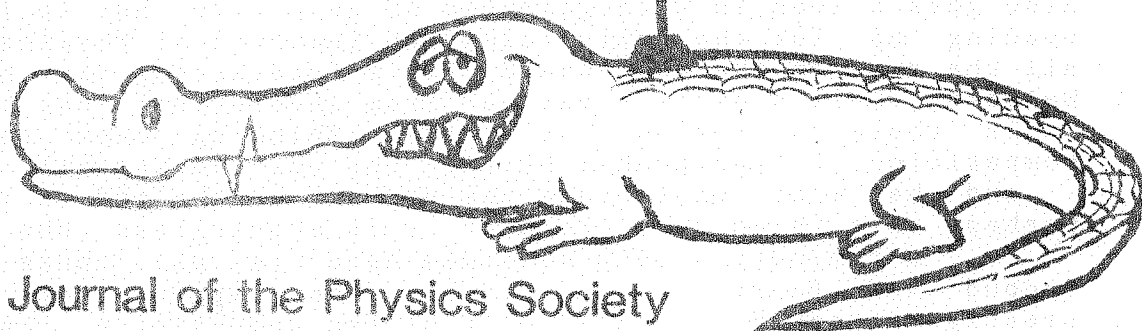


JEREMY



The Journal of the Physics Society

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Welcome to the 2nd edition of JEREMY for this year. As you can see, its a bumper issue: full of exciting and interesting reading to take your minds off the upcoming exams. As well as the usual features, such as the quotes competition, there are no less than 3 serialized stories in this issue. While this may seem to turn JEREMY into some bastardized version of *Writer's Monthly*, it does show that the artistic urge does lurk beneath the dedicated, cold, cynical exterior of the stereotyped science student. Whether this is a good thing or not is another matter altogether but you can make up your own mind as to whether any of the stories are worth reading. The policy of this journal is, however, to publish anything, so if anyone wants to improve the quality of the magazine by writing a serious article on science - or a better quality short story - all contributions are welcome, and can be left in the PhySoc letterbox opposite LT8 in the Physics building.

On the subject of contributions, the quotes section in this issue shows that the competition is up and running. A closer look, however, will show that the only lecturers quoted are those who teach 3rd year. What about the other 3 years? Is it fair for potentially outstanding players to be nobbled simply because they're teaching such a boring lot of students that none of their quotes are written down and sent along to JEREMY? Come on First Year! Where is all that innocent fresh young enthusiasm? Here's hoping that the next issue has a far wider selection of quotes in it.

The Quotes Competition

The quotes competition is off to a fine start with Neil Cramer showing good form in the opening weeks of the season. Dave Crawford also gets a look in with glimpses of good form, but it is Neil Cramer, opening up for the Daily Telegraph Theoretical Physics Team, who has all the runs on the scoreboard. (It's interesting to note that Don Melrose, Neil's opening partner from Theoretical, has been very quiet - is there a reason for this?) Thinking back to last year's competition, it was Graham Derrick who was showing all the early form - and he went on to take the pennant at the end of the season - so perhaps this is an omen. Perhaps it is meaningless. Who knows?

A reminder should be added here to all those slack first, second and fourth year students who forget that apart from the prestige attached to the winning of the competition, the student who actually contributes the winning entry gets a prize! So start listening and drop your entries into the PhySoc letterbox opposite LT8.

Here are the first real quotes of this year.

I think the best way to do this is by the following fudge ...
Neil Cramer

It doesn't matter how many constants I put in here, it doesn't matter to the equation... Neil Cramer

We have the particle zotting along here... Neil Cramer

This solution is a subtle one... I'm always amazed myself that it actually works... Neil Cramer

In quantum mechanics, wherever you see a number, just replace it with an operator and see what you can get away with... Neil Cramer

This allows us to get rid of two fields at the drop of a definition ... Dave Crawford

If it's accelerating all hell breaks loose, to put it mildly...
Dave Crawford

I'm not sure of the etymology of this word balometer. Balo is probably Greek for the noise cows make at the sunset or something...
Murray Winn

