Joseph Peter Funk PhD 1923-1964

A History of Dr. Peter Funk as recounted by his widow Margit Korn on 3rd February 2010.

Recording this history was conceived and arranged by Tom Firestone. Additional research and article by George Scott. Graeme Patterson assisted with recollections of JPF and the CSIRO Radiation group. All are former staff members of CSIRO Aspendale.

Peter Funk was born in Austria in 1923. He grew up in Vienna, was Jewish by parentage (and had Bar Mitzvah) but in his adult years he was an atheist by belief. In 1939 at the age of 16 he was fortunate to be included in the last group of students to be given a student visa to Palestine to escape the Nazi regime in Austria. It was just in time as he was already on a list to be sent to a concentration camp in Poland. Peter studied Engineering at the Haifa Technical University and remained in Palestine /Israel until 1949 when he returned to Austria. Here he learnt for the first time that his parents had perished in Auschwitz during the war. In his working years Peter was employed as a Research Scientist at CSIRO in Australia, where he was based at the Division of Meteorological Physics in Melbourne.

A parallel wartime experience concerns a girl named Margit Urach. Margit was born in Austria in 1930 and grew up in Vienna, and was Jewish by parentage. In 1939 as Nazi activities against the Jews gained momentum, Margit and her Mother undertook the horrendous and very dangerous journey of escape out of Nazi Austria/Germany. With the help of grandparents, and with their lives in peril they managed to cross the border into Belgium. Three weeks before the outbreak of WW2 they made it to England. The grandparents remained behind in Germany and subsequently perished in a concentration camp. Margit and her Mother stayed in various parts of England until 1946/47 and then travelled back to Belgium and on to Vienna.

On an occasion back home in Vienna in 1949, Margit attended a social gathering of young people and fell into conversation with the young man named Peter Funk. They spent most of the evening talking between themselves. For Margit's purposes this was partly to avoid the unwanted attention of another suitor, but on Peter's part it was because he was entirely smitten with her. They arranged to meet the next day at the university, but neglecting to set a time for the meeting they missed each other. When Margit got home she found a very agitated Mother who had received a surprise visit from Peter Funk, a complete stranger. Margit's mother was understandably agitated about being put in the position of entertaining this young man, who came straight to the point and stated that he wanted to marry Margit. In saying this he acknowledged that he was 7 years older than she, but not withstanding he thought that they were well matched. Three weeks later they became engaged, and three months later, in March 1950 they married.

In early 1956 Peter completed his PhD degree in the field of Meteorology. His mother-in-law was so proud she told everyone that she had a Doctor for a son-in-law. Around this time Peter and Margit attended a function where Peter was addressed with the title "Herr Doctor." The gentleman greeting them then turned to Margit and addressed her as "Frau Doctor", that being the formal title for the wife of a PhD. But Peter snapped back "Don't call her that, if she wants to be a doctor, she can get her own PhD". Peter began to turn his attention to future circumstances as neither Margit nor he wanted to stay in Austria, although at that time he was offered a position at the University. An English acquaintance at the University mentioned that there was a research position going in Australia that would suit him. He and Margit talked it over but he decided against it saying that he didn't want to commit to something unknown. He might travel half way around the world and find that he didn't like the job. Before they became engaged he stated his preference was for going back to the new state of Israel, but Margit said she had already learnt 2 languages (German and English) and didn't want to learn another one. Wherever they went, she said, it must be an English speaking country. As Margit was the one who wished not to go to Israel, she thought it was fair that Peter

could choose their next country. He decided on Australia after researching the options, and discussing it with a close friend. They sailed on a freighter, also Peter's choice, because, he said it would be more interesting than going on a passenger ship, and Margit says indeed it was. They had a large cabin with a sitting area and were well looked after.

