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Looking into Higher Dimensions: Research with Joseph McMoneagle

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Abstract: A world-class remote viewer, Joseph McMoneagle, offered to work with me in my particle-physics research program. I readily consented, as I thought that he might be able to see neutrinos, resolve particles' features at nuclear distances, and see into higher dimensions. To "calibrate" McMoneagle, I asked him three things (in sealed envelopes which he did not open): to look inside an electron, examine a radioactive source, and describe a quantum-mechanical wavefunction. He gave credible or useful information on all three targets. We were now ready to look at a real mystery, how a cosmic ray could have arrived over Dugway Flats, Utah in 1991 with an energy $E = (3.2 \pm 0.9) \times 10^{20}$eV, as measured by the Fly's Eye Detector from the size of the atmospheric shower that the cosmic ray produced. With an energy this high, the cosmic ray should have scattered off the 3 degree Kelvin photons left over from the Big Bang until its energy dropped below about 0.5×10^{20}eV, the Greisen-Zatsepin-Kuz'min (GZK) bound. Instead the ray arrived with six times this energy, indicating that it had travelled less than a few hundred million light years in the cosmic microwave background radiation (CMBR) soup. Yet looking along the direction from whence it came revealed no possible sources within that distance. Using his "inner" senses, McMoneagle zeroed in on the shower and saw that it had the pointed shape of a shock wave corresponding to a velocity several times that of light. With a speed this high, the ray had to have come from *outside* our four local dimensions of spacetime, suggesting that it entered our local space right over Utah and never ran the gauntlet of Big Bang photons.

Keywords: particle physics, remote viewing, higher dimensional spacetime, inner senses.

INTRODUCTION

In elementary-particle physics, one of the most difficult problems is detecting neutral particles, like photons, neutrons, and neutrinos. Neutrinos are the hardest of all to measure. Those emitted by nuclear reactors can travel as far as 25 light-years in *solid lead* before being deflected.

Another problem is seeing down to small distances. It takes larger and larger accelerators to see down to smaller and smaller distances because the accelerated particles that we use to see with must have wavelengths as small as the structure that we want to study, and smaller wavelengths call for higher energies. Nowadays our most energetic electron and proton accelerators cost billions of dollars.

A third problem is that our scientific devices, like their creators, can only look in the lower four dimensions: the three of space and the one of time. Yet modern theories point to the possibility of extra dimensions, possibly of great extent. How can we see in these directions?

In 1998 I gave a talk at an annual meeting of the Society for Scientific Exploration, and sitting in the audience was one of the world's best remote viewers, if not the best: Joseph McMoneagle.[1] In my talk I described a model for elementary particles that I had developed (Bryan, 1988, 1989). It required four dimensions in addition to the ordinary four of space and time to accommodate the 48 elementary Dirac particles (quarks and leptons) of the Standard Model. Furthermore my extra dimensions were infinite in extent. How could I determine if these extra dimensions really exist?[2]

After my talk, Joe and his publisher, Frank De Marco, invited me to go to a nearby restaurant to get acquainted. We went to the Baha Bean in the middle of the University of Virginia campus in Charlottesville where the scientific meeting was being held. As I described the problems in detecting elementary particles, Joe got interested and volunteered to "look" at elementary particles for me. I was delighted.

I had worked with another gifted psychic, Janet Jackson of Victoria, Texas. I found that she could see down to nuclear dimensions, slow the rate of atomic and nuclear processes so that she could get a better look at them, see neutral particles, and even obtain information on higher dimensions: "The higher dimensions are just like the lower dimensions,"

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[1] Joe has published four interesting and informative books on remote viewing (see McMoneagle, 1995, 1998, 2000, 2002).

[2] An extended version of this talk is published in Bryan (2000).

said Jackson. So when Joe offered to do research with me, I immediately accepted. I thought that between us, we might discover some pretty interesting stuff.

As luck would have it, I had a chance conversation with another person attending the conference and discovered that he was the treasurer of the Lifebridge Foundation of New York City. Charles Overby thought that the Foundation might support my travel expenses to see Joe at his home from time to time to carry out our program. And so it came to pass. The Lifebridge Foundation gave me enough funds to visit Joe eight times over the next three years.

Within a few months (March 20, 1999), my wife Mary and I were visiting Joe and his wife Nancy in their home near Charlottesville. Joe had designed and built the house himself. It is nestled in the foothills of the Blue Ridge Mountains about two miles up the road from The Monroe Institute where Joe is a frequent speaker.

I was ready to ask Joe some questions to begin our research when Nancy explained to me how I should pose them. Having directed The Monroe Institute for nearly ten years for her step-father, Robert Monroe, Nancy was familiar with intuitive intelligence and knew how to present the questions:

> You don’t just ask him the question right out. Instead you write your question on a piece of paper, put the paper in an envelope, and seal the envelope. On the outside of the envelope you write just enough to identify the question. Joe answers your question in due time without ever opening the envelope.

“How will he know what I asked?” I inquired. Later Joe himself explained. He uses his inner senses to go to the spacetime point where I posed the question, and reads my intent. He says that he gets the question right about 70% to 80% of the time. “People have a hard time believing that I can do this”, he said, but in our research that followed, he indeed got the question right about 70% to 80% of the time.

“Why can’t I just ask you the question straight out?” I queried. “Wouldn’t that be a lot simpler?” He explained with an example. A few years ago, the U. S. military was interested in an up-coming Chinese nuclear test shot. His military interrogators put the latitude and longitude of the test-site on a slip of paper, sealed it in an envelope and just wrote on the outside, “This is a test.” Joe took up the question and in time reported that he saw a chemical explosion; that was all. This disappointed his questioners because they thought that he had not given them any useful information. However a few weeks later, the Chinese carried out the test and indeed it was a dud. The nuclear material never detonated. Only the chemical explosive went off. Joe said that if he had been asked outright to describe an upcoming nuclear test shot (this is called front-loading), he probably would have told them everything he had ever learned about nuclear tests. Instead, just using his inner senses, he went forward in time and reported what he saw. Just the chemical explosion.

To initiate our research, Nancy helped me put my questions in the format that Joe wanted. I thought of three questions and put them in sealed envelopes.

My first question was, "Look deep inside an electron. What do you see?"

For my second question, I drew on the fact that Joe had told me at the Baha Bean that he could see active phenomena more easily than passive phenomena. Therefore I put a small harmless radioactive sample in envelope #2 and asked him to tell me what he saw.

With my third question, I really tested his abstract ability. I asked him to "describe a wavefunction." We theoretical physicists know that to understand the nature of a particle, we really have to look at its wavefunction, or what might better be termed its "waveform" (since the wave might not necessarily be parameterized by a mathematical function). It is the waveform that we use to make our predictions. I wondered what Joe would come up with, since he is neither a physicist nor a mathematician.

In about three months (June 13, 1999) I returned to the McMoneagles' and Joe gave me his answers in text and drawings. I was amazed at what I read. Here is his report:

> Verbal Description—Target A 32199 [March 21, 1999] (Sealed Envelope) [Joseph McMoneagle]
>
> The object of interest as depicted on [Figure 1], is either an elemental [*sic*] particle, or something more exotic. I think it's probably an elemental particle of some type, as my sense is that it is circling a nucleus.
>
> The red-square drawn around it, signifies a cut or plane across its direction of flight or path.
>
> Figure 2 depicts a close-up of what this elemental particle looks like in relationship to the plane across its path of direction. I get a strong sense though that there are mirror images of this same particle, which are ghosted off to all sides (only two depicted in the drawing), some of which are traveling in opposite directions with regard to spacetime.
>
> In relationship to the plane across the particle, there are at least three rotational directions that might be affecting the particle, but I say that only because I've been forced to show this on a two dimensional paper. I think there is also a fourth relative to our

reality, but I would have to bring the particle off the paper in order to show it.

This particle also probably has weight and a charge, but my sense is that it is hypothetical so comments on these factors would not be relevant here. [End of report.]