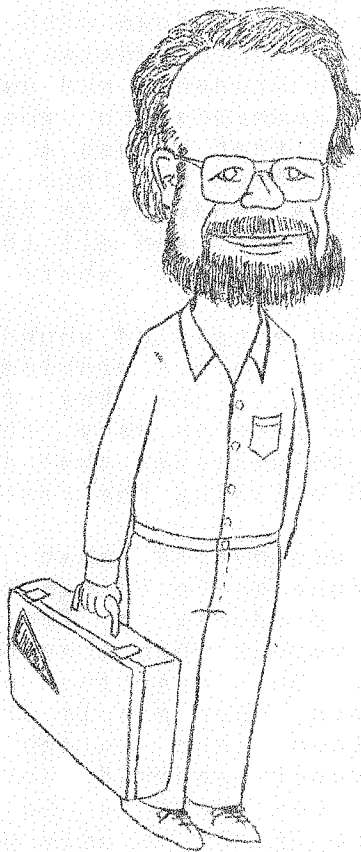
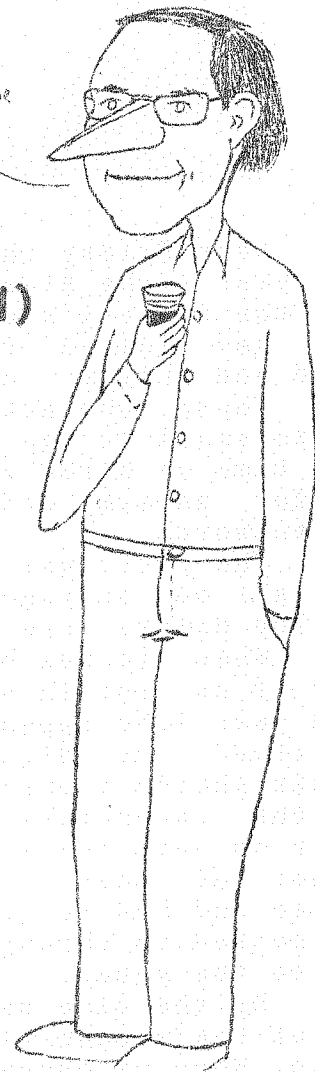
It's vaguely right, but its wrong! S. Glasby (Pure Maths)

Recall Stirling's formula - an n factorial twiddle... P. Quine
(Maths Stats)

Ask no questions - and you don't confuse your demonstrators ...
Kevin Moore (contributed anonymously 'for fear of threatened extinction if Animal finds out')

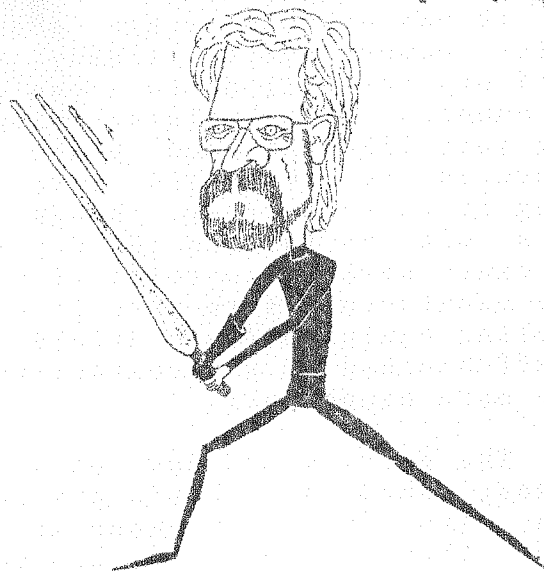
In my day the
students had
respect for their
elders and betters

Neil Cramer(Theoretical)



Ian Falconer(Plasma)

Bernard Pailthorpe(Applied)



Luke Pailthorpe

THE GREAT BLACK HOLE PARTY

Last Friday the 13th, the Physics Society held its first party of the year - the Black Hole Party. It turned out to be the best so far in the Society's short history. By the end of it, some thirty more people had joined PhySoc, bringing the total membership to around a hundred and thirty - more than double last year's total.

Those who attended last year's parties may recall that we had a BBQ so small it was only good for frying microbes. That has changed - this time we hired a big ugly behemoth from the the Union that could cook for an army and took two volunteers twenty minutes to push down from Wentworth.

The party was very well attended, particularly by first years. Almost all our sausages went - even though we bought two hundred of them. The drinks were all demolished within an hour.

