1 INTRODUCTION

Arthur Anthony Page (1922–2011; Figure 1) was well known to both authors of this paper.

The first author’s (PA’s) association with Arthur commenced as a 15-year old in 1958 when Arthur was President of the Brisbane-based Astronomical Society of Queensland (henceforth ASQ) from 1958 to 1960. Later PA followed him as President, between 1966 and 1968. In 1969, Arthur was the principal force behind the formation of the Astronomers’ Association, Queensland (AAQ Mark I), and was its first President, between 1969 and 1971, and again between 1972 and 1974.

In 1978 the AAQ Mark I merged with the ASQ to form the Astronomical Association of Queensland (AAQ Mark II). Arthur was again President, between 1981 and 1983. PA followed him as President of the AAQ Mark I in 1971–1972, and of the AAQ Mark II in 1987–1989, 1997–1999 and 2008–2009. However, from the mid-1980s Arthur withdrew from active participation in the affairs of the Association. Nonetheless, over the years PA was able to assemble a wealth of records and images that reflected their long association.

Figure 1: Arthur Anthony Page in 1962 at age 40 (Page Collection).
The second author of this paper (WO) first met Arthur Page in the 1970s, and from that time they maintained close links through their mutual involvement in variable star research; their membership of the International Amateur-Professional Photoelectric Photometry (IAAPPP) group; their shared interest in Australian astronomical history; and through national and international meetings and conferences.

Therefore, the authors are uniquely positioned to write about Arthur Page’s astronomical endeavours. Apart from personal knowledge of the authors, material for this paper has been drawn from various sources, including the ‘Astroquest’ journal of the ASQ and the *Annual Proceedings of the AAQ* Mark I and Mark II. Also used was a Project Report (mini-thesis) written by Alicia Rhoades (2005) as part of the research requirements for her James Cook University Master of Astronomy degree, which was supervised by WO. In addition, *The History of Mt Tamborine Observatory (Page, 1993b)*, which was presented to the Tamborine Mountain Historical Society Incorporated by Arthur in February 1993, was carefully examined, cross checked, and used as a further reference where appropriate.

Whilst we summarize research that Arthur conducted, we do not attempt to delve into specific details of the astrophysical projects that he was involved in. These are described in Rhoades (2005). Rather, this paper describes Arthur Page’s life and his connection with, and significant influence upon, Queensland astronomy for half a century.

2 THE EARLY YEARS: FROM JAPAN TO AUSTRALIA

Arthur Page’s original surname was Pappadopoulos, and he was born in Yokohama, Japan, of Greek–Russian parents on 3 August 1922. His parents had lived in Odessa on the Black Sea, now part of Ukraine. Arthur grew up in Japan where his father, Anthony Elephther Pappadopoulos, was a businessman and the Greek Consul in Kobe. The family survived the great Yokohama earthquake of 1923 and later had a hair-raising, narrow escape from Japan in 1941, eventually arriving in Western Australia. All this is told in Arthur’s book *Between Victor and Vanquished* (Page, 2008), which deals with his war experiences.

Being proficient in Japanese, both written and spoken, he and his father acted as military interpreters during the war. Arthur maintained his contact with the military afterwards, joining the Army Reserve in 1950 and progressively rising in rank, being commissioned in March 1953, a Major in 1958, then Lieutenant Colonel in 1968, and finally being made a full Colonel upon his retirement in 1972.

In his civilian life following the war, Arthur qualified as a physiotherapist, graduating from the University of Queensland (henceforth UQ) in 1950. He was then employed at the Commonwealth Rehabilitation Centre at Taringa (a suburb of Brisbane), specialising in the rehabilitation of amputees, rising to Chief Physiotherapist by the time he retired in 1983.

Arthur married Muriel Nancy Woods on 7 December 1946 when he was aged 24. He had met her in Brisbane during the war. They separated in late 1961 and divorced in April 1963. They had two children, Meredith (Merry) Ann Page and Robert Arthur Page. Sadly both Meredith and Robert recently passed away, Robert from COVID-19 in April 2020 after returning to England.

Having grown up in Japan as a European expatriate, then surviving a traumatic escape and serving in the Australian Army for the duration of the Pacific war, Arthur probably felt the need to put down roots and seek stability in his life. Not only did he do this by his continuing association with the military, but also by a basic change in outlook. In 1948 he anglicised his name from ‘Pappadopoulo’s’ to ‘Page’ for an economy of letters as he put it (Page 2009), but also he sensed a growing undercurrent of xenophobia. The previous name was certainly cumbersome. His family did not object. Over time Arthur adopted a demeanour that was often more formally British than that of the average Australian. That said, he adored and embraced Australian humour like a local. This was entirely understandable in the circumstances, putting down roots in his new home country. Always friendly, helpful, and approachable, he was nevertheless very conscious in his demeanour of formality, tradition, and history. Over the years, general respect grew for his continuing achievements.

Arthur joined the ASQ in 1954 and when the first author of this paper encountered him in 1958 he had become the President. PA never spoke to him about how his personal interests in astronomy developed, although he did mention that one of his antecedents was a renowned academic and astronomer. His mother, Elena Artemiovna Orbinskaya was the daughter of Professor Artymy Orbinsky, who according to family lore, was one of Imperial Russia’s best-known astronomers, associated with Pulkovo Observatory and Odessa Observatory / University in the late 1800s and early 1900s. In his book, Arthur references his interest in astronomy from a young age (Page, 2008). According to Rhoades (2005), by the
time he completed secondary schooling at the Church of England Mission Grammar School in Kobe (1930–1940) Arthur had mastered the art of astrography using wide-field and telescope prime-focus imagers and knew how to operate a Newtonian telescope that was supplied with a drive. This is confirmed in his History of Mount Tamborine Observatory (Page, 1993b).