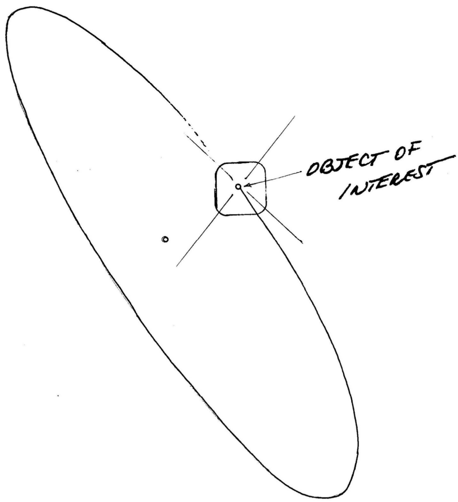

Figure 1. McMoneagle's first drawing in response to "Look deep inside an electron."

So in response to my first question, Joe drew a particle in orbit about a heavier particle. His drawing is reproduced in Figure 1. It could well be a picture of a hydrogen atom, that is, an electron in orbit about a proton. Then he gave a detailed picture of the orbiting particle which is reproduced in Figure 2. He sketched a spherical particle "ghosting off in two directions, but in reality in six directions." This is exactly right. He should not have seen a particle, but rather a waveform or wavepacket peaking at a central point and dying out in all directions. This is the correct description of an electron localized in a high orbit.

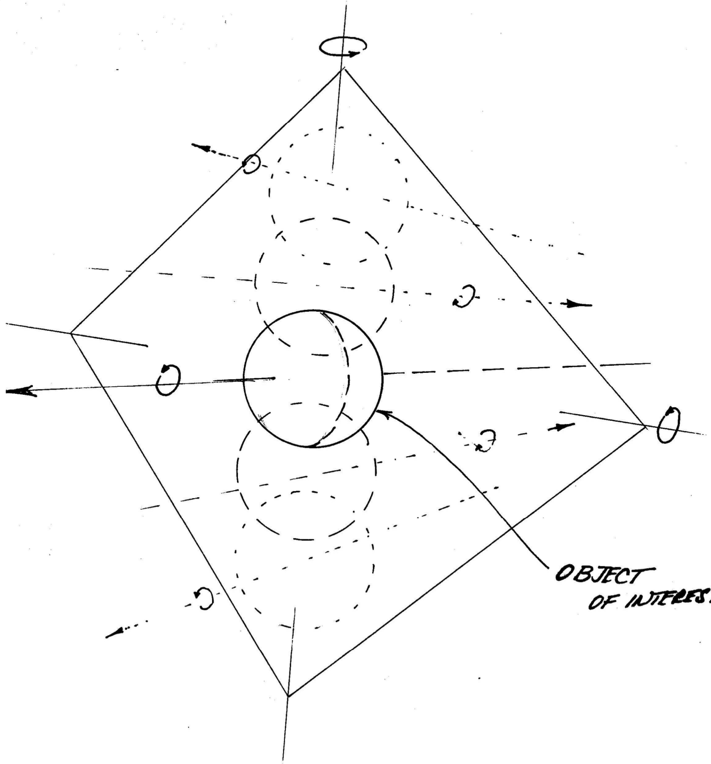

Figure 2. McMoneagle's second drawing in response to "Look deep inside an electron."

Joe went on to report that portions of the particle were moving backwards in spacetime. Right again. The electron's waveform is mathematically generated by the Dirac equation and is characterized by four wavefunctions, not one, with a pair of them telling the direction of the axis of spin (see below), and a different combination saying whether the particle has positive energy moving forward in time, or negative energy moving backward in time. (The latter is mathematically identical to its anti-particle, the positron, moving forward in time, and is usually identified as such.)

Finally, in his picture of the electron, Joe showed each portion of the electron-waveform rotating about an axis through its center. Correct again. A fundamental feature of the electron is this intrinsic spinning motion. Its axis of rotation can be oriented in any direction in three-dimensional space. This may be what Joe meant when he wrote that "There are at least three rotational directions that might be affecting the particle."

Note that Joe did not answer my first question precisely. I had wondered if he would see any structure in the electron, since a popular model a decade or two ago predicted that quarks and electrons were composed of sub-particles. Joe spoke not at all about any internal structure. Instead he described the electron as we currently understand it. If it has internal structure, it has not been seen. According to present-day experiment, the electron is a "point-particle", consistent with Joe's report.

The fact that Joe did not answer my exact question must be the 70% to 80% accuracy with which he says he perceives the questions. But the information that he did come up with was quite correct. He described the electron about as well as one can, using just words and pictures. As I said, Joe is neither a physicist nor a mathematician.

There was also a tantalizing bonus. Joe saw the axis of spin of the electron oriented in a fourth direction as well as the three of ordinary space. This might be one of the extra dimensions that I proposed in my elementary-particle model (Bryan, 1988, 1989).

If my first question was a bit general ("Look deep inside an electron"), my second question was more specific. I asked Joe to describe what he saw in the envelope. It held a button consisting of a few grams of non-radioactive material plus about two nanograms of radioactive thallium; that is, about 10^{22} non-radioactive atoms and about 6×10^{12} radioactive thallium atoms. About 40,000 of the thallium nuclei were decaying each second *via* the reaction,

$$^{204}_{81}\mathrm{Tl} \rightarrow {}^{204}_{82}\mathrm{Pb} + \mathrm{e}^{-} + \bar{\nu}_{\mathrm{e}},$$

where e^{-} is the electron, $\bar{\nu}_{\mathrm{e}}$ is the anti-electron-neutrino, $^{204}_{81}\mathrm{Tl}$ is a thallium nucleus of charge 81 and atomic weight 204, and $^{204}_{82}\mathrm{Pb}$ is a lead nucleus of charge 82 and atomic weight 204. About 0.8 MeV kinetic energy was released in each decay, with most of the energy going to the neutrino and the electron.[3]

I had expected that Joe's attention would be drawn to the decaying thallium nuclei, since the electrons and anti-neutrinos from the decay were emerging with far more kinetic energy than the ordinary electrons had. Instead, Joe drew a picture of a stable atom with a small inner nucleus, two heavier particles orbiting near the center and two very light particles orbiting much farther out. See his drawing below (Figure 3).

[3] [MeV = Mega (10^{6}) electronvolts.—Ed.]