When it was heard that a second round was being brought in, a number of us went in search of some dry ice to cool it down with. The second year labs appeared to be the best prospect. Unfortunately, when we arrived, we discovered that all the selfish students had used it on their photon counting experiments. A special commendation goes to Ted, the laboratory technician, who suggested that we use a vacuum cleaner to suck the stuff out of the tubes it had been put into. This was not as easy as it sounds. The dry ice had a tendency to clog up the hose and had to be shaken loose from time to time, and all the air being sucked up through it chilled the hose to the point where skin stuck to the metal.

By the time we were finished, a frost had congealed around the base of the vacuum cleaner and it was starting to have a problem with suction. When we opened it up, we discovered why - the bag filter inside had frozen solid... We emptied the dry ice into an esky, thanked Ted most profusely, and returned to the party to discover that almost all the new drinks had already gone. We started chilling the rest.

It was at this stage that students discovered what their alchemist counterparts already know - the remarkable things that a piece of dry ice will do to a can of beer. It produces a froth of large bubbles that release wisps of water vapour when they burst, looking just like the mud pools of Rotarua. One creative person manufactured an alcoholic icee with his quota. When people started throwing it at each other, though, it was decided that things were going a bit too far and the dry ice was discreetly removed. Not only can it cause severe frostbite if held too long, but there is no need for the manufacturers to make it chemically pure, since we only use it for cooling equipment(and drinks). In this context, it is easy to see why staff baulked at the suggestion that we use liquid nitrogen, which is even more dangerous!

The party wound down at about 7:30, at which time the question I was most asked was "When's the next one?". We usually hold a party once a term, but if demand is high enough, we might make them more frequent. Thanks to everyone who helped out, and everyone who came.

Eugene Seneta

THE GOSSIP ACCORDING TO JEREMY

As revealed to him via direct illumination

Part 1 ' RETURN TO BETHEL

One night in late February of 87, King Haryd received a phone call from the department of Astrology and Astro physics at the nearby university. A new star had appeared in the heavens, it was a sign that the mighty one had returned. Haryd fell into the depths of despair. He had been forewarned by the passing of the comet several months earlier that a young virgin would give birth to one who would usurp his throne. At the time, he had decreed that all young virgins be thrown to the crocodiles and had devised a radio telemetry system for this purpose. Unfortunately, the royal soldiers were all too willing to help the poor girls escape their fate.

Rebecca, an unattractive peasant girl from a nearby fishing village on the shores of Galileo, was not so fortunate. After being savagely mauled by a crocodile and on the point of death, she was found by a nomadic tribe of plastic surgeons who reconstructed her face and body. Such was her new beauty that she was offered the lead role in an up and coming Australian mini-series. Soon after she met James, a part time carpenter and the lead singer in a band, who became her husband.

King Haryd had ordered a census to slow the spread of AIDS and James travelled with Rebecca to his home town. He had lost his travellers cheques and the American Express office was under seige by the Palestinians, so he and Rebecca spent the night at a youth hostel where she gave birth.

Meanwhile three astrologer kings in the east had observed the new star in the heavens and followed its motion to the west (so that's why they didn't travel south). After many leagues they came upon the hostel and beheld Rebecca and her child. Each of the kings had brought a gift. The first king, whose name was Caspollins, presented the child with a burnt sausage,

"I bring you the gift of Solar Energy, the limitless power of the sun that gives us life and energy." The child did not partake of the sausage but gave it unto James. The second king, Brennthazar did step forward and present the child with a doughnut,

"I bring you the gift of Nuclear Fusion, the limitless power of the atom from which the Universe originated." The child ate of the doughnut and did throw up on the king. Melkiose, who was the third king, stepped forward. His budget was not as large as the others so he reached deep into his pocket and found a deck of cards,

"I bring you the gift of...Theory, the limitless power of the mind which governs the very essence of existence." The child listened intently with closed eyes to his profound words.

Rebecca was most impressed with the cards and offered to tell their fortunes but they said they didn't believe in the occult. Fleeing the wrath of Haryd, the three kings travelled far. Caspollins searched for private industries interested in commercialization. Brennthazar gathered disciples and formed a committee. Melkiose sat down and wrote a paper to enlighten the world. The child grew slowly

to maturity, until one day...