Arthur had a telescope in pre-Pacific War Japan, and was able to surreptitiously monitor German ships sheltering in Kobe Harbour and report to the British Consul. Later when shipboard on the US invasion task force in the Philippines, he found astronomy soothing. Late in the war on a patrol in New Guinea, his knowledge of astronomy proved invaluable in providing directional guidance when a compass failed. Astronomy became a life-long passion.

3 AN EMERGING INTEREST IN ASTRONOMICAL INSTRUMENTATION AND OBSERVING

In 1954 Arthur began to rekindle his participation in astronomy, constructing a 6-inch (15-cm) Newtonian reflector and recommencing astrography with the goal of contributing to astronomical research (Rhoades, 2005). According to the obituary published by Carter et al. (2013),

... in 1954, he began a close association with professional astronomical research in Australia through collaboration with Australian Radio Astronomy pioneer, Bruce Slee at the CSIRO Division of Radiophysics as it was then known.

A biography of this famous radio astronomer and close friend of the second author of this paper is provided in Orchiston (2004).

According to Arthur’s paper “The Tamborine telescope – reborn”,

Arising from a pre-World War 2 interest in astronomy ... the author resumed his astronomical interests with successful photographic observations on 1957 September 13th, of a Type A (OIII, 630 nm ionisation) Aurora Australis obtained from the roadside of Lambert Road, Indooroopilly, Brisbane for the International Geophysical Year and Year of the Active Sun. (Page, 1996).

For Brisbane and south-east Queensland localities mentioned in the text see Figures 2 and 3. While aurorae were visible from the southern states of Australia, especially during sunspot maximum, it was rare for aurorae to been seen this far north. Note that on this occasion the associated coronal mass ejection event generated particularly strong displays of both Aurora Australis and Aurora Borealis, as documented by Hayakawa et al. (2021).

We believe it can be stated that in this period, the nascent interest in astronomy developed into a deep and lasting one. Already by 1958 he was a competent and efficient observer. In 1959 while President, Arthur delivered a major lecture to the ASQ as part of the Queensland centenary celebrations. This traced the history of astronomy in Queensland, and subsequently was published in the Society’s Proceedings (see Page, 1959). This is an often-referenced paper.

4 THE BOK ERA: AID FROM A FRIENDLY PROFESSIONAL ASTRONOMER

Between 17 and 21 June 1959, during Arthur’s ASQ presidency, the famous Dutch–American research astronomer Bart J. Bok (1906–1983; Levy, 1993) visited Brisbane and gave an address at the UQ. Arthur was able to organise that ASQ members could attend this meeting as their monthly meeting. On a later visit to Brisbane, on 14 August 1962, Bok was to directly address a meeting of the ASQ. At the time, Bok was Director of Mt. Stromlo Observatory near Canberra (Figure 3 insert), and Professor of Astronomy at the Australian National University. He was busy building up the Observatory and a ‘graduate school’—both with considerable success (Gascoigne, 1992; Hyland and Faulkner, 1989). Bok was also a brilliant public speaker, a passionate advocate for astronomy in Australia, and had a ‘soft spot’ for amateur astronomers and their telescopes (an excellent example of this was the ‘Catts Telescope’; see Orchiston, 2010). In our joint estimation, Bok’s oratorial skills were unparalleled, and he was, without doubt, one of the most entertaining speakers we have ever encountered.

From 1963, flare stars became a major field of interest for Arthur (see Page, 1967; Slee et al., 1963). He soon realised that visual observations of these were unsatisfactory and unreliable, so he resorted to photography using a multi-exposure technique— in fact taking over 10,000 exposures between 1964 and 1977 for CSIRO Flare Star projects (for techniques see Page and Page, 1968). According to Rhoades (2005), “Between 1941 and 1946 Page became a qualified Air Photograph Interpreter (which would later assist in variable star plate examinations).” Later these stars
Figure 2: Brisbane localities mentioned in the text. Key: 1 = Aspley; 2 = Chermside; 3 = Clayfield; 4 = Clear Mountain; 5 = Forest Lake; 6 = Greenslopes; 7 = Indooroopilly; 8 = Taringa. For scale the distance from 3 to 8, as the crow flies, is 12 km (map: Google Earth; map modifications: Peter Anderson).

Figure 3: Southeast Queensland localities mentioned in the text. Key: 1 = Gold Coast; 2 = Leyburn; 3 = Mt Kent; 4 = Mt. Tamborine; 5 = Toowoomba. For scale the distance from the centre of the Gold Coast to Toowoomba, as the crow flies, is about 155 km (map: Google Earth; map modifications: Peter Anderson and Wayne Orchiston).
were monitored photoelectrically and this work was to continue throughout the entire period he was active in research astronomy.

Bart Bok’s final visit to Brisbane was as the guest of the Science Teachers Association of Queensland on 2 and 3 June 1965. Within a year, Bok’s 10 year tenure (1956–1966) at Mt. Stromlo ended. Such was the ASQ esteem in which Professor Bok was held that a special presentation was arranged. Years later, in November 1978, Bok visited Arthur at his Mt. Tamborine Observatory. It was a memorable visit because of their past close association.

Bok had been replaced as Mt. Stromlo Director by fellow American, Professor Olin J. Eggen (1919–1998), with whom Arthur was unable to establish a meaningful working relationship.

25   THE BERES PAGE ERA: TELESCOPES, AN OBSERVATORY, AND THE ASTRONOMICAL SOCIETY OF QUEENSLAND

Returning to the original theme, Arthur was President of the ASQ between July 1958 and July 1960. The Annual General Meeting was in July and the Society operated on the standard Australian financial year (i.e., July to June). At the beginning of his second term, in July 1959, Arthur also became Editor of the Society’s bulletin, renaming it *Astroquest* from 1960. Prior to this, in December 1959 he edited a 64-page *Annual Proceedings* of the ASQ for the Queensland State’s 1959 Centenary Year.