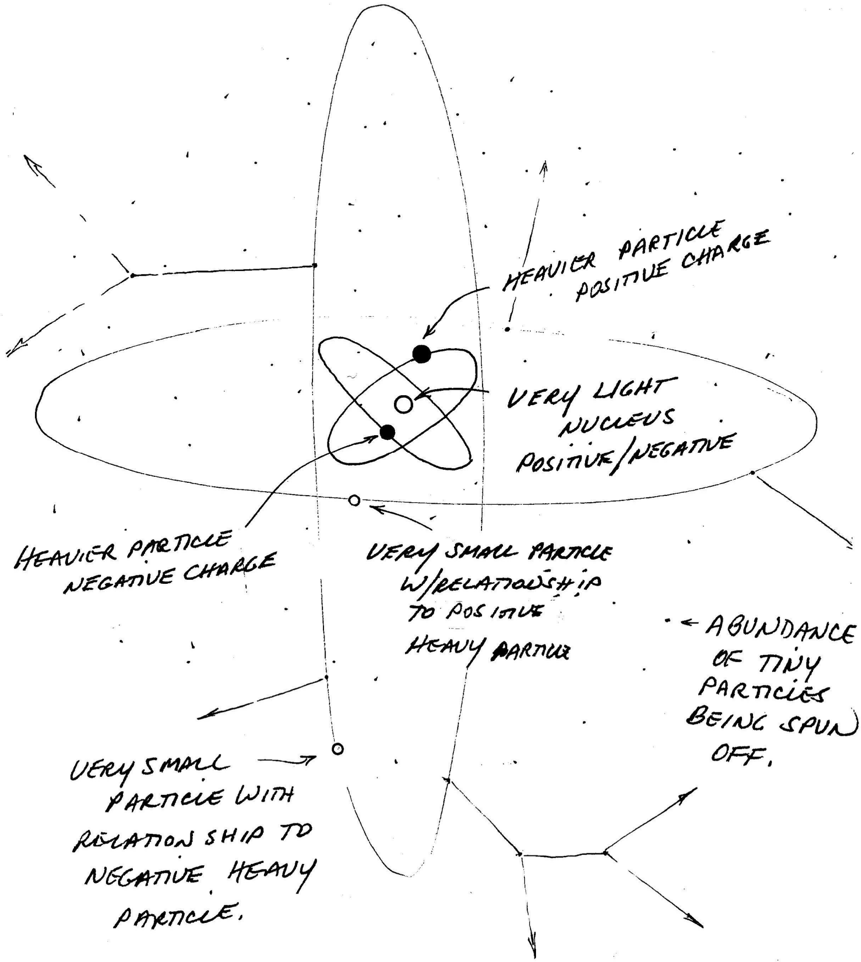

Figure 3. McMoneagle's drawing in response to "Describe what you see in the envelope."

His report is as follows.

> Verbal Description—Target B 4299 [April 2, 1999] (Sealed Envelope) [Joseph McMoneagle]
>
> This is probably a real extant object in time-space. My sense is that it is a simple one however, that consists of a core (nucleus), which is lighter than most. It [is] either negatively charged or doesn't have much of a positive charge to it. I would guess the latter.
>
> Circling the nucleus, are two larger particles (they actually seem larger than the core), one is positively charged and one is negatively charged. If the core was about the size of a basketball, I would say these two particles were circling at about the distance from the basketball as the Moon's orbit—just to give a comparison.
>
> Following the same example, if you were to go on out to about where Saturn's orbit lies, you would find two more particles circling there. Each of those particles having a separate relationship to one of the heavier moon-orbit particles—one being related to the positively charged particle and one being related to the negatively charged particle. These are also much smaller than the moon-orbit particles, on the magnitude of about a thousand to one. If these outermost particles weighed in at around a pound, the moon-orbit particles would weigh in at about half a ton each.
>
> These outer orbital particles are racing through an almost empty space, but that almost empty space is filled with even smaller particles that have a positive charge. However, I do not see them having a major relationship to any of the other particles. Now and then the outer orbital particles will strike one of these positively charged smaller particles and it sends the smaller particle off into space. Where it goes I have no idea. There is a good chance that eventually it is either annihilated or absorbed—my bet being the latter. [End of report.]

Again, McMoneagle intuited the main intent of my question, this time to look at objects ten orders of magnitude or more smaller than the envelope. However instead of reporting on the radioactive nuclei, he seemed to be seeing electrons and stable nuclei, or portions of stable nuclei.

We know that nuclei are composed only of neutrons and protons, so perhaps in McMoneagle's report, the heavy positively charged particle was a proton, and the heavier negatively charged particle was a neutron, although neutrons actually have zero charge. (On the other hand, he may have been observing the *isotopic spin* of the proton and neutron; the isotopic spin of the proton is +½ and that of the neutron is –½, and these quantum numbers are just as important as the charges.)

Possibly he was looking at a deuterium nucleus. The two light particles farther out could be electrons, since Joe said that they weighed about 1/1000th as much as the heavy particles, and we know that electrons weigh about 1/1840th as much as a nucleon (i.e., neutron or proton). Furthermore Joe said that the light particles were about 4000 times farther out from the center than were the heavy particles (which Joe described in terms of the ratio of the Earth-Saturn distance to the Earth-Moon distance), and we know that the electrons in an atom are about 25,000 times farther out from the center than the nucleons in the nucleus. So Joe's estimates of the relative orbital distances and masses of his particles were within an order of magnitude of the known relative orbital distances and masses of electrons and nucleons.

However, the atom that Joe described could not be deuterium because deuterium has only one orbiting electron. Perhaps the heavy particles in Joe's picture were *representative* of the many neutrons and protons in a typical nucleus and the light particles were representative of the many electrons in a complete atom. This would agree with the atoms in the sample that he was viewing.

Joe also remarked that these light particles "are racing through an almost empty space, but that almost empty space is filled with even smaller particles that have a positive charge." During debriefing he told me, "My sense is these are not in circular orbits, but sparkles of light popping in and out of reality. They have like a finite time of existence, but they are never in the same space." Although in his report he called them "even smaller particles," Joe may have been referring to copious electron-positron pairs which constantly appear out of nowhere in the vacuum and then quickly self-annihilate and disappear. This is a well-understood feature of quantum electrodynamics, known as polarization of the vacuum. The fact that Joe apparently saw vacuum polarization made it even more likely that he was observing nature down at the scale of elementary particles.

However, there was one feature of Joe's viewing which did not agree at all with our current understanding of the nucleus. He wrote of a core "which is lighter than most. It [is] either negatively charged or doesn't have much of a positive charge to it. I would guess the latter." If, as Joe said, the core's size was in the same ratio to nuclear dimensions as a basketball is to the Moon's orbit, then the core had a diameter of about 10^{-24} meter. According to the Heisenberg Uncertainty Principle, to see something this small using a conventional beam (electron or proton) in an accelerator would call for the bombarding particle to have an energy,

$$E \approx \hbar c / \lambda = 2 \cdot 10^{-7}\,\mathrm{eV \cdot m} / 10^{-24}\,\mathrm{m} = 2 \cdot 10^{8}\,\mathrm{GeV},$$

or about 100,000 times greater than the energy of the beams of the most powerful accelerator on Earth, FermiLab near Chicago.[4] And observing such an object using such an accelerator beam would blow the nucleus to smithereens and create millions of secondary particles. If Joe actually saw this core, he didn't disturb it . . .

What could this core be? Then I remembered giving a talk before a gathering on a Sunday morning where I likened an atomic nucleus to an orchestra. The neutrons would be the strings (violins, violas, cellos, basses) and the protons would be the brass instruments (never mind the woodwinds). Then someone asked, "What about the conductor?"

Of course there is no "conductor" in current models of the nucleus. But I wondered if Joe had seen a conductor even so. In a previous paper (Bryan, 2002), I have given arguments that, just as a person has a consciousness, and major organs may also have consciousnesses (a person receiving a heart transplant suddenly has a craving for foods that the donor was fond of) (Pearsall, Schwartz & Russek, 2002), so perhaps consciousness goes all the way down to individual nuclei. Perhaps Joe has seen the seat of *consciousness* of a nucleus.

This gets very interesting because the Heisenberg Uncertainty Principle tells us that there is no way for us to know when a particular radioactive nucleus is going to decay. At a given moment we can only know the *probability* with which it will decay. But if the nucleus has a consciousness, then perhaps this consciousness determines when the nucleus decays. And if we could learn more about this consciousness, then perhaps we could stimulate it to decay upon *our* command. It might be possible to detonate radioactive waste in a safe, controlled manner rather than wait for it to decay on its own, a time that can stretch into thousands of years.

My third question to Joe, "Describe a wavefunction," was without doubt the most abstract of my questions. A wavefunction or waveform is not a physical entity; it is more like a thought, expressed in mathematics. I wondered if Joe could even comprehend the question, since he is not a mathematical physicist. In fact, he gave a good example of a wavefunction. His report appears below:

> Verbal Description—Target C 4299 [April 2, 1999] (Sealed Envelope) [Joseph McMoneagle]

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[4] [GeV = Giga (10^9) electronvolts.—Ed.]

The target of interest is in constant motion, which is very difficult to demonstrate. It appears that there is a minimum of four planes of motion that are all going on simultaneously. I have chosen to depict actually only two.

On page one [Figure 4] there is a circle, which represents the particle at rest, which actually it isn't. Out to either side I've drawn overlaying lines depicting sort of what I could call a wave apex, or front wall.