Peter and Margit arrived in Sydney in 1956 and Peter quickly found employment with a subsidiary of AWA, one of the largest electrical engineering companies in Australia. His first task was to get a piece of electronic equipment operating which had been with the company for 2 years. He had it working in 2 days, but his Australian colleagues, instead of congratulating him, asked why the hurry? Just relax a bit and take your time.

Peter worked for a period with the company and then started to look around for another position. He went to the university to make enquiries having heard that they assist graduates to find suitable jobs. There he learned of a Research position with a Division of CSIRO which the university people thought would suit him. He travelled to Melbourne to look at the job, and liked it. He asked about CSIRO paying his moving expenses from Sydney, but they said no, the Organisation doesn't do that for interstate appointees. If he had been applying from overseas however, they would have paid all his expenses. The irony was stunning because he realised later that this was the position he had been told about in Austria and had declined it. Instead, he and Margit had paid their own way to Australia, including all their moving expenses. Peter went back to Sydney undecided. He and Margit talked it through, the fact that they were settled in Sydney, and that they would have to uproot to go to Melbourne and pay all their own moving expenses again. But he liked the job and would like to work there. They made no decision but a few days later a letter arrived from CSIRO stating that the Organisation would pay their relocating expenses. That was it; they were off to Melbourne.

The CSIRO Division of Meteorological Physics had, a few years earlier, relocated to the bayside suburb of Aspendale from temporary quarters at Highett about 10 kms away. The area was semi rural at that time with only a narrow strip of housing bordering the coast along the Nepean Highway. Peter and Margit bought a block of land at 56 Keith St, Parkdale for the sum of 500 pounds ($1000) and built a house from a design in "The Age" newspaper. They had a building tradesman work on the house, but a lot of the work they did themselves. The location was about 4 km from CSIRO and Peter either walked or cycled to work, choosing to leave the car at home.

Peter wasn't good at small talk, not because he couldn't be, but because he was always thinking and couldn't be bothered with it. He was somewhat eccentric, and Margit says, in many ways a man ahead of his time. He was a vegetarian throughout their married life, and at one time whilst living at Parkdale he was a practising Vegan. CSIRO staffers remember him stopping on his way home to pick fennel that was growing wild along the railway line. A cycling scientist stopping to pick fresh produce by the roadside was definitely viewed as eccentric in 1960 but perhaps it might be seen differently in 2010. He was eccentric in the way of an academic too, and is remembered as one who continually bubbled with ideas, sometimes coming so rapidly that he would be changing the design of an object while it was being manufactured in the divisional workshop.

Margit fondly remembers that Peter had a very caring and considerate nature, but in the workplace he paid little attention to personal relationships, with most of his interaction among colleagues being work oriented. An unusual example of these opposite characteristics combining together is on the occasion when one of his colleagues, a senior scientist, fell into a state of severe distress due to some personal difficulties. One day at work he suffered what was probably a nervous breakdown and was discovered standing in the corridor bewildered and shouting loudly. The lack of understanding of his colleagues is illustrated by the response of the Assistant Chief who opened his door and commanded "stop that noise". With that, the distressed scientist was left to his own

devices and somehow ended up that afternoon at Peter Funk's house talking to Margit. She couldn't calm him in his agitated state but when Peter came home he sat down with him and immediately started talking quietly about work matters, and this at last calmed the poor man down.

Margit recalls that when Peter joined CSIRO, his initial role was to set up a unit to study Ozone, a highly reactive gas found in the atmosphere. She is not aware of the type of work that he did, or how long he worked in that field, but the Ozone group at Aspendale conducted a continuous ozone monitoring programme until the mid 1980's at which time its operations were transferred to the Bureau of Meteorology. A recent search of his publications found two papers authored by Peter on the subject of ozone, one in 1959, the other in 1962. However, the bulk of his known research papers (12 of 19) indicate that his work at CSIRO was mainly in the field of radiation i.e. radiant energy from the sun and the earth. This is the work that he is best remembered for at CSIRO.