By late 1959 Arthur had completed the assembly of a 3.6-inch (92-mm) f/15 equatorially mounted refracting telescope, driven by a gramophone motor (Figure 4). He even ground and polished the achromatic objective, and put together the various component parts, the telescope mounting, and drive. He subsequently claimed that this was the first such achromatic astronomical telescope to be made in Queensland that he was aware of (Page 1993b). This was mounted in the front yard of his home at 44 McCaul Street, Taringa (see Figure 2). Also added around this time was a box-like plate camera with an 8-inch (20-cm) focus f/2.9 lens (Page, 1961c). This is shown in Figure 5. Images of comets and nebulae were obtained with this camera. In the April–May 1960 edition of the *Astroquest*, Arthur published a paper titled “The Orion Variables” detailing his observations between 20 and 30 November 1959 with his 3.6-inch refractor (Page, 1960b). His serious interest in the observation of variable stars had certainly commenced.

Trouble on the home front appeared to have developed after this. Some ASQ mem-

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Figure 4: Arthur Page’s 3.6-inch refractor in operation in 1960 (Anderson Collection).
bers visiting the house reported that the atmosphere was distinctly cool and we know that the separation of Arthur and Muriel occurred in 1962 under circumstances that were no fault of his. Arthur continued to maintain close contact with his two children.

Arthur continued as newsletter Editor until July 1963. Possibly because of personal circumstances, whilst he continued to contribute articles, the layout of the *Astroquest* had changed, and one reference to being ‘on leave’ (April 1963) indicates that his involvement had lessened. The work was being done by the Assistant Editor V.L. Matchett. Arthur continued to contribute substantially, but there was strong input from Dr Matchett and this resulted in a larger *Astroquest* that was now being issued monthly. Consequently, there were substantial cost blowouts.

Early 1963 was the time of the ill-fated ASQ 18-inch (46-cm) telescope project with which Dr Matchett was also heavily involved. The partially completed mirror ended up with the new ASQ President John Van Veghel, who ultimately completed it, and his son still retains it, to date unused. Dr Matchett who appeared to be at the forefront of the project, was clearly becoming frustrated with the ‘go slow’ attitude of the ASQ administration, principally with the long-term Secretary Bill Newell (from 1942 to 1971) and his coterie. This was demonstrated by a clearly antagonistic and confrontational style of writing in the *Astroquest* (e.g. see *ibid*.) which is very obvious even after the passage of sixty years. But this attitude extended to other matters, including Dr Matchett’s strong support for dissatisfied Bundaberg members of the Society.

These issues came to a head in May 1964, and Dr Matchett and his assistant Mr Eldridge were removed from the editorship. They resigned and set up their own society, which survived for a decade or so. At the same time the Bundaberg group broke away, and subsequently also formed their own society.

In late 1962 members noticed that Arthur was spending some time at ASQ meetings sitting next to a new member, Beres Rose, a pharmacist. In the December 1962/January 1963 *Astroquest*, Arthur wrote about one of our new lady members ‘Atemning’ (amateur telescope making) a 9-inch (23-cm) Newtonian mirror (*ibid*). This was obviously a reference to Beres. By this time Arthur had moved out of his matrimonial home at 44 McCaul Street, Taringa. His divorce became final in April 1963.

Arthur and Beres became engaged in July 1963 and married on 15 February 1964. The couple were given a f/6 24-inch (61-cm) focus Aero Ektar lens for an astrophotograph that he called the ‘Page–Eastwood Astrograph’ to honour the donor (*ibid*). This—and Beres—are shown in Figure 6. The astrograph used standard 3½ × 4½ inch plates (8 × 11 cm)—and was adjustable for smaller plates. It was with this instrument that much of the early research was carried out, including a very

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**Figure 5: Arthur Page’s small astrograph circa 1960 (Page Collection).**
fine series of images of Comet Ikeya–Seki 1965e (see Page and Page, 1966). But because the thick elements of the lens accounted for a 27% light loss, from mid-1965 there was a change of direction and Arthur decided to build a Schmidt camera with an 8-inch (20-cm) short-focus spherical primary mirror and a 5.5-inch (14-cm) thin corrector plate (Page, 1993b). These corrector plates are often difficult to ‘figure’, and Arthur’s first such instrument required further adjustment.

By mid-1964 the newly married couple were living at 3 ‘The Gables’, Barlow St., Clayfield (see Figure 2), the home of his new wife’s aunt, Miss Rose. They purchased land at 4 Kellino Street, Chermside (ibid.), and built a house there, moving in by November 1964. This was followed by construction of an observatory, which was completed by mid-February 1965 (Page, 1965b), although installation of the Dudley Eglinton Reflector was only completed later that year (Page, 1965a).

In mid-1964, following the departure of Matchett and Eldridge, Arthur and Beres Page were tasked to produce the last Astroquest for the financial year. Then, from the July Annual General Meeting, Arthur resumed the editorship, an office he would hold until August 1967 (by which stage other events were afoot).

As Editor, Arthur contributed a number of articles to the Astroquest, one being a series on his visit to Mt. Stromlo Observatory (see Page, 1963b). Another was an historical series on astronomy (Page, 1960a; 1961a; 1961-1962; 1962). An earlier series from late 1960 though much of 1961 had dealt with Nicholas Copernicus (Page, 1960-1961; 1961b), and this was likely the basis for a much more detailed work later (Page, 1973) that culminated in Arthur being awarded a prestigious Copernicus Commemorative Medallion in 1973. More on this in due course.

With the ‘Space Age’ in full bloom, the ASQ membership reached its peak in 1964 with 269 members being recorded. In June of that year the society regained possession of the historic 12-inch (30.5-cm) Dudley Eglinton Reflector (see Anderson and Orchiston, 2020: 160–163). Although it had been restored by the UQ, it was described as being a long way from serviceable when returned to the Society. Unlike the stalled 18-inch (46-cm) project, which
needed to be built from scratch, along with an observatory and a site upon which to build it, the Dudley Eglinton Reflector merely required a standard-sized observatory and a site. However, because of its massive construction, the project was difficult enough. The telescope was temporarily left with the AAQ President, John Van Vegchel, but on the understanding that it would be handed over to Arthur Page’s custodianship when he completed the construction of an observatory at his new home at Chermside (Newell, 1964).