The particle is sort of painting shadows of itself across and within the interior portion of this front wall. Unfortunately, I also have an impression that the wave is mobile through spacetime, which I've depicted in drawing number two [Figure 5]. Again, this is difficult to show because while I can depict what appears to be three directions of movement, I cannot depict the fourth, or at least have not found a way of doing that yet.

I have a suspicion that dependent upon how you look at the motion determines the direction in which it appears to be flowing. The wall therefore changes with the motion as well.

Of the bunch [of questions], this is probably the most difficult to depict. As I also get a feeling that the wall can be moving in both directions through spacetime as well, forward and backward relative to time anyway. [End of report.]

In McMoneagle's diagrams, the wavefunction looks like a spherical wave-packet circling about a magnetic field line, or perhaps the trajectory of a wave-packet in a Penning trap, which can be used to trap single ions. In Figure 5 we see the trajectory in a side view. In Figure 4 we may be looking at it more from on top. The particle's oscillations appear to be getting larger with time, but this might just be due to the fact that the particle is getting closer to the viewer.

Note that Joe again refers to a fourth space-like dimension ("I cannot depict the fourth"). He also reports that the "wall can be moving in both directions through spacetime as well, forward and backward relative to time anyway." This report, like his report to my first question, could be a description of an elementary particle, perhaps an electron, moving in higher-dimensional spacetime.

I followed up on each of my three questions with three further inquiries on July 20, 1999. Joe completed his responses within a couple of months. His reports were consistent with his earlier reports (i.e., he did not go off in radical new directions). As I was to observe in later reports, his first impressions were also the most informative. These, plus debriefings, appeared to make the best use of his special abilities.

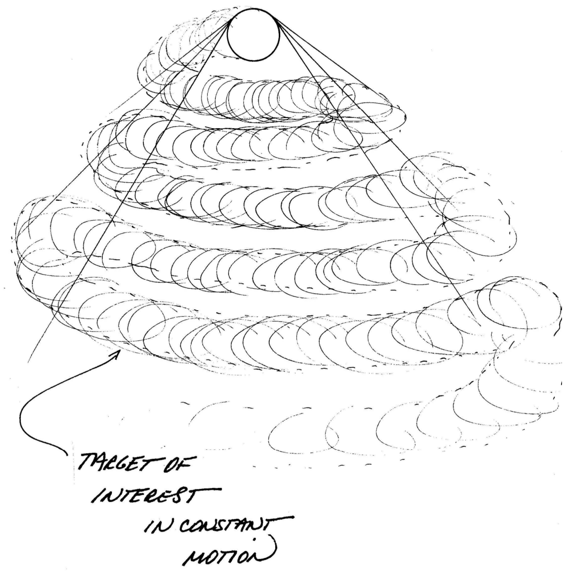

Figure 4. McMoneagle's first drawing in response to "Describe a wavefunction."

I was very pleased with McMoneagle's responses to my questions.[5] He gave an excellent description of an electron, right down to its spin states and anti-matter components. He was also able to sketch a wavefunction, an abstraction if there ever was one. His take on the radioactive source didn't correspond to any known nucleus, but did contain the essential features of an atom. Also he apparently picked up on vacuum polarization. I found all of this to be convincing evidence that he really was "making himself small" as it were, and seeing physics on the atomic and also nuclear scale.

Joe also reported several times that he saw a fourth space-like dimension. Perhaps the "extra dimensions" of current elementary-particle theories really do exist. Joe could be my telescope to peer into these higher

[5] Note that Joe answered my three questions in the order in which I gave them. He had only a 1/6 chance of doing so by chance alone.

dimensions. And if the higher dimensions stretch off to infinity as they do in my elementary-particle model (Bryan, 1986, 1998, 1999, 2000) and that of Rubakov and Shaposhnikov (1983), then perhaps he could look off into that distance too.

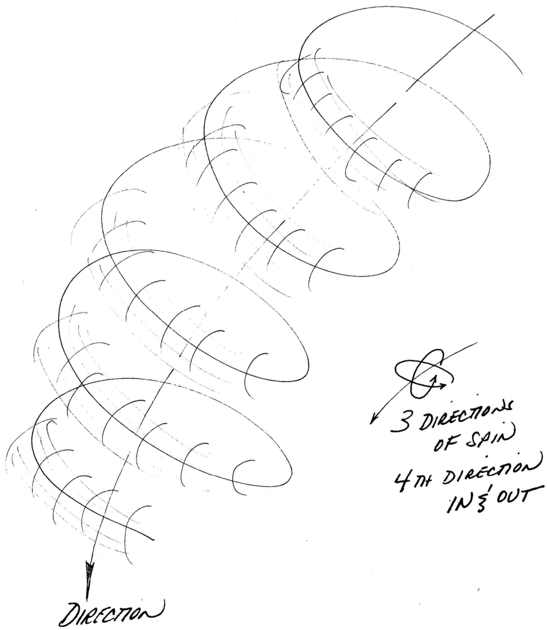

Figure 5. McMoneagle's second drawing in response to "Describe a wavefunction."

ORIGINAL RESEARCH WITH JOSEPH MCMONEAGLE: THE UTAH EVENT

McMoneagle had done so well answering questions to which I knew some of the answers that I felt that we could go ahead and examine an event that had (and still has) the astrophysics community perplexed.

On a moonless night in October, 1991 a thin streak appeared high in the sky over Dugway Flats, Utah. It was seen by a device called the Fly's Eye Detector, an array of 67 five-foot-diameter concave mirrors spaced several feet apart defining a large circle on the ground. About a dozen photo-multiplier tubes were mounted above each mirror at its focal plane. The mirrors were aimed toward the sky and were used to record atmospheric events on clear moonless nights such as this one. (These occur about 10% of the time.) The streak was a thin, bright, fluorescent line whose tip had travelled thousands of times faster than a typical meteorite. This indicated that the line was not caused by a bit of space debris, but probably by a high energy particle moving with a velocity close to the speed of light, c. As the particle hit the oxygen and nitrogen molecules in the upper atmosphere, it ionized them to produce a shower of particles, and electrons recombining with the ions emitted photons producing the visible streak seen by the Fly's Eye. Short-lived particles like pi-mesons were also produced when the shower-particles hit atomic nuclei; these decayed to produce more particles and electromagnetic radiation, some visible.

The experimental group which recorded the event (Bird et al., 1995) reported that the particle arrived at our atmosphere with an apparent energy $E = (3.2 \pm 0.9) \times 10^{11}$ GeV. This was (and is) the highest energy of a particle ever recorded by man, over 100,000,000 times the energy of protons accelerated at Fermilab.

The particle might have been a hypothetical super-massive particle left over from the Big Bang whose mass turned into the shower's energy, but more likely, it was an extremely energetic light particle (see the review by Bhattacharjee & Sigl, 2000). The problem is that if it was indeed a light particle coming from a great distance, then it should never have arrived with so much energy. When a particle is traveling very fast through the cosmos, the three-degree Kelvin photons left over from the Big Bang begin to look like high-energy gamma (γ) rays to the particle in its rest frame, due to the Doppler effect. If the particle is charged, say a proton (p), and has energy $E > 0.5 \times 10^{11}$ GeV, then the gamma rays are energetic enough to produce neutral pi-mesons (π^0) *via* the reaction:

$$\gamma + p \rightarrow p + \pi^0$$

After the particle travels a few hundred million light-years producing these neutral pi-mesons, its energy degrades to about $E = 0.5 \times 10^{11}$ GeV, the GZK bound (Greisen, 1966; Zatsepin & Kuz'min, 1966). The Utah projectile came in with *six times* this energy.

If a particle has this much energy, then the inter-galactic magnetic fields (the order of 10^{-9} gauss) are too weak to deflect it very much, so one should be able to look back along its arrival direction and see the active source that produced it. This source should be less than a few hundred million light years away, else the particle should not have arrived with so much energy. But when scientists look back over the 3×10^{11} GeV particle's path, they see no such source. So how did the particle get here?