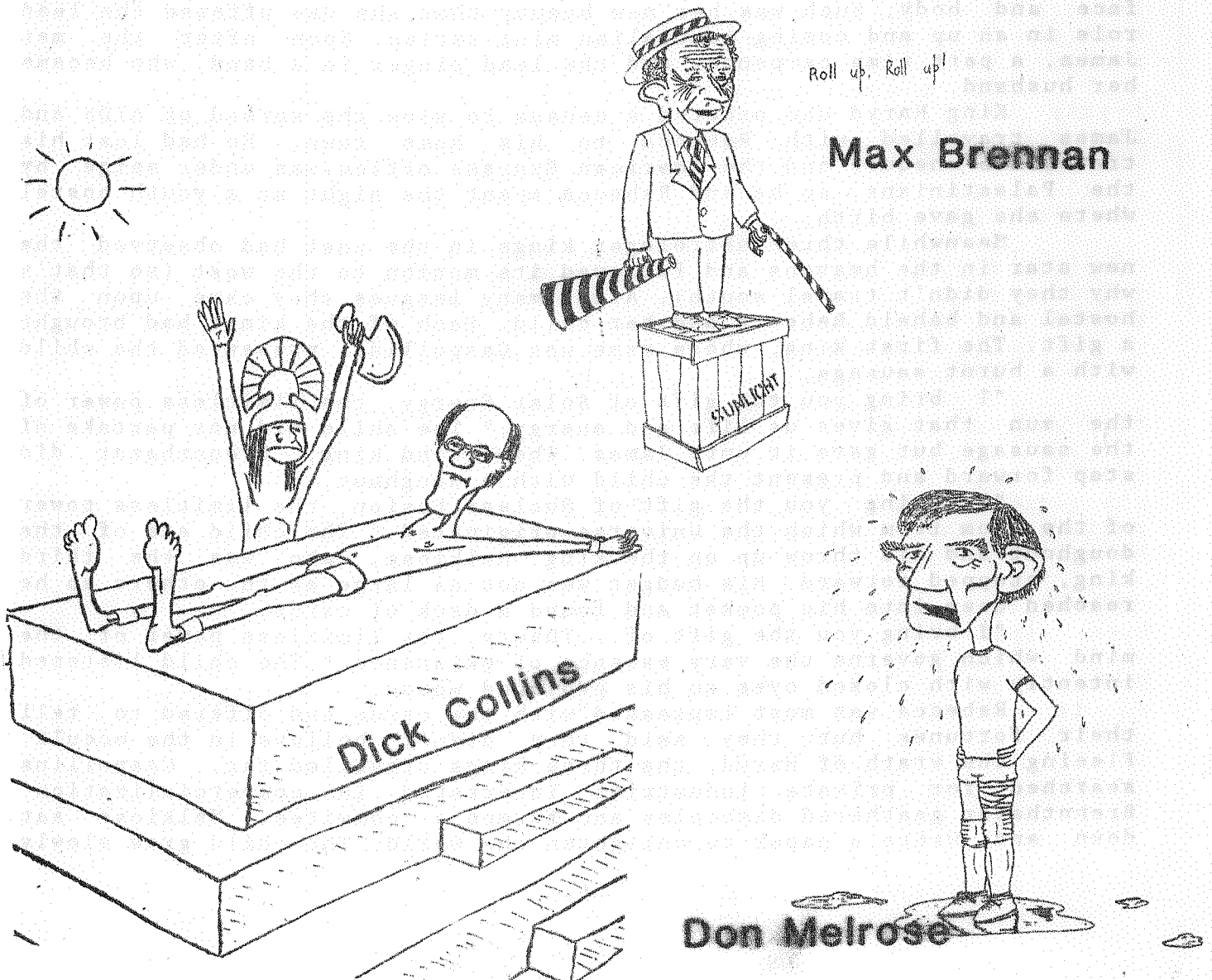
As had been the custom for many years, King Haryd held a passover meeting on a Monday evening four times a year. All the advisors and wise men and women of the land would gather to celebrate. At these meetings, the sensual young Salome would dance. Her beautiful, glistening body would writhe to the primaeval beat of the oscilloscopes as she performed the Dance of the Seven Departments. Faster and faster her body would turn and sway till she cast the first veil to the ground and screamed in ecstasy,

"Bring me the head of the Department of Astronomy". They searched high and low but a professor could not be found. Her desires unfulfilled, she began her erotic dance again. Soon the second veil fell from her body as she screamed,

"Bring me the head of ..."

