# Melbourne University Puzzle Hunt — 2004

## Act 2

"Our cause is a secret within a secret, a secret that only another secret can explain; it is a secret about a secret that is veiled by a secret."

— Ja'far as-Ṣādiq, sixth Imam

#### Prelude

The night seems to envelop you in darkness, despite the glow of street lamps. Searching for refuge amid a haze of confusion, you find yourself in the main building of Melbourne University Private. As your footsteps echo down a corridor, you notice a faint keening, almost beyond the limits of your hearing. You draw nearer to the source of the noise and the sound of static becomes distinct amidst the high-pitched noise. You push open the door to one of the offices. A couple of used soup bowls lie scattered on the floor and a pile of hessian makes up a rough bed under the desk. The source of the sound seems much closer now. You rummage through some drawers and, much to your surprise, pull out sheet after sheet of blank music. In another drawer you discover the source of the static: a small transistor radio, crackling between stations. Now that you are close, you can hear something else among the static. Turning the dial, it becomes clearer. It is music, but the tones are electronic, like those you hear on the telephone. You listen carefully. The melody is short, but repeats again and again. Suddenly, the music is cut off by the faint sound of a man's voice; you think you hear him say, "... to Gravity and Kwok. Reply..." The music immediately resumes. You have a flash of recognition. Kwok, the incoherent gentleman in the hessian robes! You grab a piece of the manuscript paper and quickly write down what you hear.

Looking around you now, you discover that the walls are covered with inscriptions. A nine-point circle is etched into the far wall. Further searching through the drawers reveals more curious things. Among them is a video labeled 'Wisdom Speaks#28', and some rough notes.

May I begin by thanking the people of the University, especially Robert Foot, for their outstanding help in the most important project of our political era. The production of mirror matter is of crucial importance to the prosperity of Australia and the world, and the prodigious synchrotron that lies beneath us is the only machine in Australia capable of its synthesis. This election is too important to allow it to be decided by a mere vocal minority of young people. That is why, fellow patriots, we must expand the electorate to the silent majority. Those who have been egregiously silenced must be raised up and given a voice.

Searching through the laboratories and libraries of the University, you turn into a darkened corner to be confronted by the melancholy figure of Robert Foot. He is bruised, disorientated, and shivering; hunched over a cryptic crossword, with his overcoat collar pulled up, clutching at a piece of paper.

"It wasn't meant to be this way," he murmurs to a pair of bedraggled cats resting under the table. "My beautiful and elegant theories on mirror matter's ability to produce local temporal-entropic inversion are being used in a cynical bid for political power... and now these mad cultists will stop at nothing...". He sees you watching him, shudders, and quickly limps away.

You bend down and notice the cats tearing at a piece of paper.

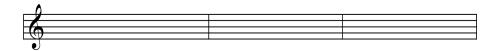
## Score

—Holly Champion and Julian Assange

You see a pencil and transcribe the music from the radio.



Figure 1: My bonnie lies over the ocean.



You manage to see the message as a coherent whole. You sit staring at the decoded message. Now you see there are less people to protect everyone. The verb echoes in your numbed mind. This verb could be your fate, too, soon.

## Ekkos

—Nick Sheridan

To your surprise, the video in the drawer comes from the chambers of the oracle at Ekkos, on top of Mount Umay. On it, you see a man entering a large, high-ceilinged and apparently empty room. Recognising him as Dr Melatos, you manage to hear what he is saying, but are unable to hear the disembodied voice of the oracle. Here is what you hear:

$\label{eq:matter} \begin{tabular}{ll} M: Illustrious oracle, I have traveled far to seek your advice (etc.) and have finally reached Mount Umay's peak. \end{tabular}$
O:
M: Thank you. We are to kidnap the Prime Minister tomorrow, but I am not sure if I am ready to take Howard.
O:
M: I assure you I am not! I shall prove my bravery tomorrow. But we lack the secret ingredient for the particle accelerator. Tell it to me before I scream!
O:
M: How very peculiar! But you are, after all, the oracle. You have been most helpful. I am tired after my journey, and there is an emptiness in my stomach - with what may I fill it?
O:

If only you could find out the secret ingredient for the accelerator...

# Abstract(ion)

—Julian Assange

Suffering only a few scratches, you take the partially chewed paper from the bedraggled black and white cats.

astro-ph/0203152

Title: Exotic meteoritic phenomena: The Tunguska event and anomalous

Low altitude fireballs – manifestations of the mirror world?

Authors: R. Foot, T. L. Yoon

Comments: About 25 pages, slight adjustment

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There are a number of extremely puzzling meteoritic events including (a) The Tunguska event. It is the only known example of a low altitude atmospheric explosion. It is also the largest unknown event. Remarkably no fragments or detectable chemical traces have ever been recovered. (b) Anomalous low altitude fireballs which (in some cases) have been observed to hit the ground. The absence of fragments is particularly striking in these cases, but this is not the only reason they are anomalous. On the other hand, there is strong evidence that most of our galaxy is accreted from exotic dark material - 'dark matter'. Mirror matter is one well motivated dark matter candidate, since it is dark and stable and it is required to exist if particle interactions are mirror symmetric. If mirror matter is the dark matter, then some amount must exist in our solar system. We demonstrate that the mirror matter theory allows for a simple explanation for the puzzling meteoritic events [both (a) and (b)] if they are due to mirror matter space-bodies. A direct consequence of this explanation is that mirror matter fragments should exist in (or on) the ground at various impact sites. The properties of this human recoverable material depend importantly on the sign of the photon-mirror photon kinetic mixing parameter,  $\epsilon$ . We argue that the broad characteristics of the anomalous events suggests that  $\epsilon$  is probably negative. Strategies for detecting mirror matter in the ground are raised.

After extensive research you manage to decode the message. How very cryptic! Perhaps it has something to do with those news reports of grave robberies in marginal electorates!