In the early 1960s Sydney radio astronomer Dr Bruce Slee led a number of monitoring programs of the flare star Proxima Centauri. The purpose was to establish how the optical flares of this star were related to flares received at radio wavelengths (Slee et al., 1963). Arthur participated, as did both authors of this paper, PA with his own 9.5-inch (24-cm) reflector and WO with an historic 6-inch refractor at Sydney Observatory. However, in Queensland it was Arthur Page and other members of the Brisbane network who were the dedicated observers, and Arthur photographically recorded some flaring activity. The following dates were recorded for this ongoing program: 24 April–16 May 1962, 20–26 April 1963 and 7–13 April 1964 (Page and Page, 1968).

In late 1962 Arthur had driven down and spent several weeks working under the direction of Bart Bok at Mt. Stromlo Observatory. They had made him comfortable, given him a desk and the keys to the historic 9-inch (23-cm) Oddie refractor. He spent his days on clerical work associated with the library records, and his nights at the Oddie in his own time, and assisting at the other telescopes, including the 74-inch (188-cm) reflector, which was then the largest optical telescope in Australia (for information on these telescopes see Frame and Faulkner, 2003). He was to repeat this visit in February 1964, but this time with his new wife.

After completion of their Chermside house, work started on the observatory that was to bear the name ‘Page Observatory’, but was sometimes called the North or East Chermside Observatory, and in this paper, we will simply refer to it as the ‘Chermside Observatory’. It was a 16-foot (4.88-m) square building constructed of concrete blocks with a quarter-spherical dome in three steps. 14 feet (4.26-m) in diameter and a slot 3 feet 10 inches (1.17-m) wide with a single left side-opening shutter (Page, 1965). It is shown in Figure 7. Initially it contained the Page–Eastwood astrograph, from February 1965 when the Observatory be-
came fully operational. As reported in the ASQ Astroquest on 1 July 1965 the 12-inch Dudley Eglinton Reflector and its massive mounting were installed (Page, 1965a). The 9-inch mirror originally commenced by Beres in late 1962 and completed, was reduced from f/9 to f/5 by mid 1965 (Page, 1965c), and together with the Page–Eastwood astrograph and smaller instruments formed part of an impressive array at the Observatory, as shown in Figure 8 (after Page, 1966).

Subsequently, the aforementioned Schmidt camera also was installed at the Observatory, and images to magnitude 14 were obtained with short exposures. Arthur and Beres used this small Schmidt camera to discover a suspected new T Tauri-type variable star (Page, 1993b). Note that Rhoades (2005: 13) dates this discovery to 17 July 1966.

However, Arthur was keen to go to fainter limiting magnitudes, so in 1966 he constructed a larger Schmidt camera with a 12-inch (30.5-cm) mirror and an 8-inch (20-cm) corrector plate, which operated at f/3 (Page, 1993b). This was used very successfully in subsequent flare star observing programs, and for novae and comet work (e.g. see Page, 1969). An image of the Orion Nebula taken with this instrument is shown in Figure 9.

Arthur also constructed a blink comparator measuring engine using some optics from a pair of binoculars (Page, 1993b: 25). Later, in
1987, he would assist the Physics Department at the UQ in the design and manufacture of a new blink comparator and plate measuring engine with an accuracy of a few microns. This was completed in 1990 (see Thomas et al., 1994). Arthur had a ‘Visitors Book’ and kept a tally of the number of Chermside Observatory visitors; by mid-1966 they had reached 550 (Page Collection).

Between 1965 and 1970 Arthur also photographed transient phenomena with the Observatory instruments, including comets (e.g. see Page, 1969).

In 1966–1967 Arthur wrote a three part Astroquest series dealing with the Large and Small Magellanic Clouds (A. Page, 1966; 1966-1967), and during the same period Beres wrote a series on spectroscopy (B. Page, 1966; 1966-1967; 1967). Both also presented ASQ lectures on their respective topics (e.g. see ASQ Synopsis ..., 1966).

An interesting development then occurred within the society. PA had been asked by Bill Newell, the Secretary, to nominate for the presidency in July 1966 (he had been Vice-President the previous two years and this was the accepted progression). However, Beres also nominated for the presidency. There were only two candidates and at the July 1966 election PA was successful by 66 votes to 57 votes, with 2 votes informal. The question can be raised as to why Beres had made a bid to become President. There were internal pressures building within the Society between those who wanted a more progressive outlook and the management who were content to continue with the existing method of operation. The choice was quite clear, and matters came to a head within two months in mid-1966.

There were a number of drivers. Firstly, a recent visit by West German Zeiss representatives touting for a planetarium, which was either driven by or seized upon by the Museum Society. It is ironic that when the planetarium was finally built in 1978 it was East German Zeiss instrumentation that was purchased, and this was entirely a Brisbane City Council project.
Back in 1966, the Brisbane City Council had been approached regarding a proposed West German Zeiss planetarium. Initially, the ASQ committee were content to 'take the back seat' and support the Museum Society, but as events proceeded a larger commitment was called for. This is because the concept evolved to include a meeting room and observatory for the society. As matters developed, the Brisbane City Council became very interested and offered two proposed sites on a track in the Botanical Gardens at Mt Coot-tha, about 400 metres west of the lookout. These sites were inspected by an ASQ group on 27 August 1966—for an intended meeting room, observatory, and possible planetarium—now to be the initiative of the ASQ! The proposal was to build an observatory, initially for the Dudley Eglinton Telescope, and a 25 × 75 foot meeting room, the estimated cost for the latter being around $10,000 (even though only a few hundred dollars had been raised by the ASQ). The subsequent development of the Sir Thomas Brisbane Planetarium and the involvement of Queensland amateur astronomers has been recounted elsewhere by the authors of this paper (Anderson and Orchiston, 2021).