Accurately measuring the solar energy arriving at the earth is essential to the study of meteorology, and was fundamental to the work of the Division at this time. Part of Peter's contribution was involvement in the on-going development of instruments known as radiometers that measured the incoming solar energy and also the outgoing (long wave) energy being emitted back from the earth. Peter developed a radiometer which, in the one compact instrument, sensed both the incoming and outgoing radiant energy, and because of its inherent design, gave a measure of the amount of the sun's energy that remained behind to warm the ground, the air and the seas. The instrument was termed a "net radiometer" meaning it measured the net energy that the sun contributes to the earth. It became generally known as the "Funk Radiometer". Around 1960 CSIRO issued licences for the commercialisation of a range of solar radiation instruments with the Funk Radiometer being one of them. Three companies manufactured the Funk instrument, which sold in reasonable numbers, given that it is a low volume market. Users are typically those engaged in meteorological or agricultural studies. One of those early licensed companies, Middletons (now Middleton Solar) still includes the Funk net radiometer in its product range nearly 50 years later.

In 1964 an international scientific conference was to be held in Leningrad, in the Soviet Republic. Peter Funk was chosen as the Representative for Australia, and invited to give one of the two keynote addresses to the assembly. Margit was to accompany him on this trip. In addition to visiting Russia, Peter was invited to spend a few weeks at the University in Munich as a Guest Professor. He also planned to make the most of the trip by installing some measuring equipment in the Cocos Islands in mid Indian Ocean on the way over. Whilst in the Cocos Islands he became quite ill with an unidentified ailment and was put on a plane to continue the trip to Munich so he could get medical treatment. As soon as the plane landed Peter was taken away to hospital. The doctors needed to operate as he was losing blood quickly and they found he had a stomach ulcer. He was given blood transfusions but his condition deteriorated after the operation. Margit recalls that in those times when blood transfusions were given, the liver sometimes had problems causing jaundice. With Peter, it was found that his liver had shut down, but whether this was a reaction to the blood he was given wasn't clear. It was suspected that it might have been associated with penicillin injections he had in Palestine during WW2 where he suffered a broken leg in a motor cycle accident. In Munich he never recovered and died a week or so after arriving. Margit was with him constantly during his hospital stay and describes it as a very traumatic time. She took him back to Vienna and he was buried there by the Rabbi who had married him. His tombstone has a commemoration to his parents and to Margit's grandparents who all died at Auschwitz.

Joseph Peter Funk died in 1964, the year after his wife was awarded her own PhD degree and proudly became "Frau Doctor" in her own right. Margit's thesis, in the field of history was entitled "The first 100 years of German Speaking Migration to Victoria".

Postscript
Margit remarried in time and continued to live in Melbourne. She worked as a Secondary School teacher/librarian. At the time of compiling this history, she is again widowed after 30 years of marriage to a wonderful man (her sentiments). With her 80th birthday falling in 2010 we can attest to the fact that she is an engaging and lively octogenarian. An unashamed coffee connoisseur, Margit is accomplished in the art of making fine coffee.