This looked like an interesting problem for McMoneagle and me to examine. I knew that Joe could look forward and back in spacetime (e.g., McMoneagle, 1998), but I wasn't sure that he could zero in on an upper atmospheric elementary-particle event that occurred eight years before and two thousand miles away. Even if he could, then could he come up with useful information? I decided that it was worth a try.

On October 2, 1999, I e-mailed Joe's wife Nancy the following query to put in a sealed envelope for Joe: "An ultra high-energy cosmic-ray particle entered our atmosphere in Utah, USA on October 15, 1991 at 7:34:16 Universal Time, and was detected by the Fly's Eye Array. The shower of particles that the incoming particle created pointed to Galactic Latitude = 9.6 degrees and Galactic Longitude = 163.4 degrees. Trace the incoming particle back to its source." On the outside of the envelope, Nancy wrote: "An event occurred on October 15, 1991 in Utah at 7:34:16 Universal Time. 1. Describe the event. 2. Describe where and how the event originated." She then gave the envelope to Joe. Joe's report follows. I first read this report while visiting the McMoneagles on January 2, 2000.

McMoneagle's Report on the Utah Event

7:34:16 UT, Utah, Oct. 15, 1991 [Joseph McMoneagle]
1. Describe the event:

> Actually the event took place over a period of time that began roughly at the time noted above. I believe it probably went on for some seconds, perhaps a little over a minute. My sense is that there was a huge wave impact on the face of the planet that took place at this position on the planet. My impression is that the impact looked very much like a teardrop of energy of some kind coming into contact with the Earth. What is interesting about it, is that it was generally localized and then sort of peters out as you go away from the epicenter or initial point of contact. The energy was apparently particles of some kind that are customarily seen only sporadically on the planet. My sense is that while they had some mass, which is measurable, they did not contain any form of specific charge. The other interesting thing is that it appears the impact of the teardrop was in reverse of how one might think it would occur. (See the attached drawings [Figures 6 and 7] for state-by-state effect.) Particles were extremely and unusually dense at point of impact and

occurred with a measurable rise in density and then falling off to normal. (See attached drawing of density profile [Figure 6].)

2. Describe where and how the event originated:

The generator of this event lies in deep space. My sense is that it is really huge. A very large and dense cloud of energy, that for all intensive purposes appears to be a star to us from our vantage point. But, it seems to be a star that has pretty much expended most of its ability to radiate. It's probably been expanding for in excess of [15 $\times$ 10^9] years. It has essentially consumed most of its energy and become a cloud of gas with mass but not energy.

At some point in time, the core stops expanding and begins to suck matter back into it at an astounding rate. Sort of like a vacuum cleaner. As the matter is sucked back in, it begins to build heat at the point of convergence, which initiates a large spike of power, sort of like a power surge. This speeds up the process that begins to actually feed on itself. As the cloud begins to re-consolidate, the core becomes heavier and heavier, and eventually begins to put off an enormous output of energy waves—much like a bulb as it converts electrical energy into heat energy. But, this wave is not visible to the naked eye. It appears to be something more electrical than visual.

Eventually, the star is able to consume all that it contained in the first place, wherein it collapses into itself and emits a huge burst of energy with no charge, as no charge can escape from its core any longer. I get a sense that this is the formation or the beginning of what we call a black hole in space. This incredibly dense and heavy part of what appears to be otherwise empty space then begins to search for and suck other energy into it as it grows in power.

I believe that event is generated at the precise point where the collapsing star becomes a black hole or begins to actually trap light. It releases a huge burst of energy that is of great mass but with no charge. It is a portion of that blast that struck Utah in 1991.

Remote viewing: 8 hours
Joseph W. McMoneagle,
November 10-December 31, 1999.

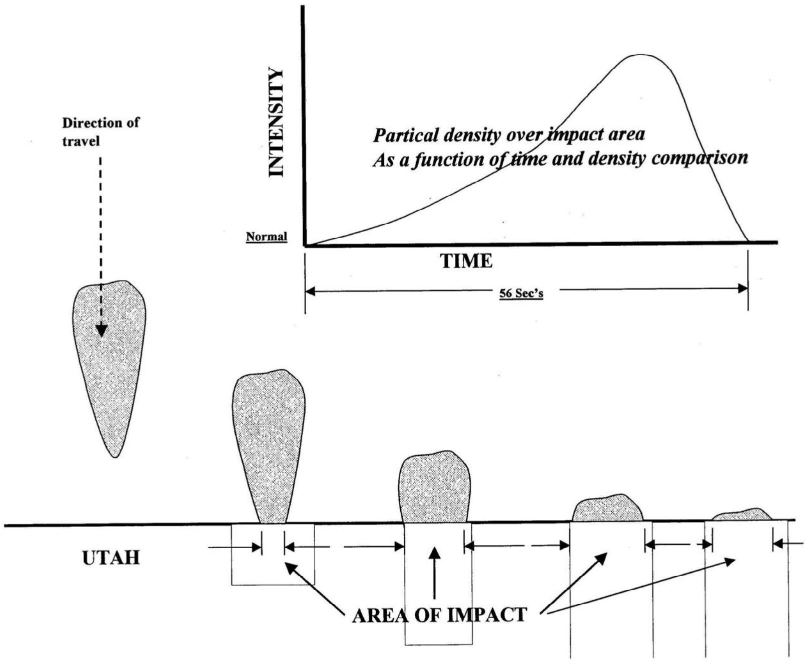

Figure 6. McMoneagle depicts the development of the 1991 Utah cosmic-ray shower.

Analysis of McMoneagle's Report

"1. Describe the event." Amazingly, McMoneagle perceived not an explosion or some such on the ground as one might have expected, but something high in the sky. And he didn't see a chemical or nuclear explosion at this altitude because the debris didn't flow out spherically. Rather the event propagated with a pointed shape. It was apparently comprised of "particles of some kind that are customarily seen only sporadically on the planet." Could Joe have zeroed in on the Utah event? For what he was seeing was no ordinary cosmic-ray event. One would have expected a shower with a flat front end shaped like a pancake several hundred feet in diameter (as explained below), not the arrowhead shape that McMoneagle saw as in Figure 6. (In fact, the "Fly's Eye" apparatus did not have the resolution to determine the shape of the front end of the shower.

The time that the actual Utah shower took to reach the ground must have been of the order of tens of milliseconds, not tens of seconds as Joe reported, but it is common for remote viewers to see events unfolding much more slowly than in real time.

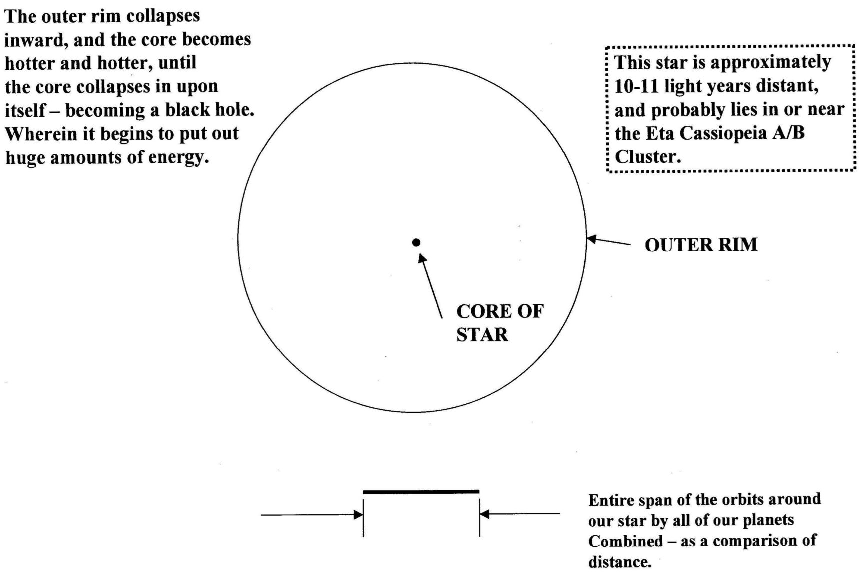

Figure 7. McMoneagle depicts the generator of the 1991 Utah cosmic ray.