The ASQ had also set up a Telescope Observatory Committee to plan a building to house the Dudley Eglinton Telescope, as it was understood that Arthur's custodianship of the instrument would cease once the telescope could be re-sited. Furthermore, there had been a troublesome campaign by some ASQ members who wished to use the telescope 'at will' at Arthur's observatory, which clearly was impractical and inconvenient.

The pressure had built and at a Special Council Meeting of the ASQ on 19 August 1966 Arthur advised that the Dudley Eglinton Telescope was to be returned. It had been the major instrument at his observatory and had served as a guide telescope for flare star patrols for GC22805, Proxima Centauri, and V1054 Oph. The return was soon effected, but as restoration of its mounting and other components were still required, the Dudley Eglinton Telescope could not quickly be put to use by the Society, nor—despite some work—would it ever be used again. So once again it entered a period of storage, and finally some of the optics and other bits and pieces found their way to the Sir Thomas Brisbane Planetarium where they are occasionally placed on display.

Following the return of the Dudley Eglinton Telescope and its mounting to the ASQ, Arthur installed a replacement mounting for the Schmidt telescope at Chermside Observatory, with the 9-inch reflector serving as a guide-scope.4

Even before the return of the Dudley Eglinton Telescope to the ASQ it was clear to the 'progressives' that the administration of the ASQ was dragging its heels. But perhaps there were valid reasons for this. The demographics of the membership necessary for the success of so ambitious a project as a Society observatory simply were not present. Lacking were the resources, existing long-term officers, members and supporters with a proven ability to successfully handle the type of building and administrative project envisaged. In fact, this conclusion had been signalled in an address given at the ASQ General Meeting on 11 February 1966 by Bill Newell (see Newell, 1966).

So this difference of views appears to have been the reason for Beres' nomination for President, in an attempt to effect radical change in the administration and direction of the Society. Shortly after Beres' failed bid at the election, the irrevocable decision was taken that a new society was necessary and the Pages started severing their connection with the ASQ.

In late 1966 Arthur and Beres Page were invited to become foundation members of the Astronomical Society of Australia (ASA), which was formed at a conference held between 30 November and 2 December 1966 (see Lomb, 2015). This was primarily a society of professional astronomers devoted to the advancement of observational astronomy, theoretical astronomy, and instrumentation, and it was to serve as the inspiration for a model that Arthur Page would emulate at a state level. A key feature of the ASA was the classes of membership, with full voting membership and rights being restricted to those actively engaged in the field, and this would be emulated by the new Queensland body. The full picture of the planning for such a new Queensland society only emerged after the formation of the Astronomers' Association, Queensland (AAQ) in February 1969.

Meanwhile the ASQ continued as before. At this time Arthur Page retired as Editor as part of his general disengagement, and he and Beres ceased attending meetings. Meanwhile, after taking long-service leave at the end of 1967, he studied and passed his Lieutenant Colonel examination in early 1968.

In 1967 Arthur had been elected a Fellow of the Royal Astronomical Society (FRAS) and an Associate Member of the American Astronomical Society (see Table 1). In early 1968 he was involved in the development of an Astronomy syllabus for the Science Teachers Associ-
72x92 development in the coming years. In hindsight it was obvious how things would unfold.

In 1968, the Astronomical Society of Queensland (ASQ) was formed as the Astronomers’ Association of Queensland (AAQ). Arthur Page was one of the early members of the ASQ and was involved in its establishment. The society was initially based at the Page’s house in Toowong and there were informal meetings held in Arthur’s armchair. The initial officers were elected on 8 February 1969 (Figure 10) and the fourteen attendees (including PA) were presented with a full draft Constitution which was then examined clause by clause. The name ‘Astronomers’ Association, Queensland’ was decided upon for the new body, which is hereafter referred to as the AAQ Mark I.

The die had been cast. On the one hand there was the established, conservative Astronomical Society of Queensland (ASQ) the members of which mostly had an armchair interest in astronomy, and on the other hand the active, progressive observational Astronomers’ Association, Queensland (AAQ). In hindsight it was obvious how things would develop in the coming years.

Over the next two years as the inaugural President of the AAQ Mark I Arthur Page was very much at the forefront. His scientific work was quite prolific. He had recorded a major outburst of UV Ceti in October 1967 (cf. Higgins et al., 1968). In the first year (1969) he reported his involvement in Algol-type eclipsing binary work for the British Astronomical Association (BAA), two major flare star programs for the IAU (UV Ceti and YZ Can Min), charting the T Pyxidus area for variable stars (285 exposures), and the serendipitous discovery of flares from the Be star 66 Ophiuchi (Page and Page, 1970) whilst monitoring nearby Barnard’s star for possible flares (see Figure 11). Until that time is was not known that Be stars, such as 66 Ophiuchi, could demonstrate flare behaviour, so this was an important discovery.

In 1969 with the deterioration of the North Chimneys, Arthur considered establishing an observatory at Clear Mountain north of Brisbane (see Figure 2), where he planned to operate a larger 13/20-inch (33/51-cm mirror) Schmidt telescope. He even constructed the Hindle machine necessary for the optical work on this project. However, due to difficulties with the local council, this project did not proceed (see Page, 1993b: 30). Construction of this larger Schmidt telescope had been suggested by Arthur’s Sydney radio astronomy colleague Dr Bruce Slee in 1969 (ibid.).
Figure 10: The inaugural meeting of the Astronomers’ Association, Queensland on 8 February 1969. On the extreme right (from the right) are Arthur Page, Evon Anderson, Peter Anderson and Beres Page (Anderson Collection).

Figure 11: Discovery flares recorded from 66 Oph by the multiple exposure method in 1969 (Page Collection).
However in December 1970 a letter was received from Dr Slee suggesting the Schmidt project should cease and that Arthur should instead reconsider establishing a photoelectric telescope. Moreover, the CSIRO would construct the mounting, if Arthur was willing to purchase the optics for a larger Cassegrain telescope. Arthur was to prepare and forward plans (Page, 1996).