Whose head did Salome ask for? What would happen when all the veils were removed?

All will be revealed in the next exciting chapter of
The Gossip According to Jeremy.



A SPELL FOR FREDERICK

It was six o'clock on a Friday night, and Fred Carruthers was feeling miserable. He'd had the misfortune to complete a second year experiment just before four, and had to wait for his demonstrator, a man with a particular fondness for coffee, to finish a leisurely tea break. When he saw him walking out of the common room, he'd sprinted over, only to find that half of the students in the laboratory had made it before him and had crushed the poor man in their eagerness to get his signature. By the time the ambulance left for the hospital (which wasn't too long, as the doctors at Prince Alfred were used to this kind of thing) and the staff had found a replacement demonstrator, it was too late for Fred to get his book marked.

It was dark outside, and the thunderclouds muttered nastily to themselves in the west. Fred was almost too morose to notice as he headed for City Road. He had an hour's train trip to Sutherland to face before he could even start the truckload of work waiting for him. He could not escape the feeling that his day had been a complete waste.

He watched the clouds approaching the city through a melancholy haze. He could see little lightning flashes through them, like the ones in the photomultiplier he had used last week. The storm was brewing uncomfortably fast, so he opted to catch his train at Central because he could get there in a reasonably dry condition whatever happened. By sprinting almost as hard as he had in the laboratory, he managed to cram himself on to a bus that was just about to leave.

"Um, could I possibly have a concession to Central?" he said, trying to smile engagingly at the frowning driver and fumbling with his pass and his change. The man glared at him, ripped a ticket off his pad, shoved it in to his palm, and shut the bus doors. Fred had to lunge violently into the crowded aisle amid angry looks just to stop the doors from crushing him. He was quite sure this was not his day.

The bus had just pulled away from the curb when the first droplets of rain fell. By the time it had made Broadway, the rain was pelting down, noisily blurring the streetlights and neon signs in patches of luminosity in a dark grey world. Dripping refugees of the storm boarded and windows started to fog. The bus became a little wet world of commuters, travelling through a humid twisting and turning tunnel of crashing thunder and electric flashes as it went its way through the rain.

Fred recognized his stop only by the fact that the press of bodies was lightening, and that most people were getting off. He stepped out, ran hurriedly for shelter. It seemed to him that going home this way was the only right decision he'd made all day; at least he was reasonably dry.

The roads hissed as the cars went by, and gleamed with the reflection of headlights. In the space of a few minutes the city had been transformed by the rain, which was already slackening.

"The next problem", Fred thought, "is dinner." He'd given his family the directive some time ago that if he wasn't home by seven, not to cook for him. He regretted that now; he was going to have to buy something on the way.

Just at that moment, a yellow gleam caught his eye; a golden "M" stencilled neatly on a shining window. He dismissed the idea at

once of eating at a restaurant, but something drew him back to the sign. While one part of his mind said "No, no, you mustn't eat in there, if you have a Big Mac you'll die if sodium poisoning!", another argued with it, "It's warm inside, and dry, and only once this year won't hurt!" The rational part of his consciousness lost; he went in.

It was like stepping through a door into another world. Brilliant fluorescent lighting almost like sunlight lit up the brightly coloured furniture. Pot plants were placed in every spare corner, and tinny muzak played over hidden speakers, masking whatever muffled thunder was still audible. The place was full of the poores of the poor ; streetwalkeres seeking shelter from the storm, pensioners seeking social contact in the only way they could afford, mothers with a dozen screaming students, and full time students. No-one ate here unless they had to, but Fred reasoned that he could do worse than eat here. At least it was clean. He joined a cue.

Eventually getting to the front, he saw a five-year old standing behind what looked like an F-18 pilot's console. "May I help you, sir?" she said brightly, and grimaced in a forced parody of a smile, revealing that one of front teeth was missing (presumably in a jar at home, waiting for the tooth fairy).

"Why can't my experiment behave like the book says it should just once...um...sorry, what was that?"

"May I help you, sir?" The smile was even more forced this time. She'd obviously been wearing it all day.

"Yeah, uh, I'll have a Big Mac, a small french fries and a small Coke."

"Would you like a thick shake with that?"

The suggestion made Fred feel queasy inside. "No thanks."

