universes are in closer proximity as they approach Havona; …" "…the circuits are greater in number, and there is increased superimposition, layer upon layer." (168.12) 15:3.16



Ok, things have gone from a bit wobbly to very fishy indeed. With our space telescopes and precision cosmology, surely astronomers would notice something like this? Well, that's the question. Would they? Remember, our pizza is of the thin crust type. If we assume that such an extended Orvonton lies in the same plane as the disc of the Milky Way, then this arrangement has become very thin indeed. Let's say 400,000 light years long, and still only 1,000 light years thick: the superuniverse is now 400:1, or Bible Paper thin. Almost a two-dimensional plane. That's an interesting point, and I'll get back to it soon. Meanwhile, there's another problem.

This hypothetical structure is not only thin, but **old**. Recall in Paper 57 section 1, the story of Nebadon begins 875 **BILLION** years ago, more than 50 times older than the universe imagined by Big Bangers. But wait, there's more: not only is Orvonton old and thin, but in some sense, it may be "more-than-finite". What do I mean? Well, if Orvonton is truly part of a central "grand universe", then it's also part of the core of a more-than-finite, or absonite, "master universe". So even though the grand universe evolves, it must have a "pre-echo of transcendental stability". So not only is it flat… it STAYS flat.

Hmm. Things have gone from a bit wobbly, to fishy, and now **unimaginable**. For me, the concept of Orvonton (unfolding in these papers), is quite literally **undreamt of** in anyone's philosophy.

Ok, all this makes for a fine story, but let's try to keep it real, and get back to the facts. If we're stuck all the way out here [referring to picture], and all this is lurking over here, in a very, very thin plane, what should we expect astronomers to see? Well, that depends on how they look. As Bob Kirshner explained, as a bit of peperoni in a really big, thin, pizza, we face real problems trying to gauge the full reach of the Milky Way.

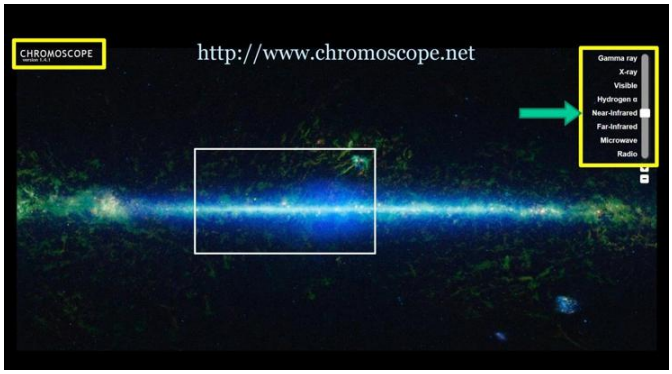
Especially when our telescopes were limited to the narrow band of light our eyes can see. But in paper 41, the authors encourage us to persevere:

" […] Better methods of space measurement and improved telescopic technique will sometime more fully disclose the ten grand divisions of the superuniverse of Orvonton; you will at least recognize eight of these immense sectors as enormous and fairly symmetrical star clusters." (459.4) 41:3.10

Well, our "telescopic technique" has certainly improved. Here's another short clip to help bring us up to date:

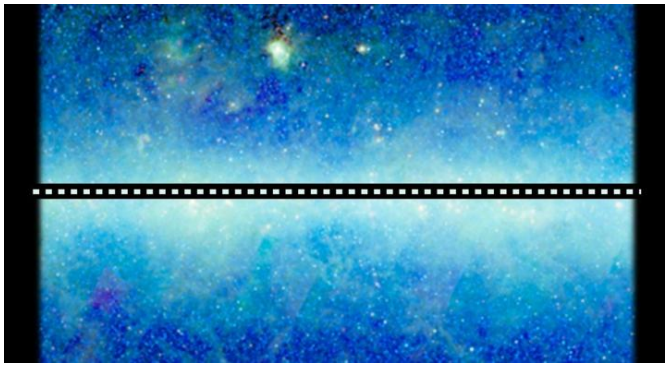
[Movie: **The Spitzer Space telescope** (infrared), 2012]

Wow! We can use infrared light to see what the Milky Way is really like! And not only the infrared. We can now explore Orvonton in all wavelengths of light. This web site shows what our new telescopes reveal: http://www.chromoscope.net.