The search for a new observatory site was given renewed impetus by this proposal, which resulted in the eventual purchase of a block of land at Mt. Tamborine in January 1971 after a long search and associated site-testing (Page, 1993b:33–35). This site was in the mountainous hinterland directly inland from the Gold Coast, to the South of Brisbane (see Figure 3).

The 1970 AAQ Annual Proceedings contains a list of activities similar to those listed in previous years, and it would become tedious to continue to detail individual projects and observations.

A sudden shattering tragedy befell Arthur on 24 July 1970 when Beres suddenly passed away as a result of a cerebral aneurysm. With great inner strength, Arthur continued. Beres (1929–1970) was honoured by a commemorative medal that is awarded biennially by the ASA to an Australian amateur astronomer whose observations have helped advance astronomy. Subsequently, following Arthur’s own death, this became the Berenice and Arthur Page Medal.

In 1970, shortly after Beres’ death, Arthur learned that he had been elected to full membership of the American Astronomical Society (see Table 1).

### 7 MT. TAMBORINE OBSERVATORY AND VARIABLE STAR PHOTOMETRY

On 8 October 1971 Arthur married Aileen Sturgess Goddard, a widow with five children. They had met when Aileen’s oldest daughter, Anne, who was attending Clayfield College, wrote to Arthur asking for some assistance with a school project on astronomy. Always keen to encourage students in astro-science, Arthur was only too happy to help. It led to an invitation to a viewing night—a rare chance for Anne to look at the stars through a real telescope and not just from pictures in books. Needless to say her assignment went on to score top marks. After the observing session, Arthur, Anne, and her mother (who had accompanied her), adjourned to the kitchen for a cup of coffee, where they sat around the table talking at length. One thing led to another and with-in months, Aileen and Arthur decided to get married.

Aileen ultimately survived Arthur by only 19 months. With the marriage came a change of address to Aileen’s house at 17 Hillhouse Street, Aspley (see Figure 2). Cherrmside Observatory ceased operation on 25 February 1972, and the property was then sold. In any event, night sky light pollution from the central part of the city to the south had been proving increasingly troublesome (Page, 1993b:32).

In the meantime, a prefabricated ‘weekend cottage’ was assembled on the residential block on the crest of the eastern scarp at Mt. Tamborine overlooking the Gold Coast that had been purchased in January 1971. This house, was followed by a workshop, and then an observatory was built near the dark back yard boundary abutting a golf course. Apart from some light from the Gold Coast, the only problem was a nearby television tower.

The Mt. Tamborine residence was completed in March 1972, and building of the 3.3 x 5 metre workshop was completed by Easter 1973. The round-walled concrete block observatory building itself was started and with the help of P. Higson and L. Lafferty was completed together with the rotating dome, to a working state by August 1973 (see Figure 12). This building was 4.2 metres internally and 4.4 metres externally. The dome pitch was 1.68 metres with a top height of 3.66 metres. The dome was massive, weighing 1.25 tons. Initially it housed the 8/12-inch Schmidt camera that had been built in 1966, and a 4-inch (10-cm) f/15 guiding refractor, with plans for a 31-cm ‘Berenice Page Cassegrain’. Other instruments were a 4-inch (10-cm) f/4.8 short focal-length refractor and a Ross 5-inch (12.5-cm) f/8 astrograph (Page, 1973). These instruments are shown in Figure 13.

As recorded upon a plaque, the Mt. Tamborine Observatory was formally opened on 9 September 1973 by Dr Paul Wild, a world-famous solar radio astronomer, Chief of the CSIRO’s Division of Radiophysics in Sydney (see Frater et al., 2017; Stewart et al., 2011) and the inspiration behind the unique Culgoora Radioheliograph (Wild, 1967). The opening was “… in the presence of 110 international astronomers who took the opportunity of a rest day from IAU Symposium No 56, at that time being held at Surfers Paradise …” (Page, 1996: 170–171).

With its establishment the Page Observatory became the Mt. Tamborine Observatory. Shortly after, Arthur grasped the opportunity and obtained a Wray 9-inch (23-cm) f/4 astrograph (later stopped down to 8 inches (20 cm) f/4.5) that was duly mounted at the Observa-
Figure 12: An exterior view of Mt. Tamborine Observatory taken in the 1980s (photograph: Greg Bond).

Figure 13: Mt. Tamborine Observatory instruments in 1977 (Page Collection).
tory (Page, 1974). Observations continued—specifically of a possible nova (Matchett and Page, 1973) and of Comet Kohoutek (Forest et al., 1973).

In addition to being inaugural President of the AAQ Mark I between 1969 and 1971, Arthur was again President between 1972 and 1974 (Table 1).

The 1974 Annual Proceedings of the AAQ records the presentation to Arthur in October 1973 at the Brisbane City Hall of the Copernicus Commemorative Medallion by the President of the Queensland Division of the National Committee for the 500th Anniversary of Nicholas Copernicus. This medal was authorised by Pope Paul IV.

Between 1974 and 1986 a series of plates of regions in the Southern sky and Milky Way were obtained for the Variable Star Section of the Royal Astronomical Society of New Zealand (RASNZ) (Page, 1978). The Wray astrograph was employed and proved much easier to use than a Schmidt camera, although it did need ‘stopping down’ to f/4.5 to improve resolution. Phillip Higson helped with these patrols between 1973 and 1977.

From 1975 Mt. Tamborine Observatory carried out observations of flare stars in association with the CSIRO Division of Radioastronomy, and a major flare of UV Ceti was recorded in July 1975 (Page, 1993b: 37).