"2. Describe where and how the event originated." Although he is neither a physicist nor an astronomer, McMoneagle is clearly describing and drawing a huge Type II Supernova. If it had been centered at our Sun's position, then the Supernova would have reached out beyond the orbit of Pluto. It culminated in the formation of a black hole (as he states) and the release of an incredible flux of neutrinos. ("It releases a huge burst of energy that is of great mass but with no charge.") Indeed, neutrinos are electrically neutral, and although recent measurements of neutrino oscillations indicate that individual neutrinos have very little mass, the neutrino flux of a supernova is so stupendous that it carries a huge amount of energy and mass. Joe estimates that the star which ended its life as the supernova began 15×10^9 years ago. This is only slightly longer than current estimates of the age of the universe, about 13.7×10^9 years.

The event that McMoneagle reported sounds like a cosmic-ray event all right. He finds the primary particle or particles originating in a Type-II Supernova, traveling to Earth and creating a shower of particles of some kind. The shape of the shower is a little strange, though.

The shower measured by Bird et al. (1995) points to an “apparent source” with celestial coordinates right ascension $\alpha = 85° \pm 1°$ and declination $\delta = 48° \pm 6°$. McMoneagle reports the primary came from the direction of celestial coordinates right ascension $\alpha = 12.3°$ and declination $\delta = 57.8°$—i.e., the direction of Eta Cassiopeia, a binary star in our local universe labeled A/B. A short calculation shows that McMoneagle’s reported source subtends an angle fully 57° with respect to the Utah group’s “apparent source.”

In fact, there were no reported sightings of a Type-II Supernova in *any* direction during October 1991 (R. Schorn, personal communication, 2004). So what to make of this?

One clue may be that McMoneagle’s cosmic-ray shower has the shape of a pointed shock wave, whereas one would expect it to look more like a pancake in front, as stated above. See Figure 8, where I show shock waves created by objects traveling faster than ordinary waves in a given medium. In the upper atmosphere, ordinary light waves travel at a speed perhaps 1% less than their speed in a true vacuum. A highly energetic cosmic ray will nonetheless travel essentially at the vacuum speed of light in the upper atmosphere. Thus it will create a shock wave like the one labeled $v = 1.01c$ in Figure 8. However, Joe’s shower looks more like the shock wave of a particle traveling at a velocity $v = 4c$. See the shock waves labeled $v = 1.4c$ and $v = 4.3c$ in Figure 8 below.

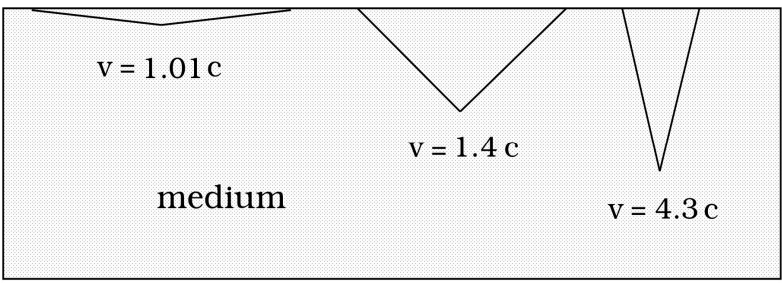

Figure 8. Shock waves produced by projectiles traveling with velocity v greater than the velocity c of normal waves in a given medium.

How could McMoneagle have seen a particle moving with a speed greater than the speed of light in a vacuum? Such particles, called tachyons, have been looked for over the years but never seen (E. C. G. Sudarshan and others have predicted the properties of tachyons in a definitive series of papers; e.g., Bilaniuk & Sudarshan, 1969). If, on the other hand, McMoneagle's particle came from *outside* our local four dimensions of space and time M^4, then it might indeed have entered with a speed greater than the speed of light. Nobody knows what laws govern speeds outside M^4. Indeed, speed = (distance covered)/(time elapsed), and time outside M^4 might be quite different from time inside M^4, if it exists at all there.

If the cosmic-ray particle did enter our local spacetime from higher-dimensional spacetime, then it might have penetrated our space with speed ~4*c*, creating the pointed shock wave that McMoneagle saw. This could explain how it arrived with kinetic energy six times the GZK bound. Traveling outside our local spacetime, it never encountered the 3K photons. It may have entered our spacetime right over Utah.

After a little thought, though, one realizes that even if the cosmic ray did enter our M^4 directly over Utah, it probably would have punched right through our local spacetime and continued on in the extra dimensions. How could it have initiated a shower over Dugway Flats?

To explain this point, I would like to use a simplified model of lower and higher dimensions. Imagine that our local space had just two dimensions, say the horizontal x- and y-dimensions. This reduced space would still be adequate to describe a lot of physics, e.g., the orbit of the Earth around the Sun, or a high localized orbit of an electron around a proton. See the plane labeled "portion of lower universe" in Figure 9. This slab is a portion of a plane which stretches out to infinity in the x and y directions. Now in place of the ordinary z-axis perpendicular to the x- and the y-axes, let us draw a *new* axis and call it $\tilde{z}$. (The tilde over z indicates that it is an extra dimension.) These x-y-$\tilde{z}$ axes are sketched in Figure 9.

We can now use this extra dimension $\tilde{z}$ to make space for another universe. Make a copy of "portion of 'lower' universe" and place it parallel to "portion of 'lower' universe" only higher along the $\tilde{z}$-dimension, as sketched in Figure 9. Call it "portion of 'upper' universe." It too is just a portion of a horizontal plane which stretches out to infinity in both directions. "Upper universe" might contain an electron orbiting a proton also.

Now we are ready to tackle the problem of how a particle from outside our local spacetime could initiate a shower over Utah (see Figure 10). Again I consider just two dimensions of our local universe M^4. Earth now appears as a very thin disk. The surface of real Earth is now just the circumference of this disk. Earth's atmosphere coats the circumference.

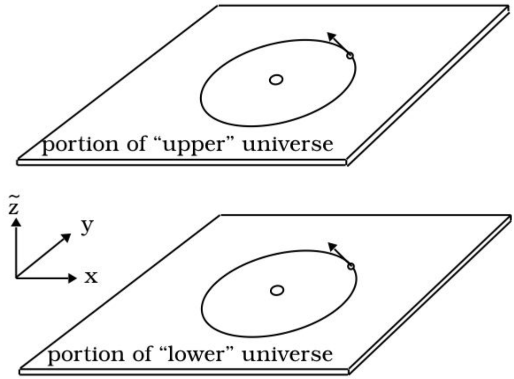

Figure 9. Two parallel universes, each depicted with just two ordinary x- and y-dimensions, spaced a distance apart along a vertical extra dimension $\tilde{z}$.

The illustrated thickness of "our universe" is not the thickness in the ordinary z direction, but rather the thickness in the direction of the extra dimension $\tilde{z}$, and is probably less than 10^{-19} meter, a thickness of Earth's elementary particles in the $\tilde{z}$ direction suggested by Rubakov and Shaposhnikov (1983) and Bryan (1986, 1998, 1999).

Now imagine, as in Figure 10, that the Utah cosmic-ray primary actually was accelerated by a supernova in an "upper universe." Suppose that it escaped and sped on to reach our universe M^4 near Earth. What might have happened when it hit our local spacetime? Usually I suppose that it would just have gone straight through the 10^{-19} meter of "our universe" and continued on in the extra dimension. However if it had entered with a speed greater than c, then it might have set up a shock wave in M^4, as such a speed is strictly forbidden by Einstein's Theory of Special Relativity. This shock wave might have proceeded to Earth and created the shower. The primary wave would have been deflected slightly and continued on to a "lower" universe, as sketched in Figure 10. Alternately, the wave might have ricocheted off a molecule high in Earth's atmosphere, with the molecule initiating the shower. In either case, the shower would have pointed back to the "apparent source" of Bird et al., as indicated in Figure 10.