From radio waves to gamma rays, each wavelength is revealing surprises. But for looking at stars in our disc, infrared gives the most spectacular view. Just this year, the Spitzer team combined a set of their infrared snaps to create this truly stunning view from our place in space. I liked it so much I thought I'd print it out. Quite a challenge for the old bubble-jet… [unrolls map]. Ok, let's zoom in and see what we can see:

Now remember, stars are not only bright, but also warm, so each star is an infrared source. Even in our best dust-cutting infra-red view, along this mid-plane, "*we gotta damn **wall** of stars…* "



So here's the problem: if Orvonton does in fact extend, back beyond this milky wall of light, and if these background sectors are also thin – that is 100 or 400:1 thin – then to see them we'd need to detect a line of stars behind a wall of stars. This remains, technically, a challenge. But remember those encouraging words in paper 41 :

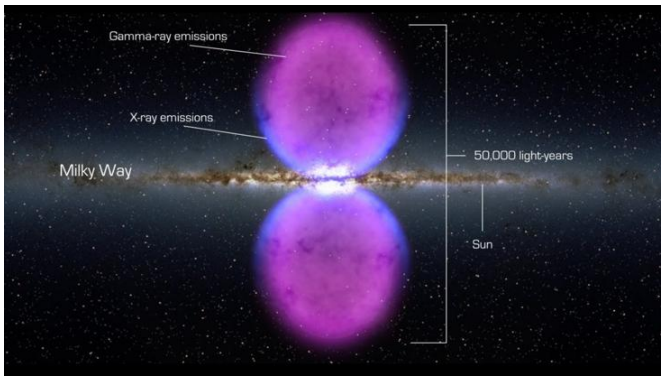
“Better methods of space measurement and improved telescopic technique […]; you will at least recognize eight of these immense sectors […].” (459.4) 41:3.10

Ok, we humans love a challenge! And sure enough, a team has taken this on. In mid-2011, a new survey began, the Apache Point Observatory Galactic Evolution Experiment (APOGGEE). This uses a spectrograph that takes infrared snapshots of 300 targets at a time, and will continue until sometime in 2014. As principal investigator Steven Majewski says:“The combination of infrared sensitivity and a 300-target multiplexing capability will make it possible for APOGEE to create the first-ever systematic and comprehensive probe of stars in every part of our Galaxy,” … “From this census of our Milky Way we expect many new findings about its structure, dynamics and constituent stellar populations [...] and to do it hundreds of times faster than would be possible with conventional instruments.”

This survey will be complete some time in 2014. And then? Post-docs and grad students start to mine the data, busting to be first to find (and to explain) anomalies. But realistically, what big surprises can we expect this infrared data to reveal? Well, astronomers have recently learned, once again, that the universe can surprise us. Take a look at this:This is an example of what happened two years ago, when astronomers got their first good look at a **gamma ray** view:

Movie: **Fermi Lobes** http://www.nasa.gov/mission_pages/GLAST/news/new-structure.html

Something very odd bubbled up out of the data beamed back by the Fermi gamma-ray space telescope. [Shows picture of adjusted raw data.] And *this* is the “artist’s impression” released by NASA in 2010:



Behold, the “Fermi Lobes”, which remain a mystery.The point here is that with each new survey of our Milky Way, we bump into unexpected things. In 2014, a lot of very bright folks will be hunting through a treasure trove of infrared data, searching for those undreamt-of anomalies. Like these now-famous Fermi Lobes, will the superuniverse of Orvonton be the next big thing to bubble up from the data? Watch this space!As astronomer Jim Bullock said in that NASA clip we saw earlier: “it’s a great time to be in the Milky Way business.”

Note: an extended version of this presentation will be available as Part 4 in a series of YouTube videos:

[Part 1] http://www.youtube.com/watch?v=ls9fkACcrKk[Universe Frames]
[Part 2] http://www.youtube.com/watch?v=--iA7xRTSS0[the Personal Universe]
[Part 3] http://www.youtube.com/watch?v=sxD2ztzDrT4[a Family Affair]
[Part 4] [coming soon]