J.P.Funk - list of known publications

1958 Archiv fur Meteorologie, Geophysik und Bioklimatologie (Vienna University, Austria)
Der EinfluB der Polarisation auf die Reflexion an Wasserflachen
1959 CSIRO New Absolute Wedge-Calibration Method for the Dobson Ozone Spectrophotometer
1959 CSIRO Improved Polythene-Shielded Net Radiometer
1960 CSIRO Behaviour of Freely Exposed Absorbers in Radiation Fields
1960 CSIRO Measured Radiative Flux Divergence near the ground at night
1960 CSIRO Sensitive and simple integrator
1960 Archiv fur Meteorologie, Geophysik und Bioklimatologie (Vienna, Austria)
Transient Response of Net Radiometers
1961 CSIRO Comparison ofRadiative Divergence near the Ground with Black-Ball measurements
1961 Archiv fur Meteorologie, Geophysik und Bioklimatologie (Vienna, Austria)
A note on the Long-Wave Calibration of Convectively Shielded Net Radiometers
1961 CSIRO A Numerical Method for the Computation of the Radiative Flux Divergence near the ground.
1961 CSIRO Norris & Funk Radiation Observations at Mawson, Antartica
1962 CSIRO Funk & Garnham Australian Ozone Observations and a suggested 24 month cycle
1962 CSIRO A Net Radiometer designed for Optimum Sensitivity and a Ribbon Thermopile used in a Miniaturized Version
1962 CSIRO Ribbon Thermopile
1962 CSIRO Radiative Flux Divergence in Radiation Fog
1963 CSIRO Improvments in Polythene-Shielded Net Radiometers
*1965 CSIRO Funk & Dowe An Integrator for Multichannel Potentiometric Recorders ***
*1966 CSIRO Funk, Deacon & Collins. A Radiosonde Radiometer ***
*1971 Meteorological College Japan Okamoto & Funk ***
The Divergence of Eddy Heat Flux and the Temperature Fluctuations in Stable Conditions

*** J.P. Funk deceased June 1964*

19 Papers
2 x Ozone
12 x Radiation & Radiometers
3 x Technical
1 x Meteorological
1 x Physics

NET RADIOMETER

CN1-R Net Pyrradiometer

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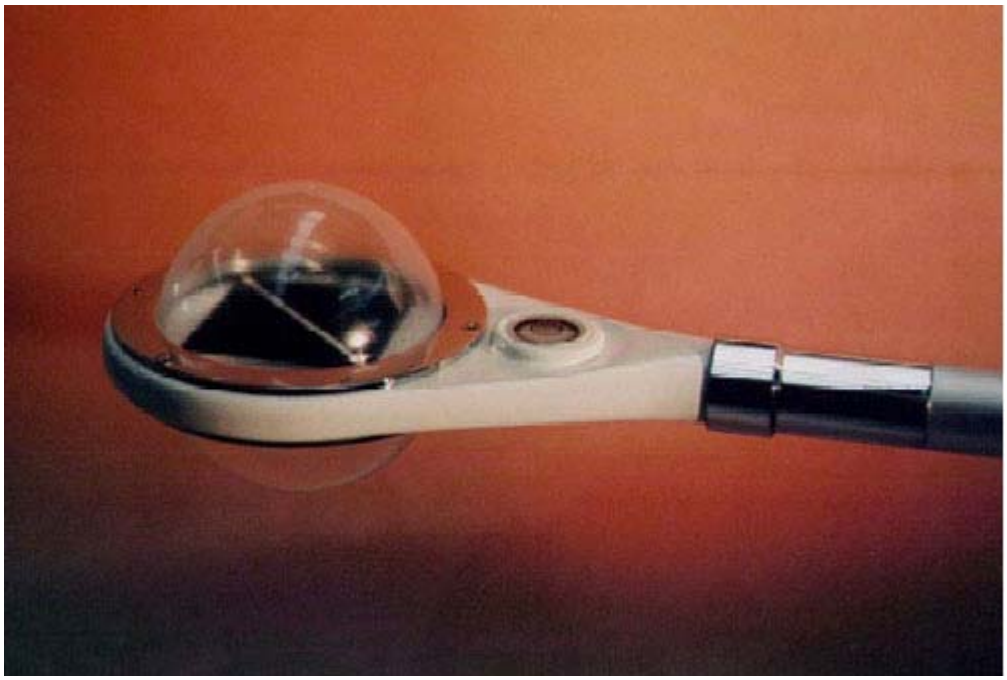

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Non-linearity	±1%
Cosine response (at 80° inclination)	-4%
upwards and downwards sensitivity variation	<3%
shortwave and longwave sensitivity variation	<5%
Temperature coefficient	-0.05%/°C

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