After a quick consultation with a notepad that said 'Remember your six basic steps', the girl asked Fred if he wanted to "eat here or take away".

"Eat here, thank you."

At this point she started stabbing at her console. She would search for one of the thousand odd buttons, and having found it, would try to run it through with a stubby fingernail, and when she'd finished the massacre, she'd do it again with a different button, completely at random. After she'd finished, she looked up triumphantly and said "That'll be three dollars ten, sir", as if the fact that it was three dollars ten was the most amazing thing in the universe. After she went and put his food on a tray, Fred handed her the money and went looking for a table. Miraculously, four people were just leaving one and Fred dived for it.

He settled down to eat his meal. Sipping at his Coke, he thoughtfully contemplated the box containing his burger. Something about it was not quite right. He couldn't place it at first, but realized that he wasn't imagining things when no-one else had filled the seats near him, though the restaurant was filled with people. He used an astronomers trick, looking away from the box so that his peripheral vision, more sensitive to light levels and movement, was on the container. He saw it now. It was glowing with a soft pulsating light. Looking closely at it, he saw that the little golden arches that were the restaurant's logo were slowly glowing and fading, glowing and fading.

It was warm to the touch. Fred was intrigued. Where could the energy that caused the glow come from? Fascinated, and a little

frightened, he started to open the package, very slowly. There was blinding light coming through the crack. The noise of people talking gradually died away and all eyes were on Fred now. He realized that he was embarrassing himself now, but his scientific training was working now. He just had to get to the bottom of this.

He opened it a little further. More golden light poured out. The lighting in the ceiling was dim by comparison, and went out altogether as the weakening storm brought down some power lines. Fred could see the light from the package reflected from the open stares of the spectators. Fred took a deep breath and opened it all the way.

Inside was a blindingly bright Big Mac. It sent shafts of light arrowing in to the crowd, making them shield their eyes or put on sunglasses. The aroma was incredibly enchanting, starting the saliva rushing in his mouth as he gazed down on the burger. He reached out for it and people began to edge away from him. It was perfectly made. The buns were soft and mouth-wateringly moist; not a drop of mayonnaise fell out as he raised it to his mouth. Golden light spilled between his fingers, and he took a bite when he could resist no longer.

It was a mistake. He started feeling horribly dizzy. The world started spinning around him as he staggered to his feet and people began screaming and rushing out the doors. He lurched around, still dazzled by the burger's light, a nauseating twisting feeling developing in his gut. He felt his grip on the world was somehow loosening, that he was being wrenched elsewhere. People and unfinished meals faded in and out of his vision as he shook his head violently in a futile attempt to get rid of whatever was happening to him. He grabbed someone and shook him. "Help me please help me!" he yelled into the general uproar. The man broke loose and joined the stampede to the door.

The world was growing dimmer and dimmer. Somewhere Fred could hear a siren, but even noises were fading now. He cut his arm against something, clutched it to him, moaning with pain. The tables were no longer solid, but misty pencil-drawn objects in his vision. He could stagger through them altogether. Superimposed were other objects, tables again, seen dimly in the dark, but of a rougher cut. Again they were outlines and when Fred couldn't take any more of the writhing in his stomach and fell, he passed right through one of them and lurched in to a blissful oblivion.

END OF PART ONE

BIGGLES IN AUSTRALIA



In the first episode of this tale, Biggles and his colleagues were sent by Scotland Yard to Australia to investigate strange things occurring in the School of Physics at Sydney University. In this episode they meet their Australian contact, and discover the way scientists occupy themselves at an Australian University.

Following a long flight from the United Kingdom, Biggles stood with Algy, Bertie and Ginger in the foyer of the School of Physics.

"Our contact is Professor Don Millar, who is high up in the hierarchy here," Biggles informed his colleagues. Although he has been here in the colonies for many years now, he is still sympathetic to the old country. The Yard have wired him the essential details so he should be expecting us."

As he spoke, a man with a beard approached them.

"You must be here for the Symposium," he stated, and when Biggles began to protest, touched his finger to his lips and smiled. "Just follow me if you will," he added and motioned them to follow him.

"This must be our cover, men," Biggles whispered, and they all followed the man up some stairs, down a corridor, round a corner, down another corridor then up some more steps. Their guide introduced himself as Lawrence Cram, the new Professor of Astrophysics.