Harking back to the move to photoelectric observations suggested by Dr Bruce Slee in December 1970, there were delays and problems, and the construction of the mounting was eventually agreed to be undertaken by the Physics Department of the University of Tasmania. However it was not to end there. Delays meant that ultimately in 1977/1978 the University constructed the polar axis assembly, bearings, housing, and drive, leaving the equatorial head and the fork mount to be built locally. This was done at the steel fabricating works of Phillip Higson and his father. Spare time construction of this had started in 1977 and was complete 15 months later in August 1978 (Page, 1993b: 41–42). Following that, the 32-cm Coulter Cassegranian optics and the photoelectric system (funded by a grant), were ordered from the United States.

The first photoelectric observation, that of the binary star EX Hya, was made in March 1979 (Sterken et al., 1983a; 1983b; cf. Kruszewski et al., 1982). In the meantime photographic work had of course continued using the old mounting and instruments that had been relocated to Mt. Tamborine. Between 1964 and 1977 more than 10,000 flare star photographic exposures were obtained (Page, 1982d).

Various annual reports written by Arthur Page appear in the Annual Proceedings of the Astronomers’ Association, Queensland from 1969, and its successor The Astronomical Association of Queensland from 1978. Those reports dating between 1969 and the mid-1980s and a few later ones, along with relevant Observatory Reports, Presidential Reports, Technical Secretary and Variable Star Section reports, indicate a continuing high level of research activity at Mt. Tamborine Observatory. Note that such individual routine reports are not listed as references here.

In addition, Arthur wrote a number of popular articles and research papers for astronomical magazines and journals on astronomical topics (Page 1981b; 1983b; 1987b), instrumentation (Page, 1983a; 1987a; 1988d), and his research (Page, 1985b; 1993a; Page and Neilson, 1991). These are in addition to other references specifically quoted here. In summary, Arthur Page’s astronomically productive years spanned the period between 1957 and 1993.

In 1979 the old mounting was sold, and photometry started to supplant photography as the primary means of recording data. Specifically, photographic observations of flare stars were replaced by photoelectric observations from this point (Page, 1985a). This system was dramatically more sensitive, and Arthur was able to obtain these results with very short integration times. However, only one object could be studied at a time. Therefore, the astrograph was transferred to the new mount as photography was necessary for wider-field studies. The 8/12-inch Schmidt camera must have been retired earlier, because it is not present on the 1977 image of the equipment shown here in Figure 13.

New studies were undertaken. Following attendance at an IAU Colloquium in New Zealand in 1979 (Slee and Page, 1979), Arthur began researching the calaclysmic binary star EX Hya (Sterken et al., 1983a; 1983b) and the flare star V645 Cen. In the latter case, in a coordinated program, the first evidence was obtained of an X-ray outburst that occurred without radio and optical flaring (Haisch et al., 1981). In 1980 Arthur started compiling a catalogue of Be stars, with information largely drawn from over a decade of earlier work (Page, 1981a; 1982e). This was published in 1981/1982 and updated in 1989 (Page, 1982a; 1989a).
8 SOCIETIES, CONFERENCES, COMETS AND FLARE STARS

On the broader Queensland amateur astronomical scene, towards the latter part of the 1970s an approach was made by the ASQ to amalgamate with the AAQ (see Powell, 1977). The Secretary and mainstay of the former organisation, Bill Newell, had died in September 1971, bringing his 29-year tenure to an end. The two bodies had participated together in the 1976 total solar eclipse trip to South Australia and the previously strained relationship between the two clubs had eased greatly. The ASQ was running into difficulties and it was stated that they were waiting to make the amalgamation approach after their 50th Anniversary celebrations in 1977. Initial negotiations were held at PA’s house on 16 October of that year.

The two bodies formally merged at a meeting on 18 March 1978 with Arthur Page as the convening Chairman (see Anonymous, 1978). The merger was upon conditions that reflected the dominant position of the AAQ. Its existing constitution was effectively unchanged. We dare say that Arthur experienced some personal satisfaction from this turn of events. A new name, the Astronomical Association of Queensland was adopted. For comparison purposes this is referenced here as the AAQ Mark II, but otherwise all later ‘AAQ’ references after 1978 refer to the new body.

On 15 April 1978 the newly formed AAQ held its monthly meeting at Mt. Tamborine Observatory in conjunction with a barbecue and observing night, and 76 persons attended.

The merger then necessitated the dissolution of the existing bodies and registration of the new one. Arthur Page was destined to become President again, of this new and current body, between 1981 and 1983.

Meanwhile, on the observational front, in 1978 he contributed observations of Comet Bradfield (Page et al., 1978; Schuster et al., 1978).

When in Europe in 1979 Arthur attended the 28 November meeting of the BAA in London where he described Mt. Tamborine Observatory and its flare star research. This subsequently was published in the Society’s Journal (see Journal of the British Astronomical Association, 1980). A paper by Arthur and Beres Page on “Multiple Exposure Techniques in Flare Star Photography” had been published in an earlier issue of the JBAA (Page and Page, 1968).

In 1980 Arthur was invited to become a founding member of the IAPPP. He also presented an oral paper at the 9th National Australian Convention of Amateur Astronomers (NACAA) in Geelong on the behaviour of EX Hydrae. In addition, over coming years a number of flares were recorded during international multiwavelength programs, and these resulted in further publications (Nelson et al., 1979; Slee et al., 1984; Wright et al., 1987).

Arthur was first introduced to computers by Ken Jackson, a UQ staffer and AAQ member, and in 1981 he submitted a grant application to the CSIRO for a computer and printer. This was successful, and later that year AAQ member Gary Neilson interfaced the computer with the Mt. Tamborine Observatory photometer (Page, 1982c). This allowed all flares observed photoelectrically to be instantly downloaded onto the computer. In 1987 a grant of A$4,200 was obtained to upgrade the computer system (Rhoades, 2005: 10), and “... a completely revised photo electric data logging system was made with the assistance of the UQ Department of Physics.” (Page, 1993b: 51).

Arthur co-authored IAU Circulars in 1981 reporting the discovery of a nova in the Large Magellanic Cloud (Maza et al., 1981) and in 1987 concerning a supernova in NGC 7606 (McNaught et al., 1987).