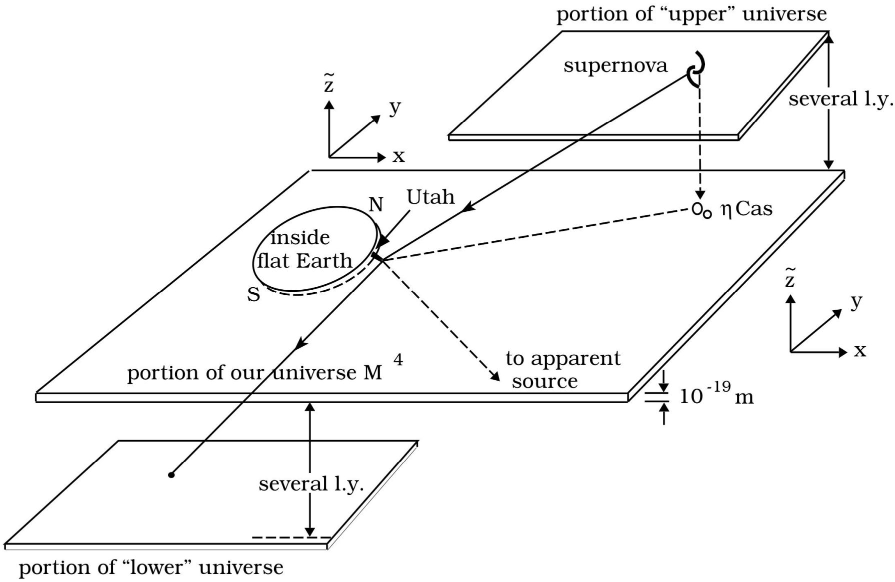

Figure 10. Scenario in which a Type-II Supernova in an "upper" universe accelerates a cosmic-ray particle to ultra high energy. The particle escapes and propagates to our universe M^4, entering with a speed in excess of the speed of light. There it hits a secondary particle (or creates a shock wave simply by encountering our spacetime) and proceeds on to a "lower universe." The secondary heads toward Earth and creates the shower seen by the Fly's Eye Detector in Dugway Flats, Utah in 1991.

(If the primary had already been traveling some distance *within* M^4, then Special Relativity dictates that any particles that it hit or created would have travelled right along with the primary in nearly the same direction. However for a primary entering from *outside* our local spacetime, we don't know what rules apply at the boundary of M^4, so perhaps the primary *could* hit another particle and send it off at right angles into M^4 as suggested in Figure 10.)

(Note that just from the geometry, a primary reaching Earth would be much more likely to materialize somewhere in the middle of the planet rather than in its atmosphere. If it had entered M^4 inside Earth, then it would have then passed right on through the 10^{-19} meter and disappeared in the extra dimension and we would never have known about it.)

Of course Earth is three-dimensional, not two-dimensional, so for a more realistic picture of lower and higher dimensions, consider what an observer would see as he or she moved along the $\tilde{z}$-axis starting from above the "upper universe" and passing on through "our universe." Before the observer entered the "upper universe," s/he would see nothing except perhaps a few stray elementary particles. However as soon as the observer entered the "upper universe," s/he would see the supernova in all three dimensions. Upon leaving the "upper universe," s/he would again see nothing, as the (assumed) elementary particles of that universe only exist inside the universe. Light, for example, could not inform the observer what was going on inside the "upper universe" for photons would not be able to leave that universe.

Traveling along $\tilde{z}$ would be something like traveling through time. Three-dimensional scenes would unfold each time the observer entered the thin plane of a universe with its population of elementary particles. When the observer entered our universe M^4, s/he would see Earth, the solar system, our galaxy, all galaxies in three-dimensional glory. The instant that the observer passed on through along $\tilde{z}$, our universe would disappear again.

This, incidentally, explains how an elementary particle from outside our universe could first enter Earth at *any* point within its interior, z-direction included. The z-direction would open up the instant that the particle entered our slab in the (extra) $\tilde{z}$-direction.

Regarding McMoneagle's report of a Type-II Supernova in the direction of Eta Cassiopeia, if it did occur in a "higher universe," then it would not have been observable on Earth, as photons (if such exist in that universe) would have been trapped there and unable to reach Earth, as noted above. McMoneagle's Supernova might exist above Eta Cassiopeia in a higher dimension, a few millimeters in $\tilde{z}$ above our universe, or maybe a few light-years as suggested in Figure 10.

I would be remiss if I didn't point out another possible scenario for the Utah event. In this picture, the parent Supernova exists somewhere in our *own* universe M^4, while the cosmic ray travels at superluminal speed just outside M^4, as sketched in Figure 11.

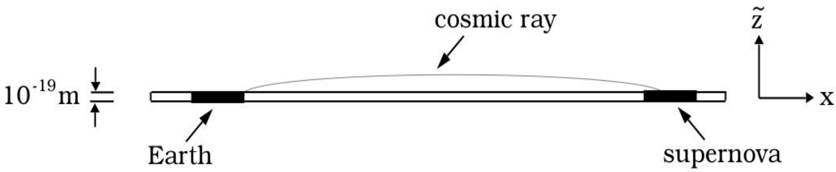

Figure 11. A Supernova-generated cosmic ray escaping M^4 and traveling slightly "higher" in an extra dimension $\tilde{z}$ before returning to M^4 in the vicinity of Earth. Our lower three dimensions are represented by a single ordinary dimension x.

The speeding ray leaves M^4 by moving slightly in the direction of the higher dimension $\tilde{z}$, grazes M^4 (represented by a single dimension x), and returns to Earth's surface over Utah. (If the "density" of the vacuum just above M^4 were less than that in M^4, then redirection of the cosmic ray back into M^4 might occur the same way that light in a fibre-optic strand is trapped in the strand due to total internal reflection each time it grazes the wall of the fibre.) Meanwhile the normal outburst of photons and neutrinos travels conventionally within our lower four dimensions and simply hasn't reached us yet. These photons and neutrinos from the Supernova might be a few light-years, or perhaps millions of light-years, behind the cosmic ray. The as yet unseen Supernova might indeed be in the direction of Eta Cassiopeia as McMoneagle says. Or perhaps along the line-of-sight reported by the University of Utah group (Bird et al., 1995).

With regard to the number of extra dimensions, we probably need to extend the parallel-planes picture of one higher dimension to one with several higher dimensions: to accommodate the 48 elementary particles, not one but at least four extra dimensions are needed (Bryan, 1998). I show three extra dimensions in Figure 12. Each small sphere represents another universe with a small diameter (10^{-19} meter or less) in the extra dimensions. The three ordinary dimensions are suppressed in Figure 12 to permit showing three extra dimensions. In this picture, a particle leaving the "upper" universe need not travel through our universe to reach the "lower" universe. It might not hit any universes at all.