As they strode up the stairs, strange sounds quickly became audible. It seemed, in fact, as though a party was in progress on one of the upper floors. Their guide made no reference to the noise but the airmen became more and more curious. All was revealed when the professor led them into a narrow hall and they could see that there was indeed a party going on. Biggles stared around in amazement, and Professor Cram left them, saying,

"Hang on a moment, I'll just get you all a drink."

Middle-aged bearded men were wandering up and down the hall, bearing wine glasses in their hands and enraptured expressions on their faces. This was not the only disturbing feature of the scene. Also in the hallway were a number of small tents, their pegs driven into the lino (Ginger noted that the tents were very similar to those he and Biggles had shared in their Kenyan encounter, amongst the jungles of Africa).

Biggles was becoming increasingly annoyed. Not only was this holding up his investigation, but after all, he thought to himself, this was a university, and even in the colonies he had expected a slightly more scholarly atmosphere to be prevalent.

Meanwhile Professor Cram had returned with a trayful of glasses.

"Help yourself," he advised them. "I don't expect you see much of this in CSIRO, do you?" he commented.

"What are you talking about, man!" ejaculated Biggles.

"You are the group from CSIRO aren't you?" asked the professor. Seeing their faces he continued, "You're not, obviously. Oh well, join in anyway. I don't suppose it will do much harm."

"I say, old chap, thanks most awfully for the drink and all that," replied Bertie, who had joined in the party enthusiastically, "but we're actually here to meet Professor Millar."

"Why didn't you say so," said the professor. "If you'll just hang on a moment, I'll show you down myself."

He left them and vanished into the crowd. Algy took advantage of the break to talk to one of the middle aged bearded men who wandered past.

"What's all this flap about?" he asked curiously.

"Oh haven't you heard?" the man replied excitedly. "There's been a supernova! Oh, what joy!! What ecstasy !!! And the best thing about it is," he added with a gleam in his eye. "our radiotelescope is the only one in the world that can still see it!!" The man wandered away through the tents and Algy saw him refilling his glass generously. Ginger was still fascinated by the tents, and asked an unbearded man, why the hall was full of tents.

"They are the new offices for our 4th year students," he explained. "At two to a tent, we can just squeeze them all in. Do you realize that this year we have almost as many 4th year students as there are moons of Jupiter." Leaving Ginger with this, he moved on, and Ginger saw him refilling his glass at the other end of the hall.

Biggles was, by now fed up with the waiting. They had not seen Professor Cram again. Calling his small group of airmen together, he led them back down the stairs. They went into the main building, but as they didn't know where Don Millar was to be found, they were looking for someone who could help them. Seeing a man vanish into

another corridor, they followed him, only to find themselves in the midst of another party. Again, the corridor was full of middle-aged bearded men, swilling down red wine for all they were worth.

"Here, have a drink," offered a man who introduced himself as John Davis. "Isn't it exciting! The government has agreed to give us \$US4.5 billion for our new super-duper, twin overhead camshaft, dual rear widescreen wipered telescope."

Biggles didn't answer but strode silently from the hallway. Bertie reluctantly put his glass down and, with the others, followed. Eventually, the foursome found themselves outside the office of the man they had been seeking all morning.

Quickly and efficiently, Biggles explained to their contact the mission. He concluded

"You must do all in you power to help us get to the bottom of this entire business. It must be understood that this von Stalhein is a nasty piece of work and it is certain that as he is involved, this is important to both of our countries."



John Davis

To this, Professor Millar replied in his deep melodious voice.

"Most certainly, Inspector Bigglesworth. But you must understand that we here are scientists, and may not be suitable for all this cloak and dagger business"

"Damn it, man, your country may be at stake. We must all do as much as we can...."

Biggles was interrupted by Ginger, who had been watching from the doorway, and who asked them all quietly to come and see something very interesting. One by one they peered down the long, long corridor of the School of Physics. Walking away from them was the unmistakable figure of Eric von Stalhein. The close cropped hair and the military gait identified him readily to the experienced Englishmen.

"I think this calls for a plan of action," stated Biggles quietly, as they watched the sinister figure, in the long corridor, vanish from view.

What is Biggles plan of action? How do the other physics departments deal with their 4th year students? Is anyone in the School of Physics not at a party?

Find out in the next exciting episode of BIGGLES IN AUSTRALIA.



John Davis