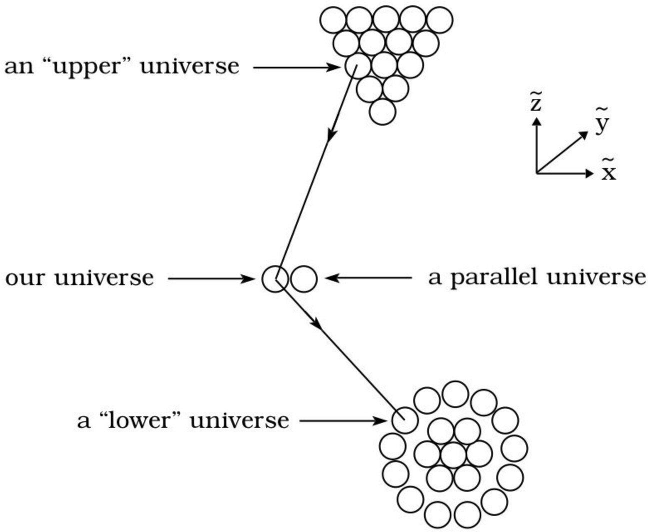

Figure 12. Universes depicted as spheres in a three extra dimensions $\tilde{x}$, $\tilde{y}$, and $\tilde{z}$. The spheres have diameters of 10^{-19} meter or less in the extra dimensions. The ordinary dimensions *x*, *y*, and *z* exist also, but are suppressed so that the higher dimensions can be shown. The upper cluster of universes resembles a bunch of grapes; the lower, seeds of a pomegranate. Our universe is shown alongside a parallel universe. Additional universes may be as common as grains of sand on Earth.

DISCUSSION

It appears that Joseph McMoneagle uses his "inner senses" to gain information otherwise inaccessible to most of us. I think that his description of the electron is particularly striking. And drawing a quantum-mechanical wavefunction when he has no background in physics or mathematics is remarkable. McMoneagle can not only determine the question in the sealed envelope, but oftentimes, if not always, answer it as well. Some manner of information transfer is clearly taking place, and certainly not through the four fields that we physicists are currently conversant with: electromagnetic, weak, strong, and gravitational. There is something waiting to be discovered here.

McMoneagle doesn't give precise quantitative answers as a rule. He gives impressions, verbal and visual. These comprise a wonderful storehouse of ideas, invaluable to "right-brained" researchers receptive to new concepts. As in any era, some ideas have immediate applications, others may be years ahead of their time. And some may not relate to our universe at all. But there are, no doubt, some gems awaiting our perusal.

For example, the Heisenberg Uncertainty Principle is a cornerstone of present-day quantum mechanics. Yet McMoneagle seems to be blissfully unaware of its limits. How can he examine the interior of a nucleus, down to 10^{-15} meter without disturbing it? To see this structure with a particle beam requires the particles to have quantum-mechanical wavelengths of 10^{-15} meter or less. Protons of this wavelength would have kinetic energies of over 600MeV. Since the protons and neutrons in a nucleus are bound together with an average energy of about 8MeV, such a beam would disturb the nucleus, most likely knocking several nucleons out of it.

It is true that McMoneagle did not describe a nucleus and electron cloud corresponding to any known atom, but he may have seen a generic form. Most interesting was his seeing a nucleus *within* the nucleus, of a size about 10^{-24} meter. This inner nucleus may have no bearing with reality, but what if it actually does exist? Joe has been correct on many counts where he could not have known the answer (the four-component Dirac form of the electron-wavefunction, the Chinese test shot, etc.). It appears that his inner senses give him correct information. So perhaps he has correct information here too.

The implications for nuclear physics are astounding. If such an inner nucleus exists, and if we can learn to manipulate it, then a whole new era in nuclear science could begin. Perhaps we can use this hint to put us on track to learn how to make radioactive nuclei disintegrate at *our* command. Again the Heisenberg Uncertainty Principle does not seem to be coming into play. It says that we cannot know when any particular radioactive nucleus will decay.

Note, incidentally, that if Joe indeed saw a nucleus *within* a nucleus, and it is as small as 10^{-24} meter, then he saw detail that would have required a particle beam with an energy of 200,000TeV, or 100,000 times more energy than the most energetic beams currently available on Earth, the Fermilab proton and anti-proton beams.[6] And dumping this much energy in a nucleus would not only cause it to disintegrate completely, but would produce millions of short-lived elementary particles. If his reports are

[6] [TeV = Tera (10^{12}) electronvolts.—Ed.]

accurate, then Joe has found a way to get information in a way not permitted by the Heisenberg Uncertainty Principle.[7]

If Joe can see far smaller structure than our current accelerators and other instruments can, then perhaps he can also see neutral particles. He reported seeing beams of neutral particles streaming out of a Type-II Supernova which were clearly neutrinos, particles notoriously difficult to detect. Physicists might be very interested to know the means by which he sees these neutral, barely interacting particles. In a typical Fermilab secondary beam pulse of 10^{13} neutrinos, only about one neutrino interacts with the target.

Also of great interest to physicists is the possibility that extra space-like dimensions exist. Joe reported seeing the electron spinning about a fourth dimension (a dimension in addition to the usual three). He also described the wavefunction proceeding in a fourth direction. And when he showed the cosmic-ray shower comprising what appears to be a shock wave, again he may have given evidence of an extra dimension, perhaps light-years in length. Joe knew of my great interest in extra dimensions (Bryan, 1986, 1998, 2000), but for over twenty years he has demonstrated an ability to use his "inner" senses to report information independent of what his collaborators might expect to hear (McMoneagle, 1995, 1998, 2000, 2002).

So I would recommend to cosmic-ray physicists that they measure the speed of incoming ultra-high energy cosmic-ray particles to see if they are entering our atmosphere faster than the speed of light. This would suggest the existence of extended higher dimensions and explain how particles could enter our space with energies in excess of the GZK bound. And alter our view of our place in the cosmos just as surely as the Copernican model forced our ancestors to relinquish the belief that Earth sat peacefully at the center of the universe.

What is of particular interest about McMoneagle's extra dimension(s) is that they are (presumably) straight lines macroscopic in length. The whole string-theory effort is focused on extra dimensions that are basically little circles within circles of the order of 10^{-32} meter in diameter (although some physicists have suggested that one of these extra compact dimensions might be a straight section the order of 10^{-6} meter in length). *Macroscopic* extra dimensions bring the peculiar features of theoretical particle-theory right into every-day life.

For if extra dimensions are an unproved hypothesis for scientists, they may be reality for millions of people who have had a near-death or out-

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7 Alexander Imich has credibly argued that conjectured psychic observation of subatomic particles may not be subject to limitations of the Heisenberg Uncertainty Principle (Imich, 1996).

of-body experience. Traveling down a dark tunnel and arriving at the light to meet deceased relatives in new surroundings might be explained as leaving our lower four dimensions and tunnelling to a higher dimensional universe.

McMoneagle may well have described such a universe when he reported seeing the Type-II supernova. There is no record of astronomers' seeing such a supernova anywhere in the sky in October 1991 (R. Schorn, personal communication, 2004). Joe may have had to go outside our universe to see the event leading to the Dugway Flats shower. (Although I have also suggested another scenario where the Supernova is sited in our universe and the cosmic ray skims along in the extra dimension at greater than light-speed; meanwhile the conventional particles traveling in ordinary space are still on their way here.)

If higher dimensional space exists in addition to our lower three dimensions of space, then our concept of time may have to be modified if it is to hold in these higher dimensions. A possible clue might be that an observer moving along an extra dimension $\tilde{z}$ sees whole three-(normal)-dimensional universes open up each time he or she crosses a "slab" containing the particles that make up that universe. This moving along $\tilde{z}$ appears to be akin to moving along in time, where again one sees a three-dimensional panorama unfold as time proceeds.

I would like to close with a comment on higher dimensional universes. If they exist, then they are probably quite numerous, not just a few scattered about like I used to model the Utah event in Figure 10. They may sometimes come in clusters, such as I have sketched in Figure 12. In this figure I have suppressed the three ordinary dimensions so that I could show three extra dimensions, measured by coordinates $\tilde{x}$, $\tilde{y}$, and $\tilde{z}$. I show an "upper" universe in Figure 12 as part of a cluster of universes resembling a bunch of grapes (each small sphere representing a distinct universe, with the ordinary dimensions suppressed) and a "lower" universe as part of a pomegranate-like cluster. For our own universe I suggest a companion parallel universe. Note that probably no universe anything like our own could keep a 3×10^{11} GeV particle from breaking loose and traveling through higher-dimensional spacetime, if such exists.

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