Arthur was the convenor of the 10th NACAA which was held in Brisbane in 1982 during his AAQ presidency (see Figure 14). He presented a paper about the optical observation of flare stars at this convention (Page, 1982d).

In 1982 Arthur also chaired a workshop on photoelectric astronomy, which was held by the IAPPP as the Second New Zealand Photoelectric Symposium at Carter Observatory in Wellington (Page, 1982b). That same year, UQ BSc Honours student Brad Carter fitted a stepper motor filter controller to the Mt. Tamborine Observatory photometer in his search for stellar flares. He then obtained a good UV Ceti flare to satisfy his requirements. He continued his flare star research at the Observatory, graduating in 1983. He was later awarded a PhD in 1988, his thesis topic being “Flare Stars of the Orion Nebula”.

On 15 June 1983 an occultation by Neptune of a 9.5 magnitude star was observed and recorded as part of an international collaboration (Vilas et al., 1983).

In Brisbane, the mid-1980s were proving turbulent times with personality differences arising within the AAQ. In Arthur’s case, these
principally stemmed from a supernova search charts project he had been involved in since 1977. These problems arose as a result of ethical issues involving specific prominent members of the society and resulted in considerable tensions that were only relieved by the departure of these members. Although the issues were resolved within a year or so of coming to a head, Arthur’s close relationship with the AAQ had suffered a significant blow. Thus, in 1984 he withdrew from active AAQ participation and did not submit an Annual Report to the AAQ in 1985, nor in any subsequent year until the early 1990s. But even when they were resumed, these Reports were very brief.

Apart from successful flare star observations (Page, 1988b) Arthur participated in the International Halley Watch for the forthcoming return of that comet (Page et al., 1988). During that apparition he welcomed many visitors to Mt. Tamborine Observatory and through their donations was able to raise $1500 for charity. An image of the comet taken from his Observatory on 10 March 1986 received wide publicity ("Up with the sparrows . . .", 1986) and appeared on the front page of the Brisbane ‘Courier Mail’ the following morning (see Figure 16).

During this period Arthur Page was working with Dr Kevin Jones from the Physics Department at the UQ researching open cluster flare stars using the Uppsala Southern Schmidt Telescope at Siding Spring Observatory, near Coonabarabran in northern New South Wales. On one occasion he was able to assist supernova discoverer the Reverend Bob Evans with an image and positional measurement of a new discovery. Arthur’s collaborative flare star research involved several visits to Siding Spring Observatory between December 1987 and July 1991. A number of suspected flare stars were found and one star was observed to increase by five photographic magnitudes during a massive flare! Then in March 1989 Arthur addressed the Third New Zealand Photoelectric Conference at Blenheim and presented a paper with Keith Jones on a large outburst from a suspected southern cluster flare star near IC2391. Three papers were ultimately published as a result of this research collaboration (Jones and Page, 1991a; 1991b; Page et al., 1988).

In July 1987 Arthur was interviewed by Drs O’Mara and Stacey from the UQ and as a result he accepted an honorary position with the Department of Physics. From that time onwards, Arthur worked as an Honorary Research Consultant of the University and could publish in the name of the University.

Following this appointment, his publication output increased. Thus, in 1988 the AAQ was advised that Arthur had produced two new publications: The Atlas of Flare Stars Within the Solar Neighbourhood, containing 86 charts (Page, 1988c), and Field Charts of Nova Searches (Page, 1988a). He noted that “The atlas represents the pinnacle of five years work in the field of flare stars.” (Page, 1988c). More results were presented to the Variable Star Section of the RASNZ (Page, 1985b; 1993a; Page and Neilson, 1991). A second edition of the nova search field charts was produced in 1989 (Page, 1989b).

In his President’s Report in the 1985 Annual Proceedings, Dr Bryan Bridge (1985) stated that the Mt. Tamborine Observatory continued to improve photoelectric equipment resulting in a very successful monitoring of flare stars, but without Arthur Page’s own report the inescapable conclusion is that by this stage Arthur was no longer taking an active part in Association affairs.

At Christmas time in 1985 Arthur received congratulations on his election to membership of the IAU, the world’s leading body of professional astronomers. At the same time, he also became a member of the IAU Commission on Photoelectric Astronomy.

Figure 14: Arthur (on the left) presenting an award at the Brisbane 1982 10th NACAA to Bill Bradfield, the famous comet discoverer (from the cover of the 1982 AAQ Annual Proceedings).

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Also in 1988 Arthur contributed observations of Pluto during its occultation of a star on 9 June that helped refine Pluto’s radius and demonstrate that it had an atmosphere (Kilmarin et al., 1988; Millis et al., 1988; cf. Millis et al., 1993). It was fortuitous that the track at Mt. Tamborine was directly aligned across the equator of the planet to produce the longest chord.

In 1988 the prominent English amateur astronomer Dr Patrick Moore (1923–2012; Mobberley, 2013) also visited Arthur’s observatory during Brisbane’s ‘Expo 88’, as part of a national tour. He was but one of a number of prominent astronomers who visited Mt. Tamborine Observatory over the years.7

Figure 15: Arthur Page at the Mt. Tamborine telescopes in the 1980s (photograph: Greg Bond).
Figure 16: Mt. Tamborine Observatory group and the 1986 “Halley Newspaper article” (courtesy: Greg Bond).

Between 1986 and 1989 Arthur addressed the AAQ General Meetings on four occasions. Two of the lectures related to his research: “Nova Search” (November 1988) and “Discovery of Flare Stars Photographically” (April 1989). The other two were of a more popular nature: “The Star of Bethlehem” (October 1986) and “A Spider in the Sky” (August 1987).

The Edward Corbould Research Fund was established in 1988 by a grant from a Sunshine Coast property developer. The administration of this fund was the primary function of the Research Committee of the AAQ, and for a considerable period Arthur was the Chairman, Secretary, or a Committee Member of this Fund. In 1990 he was awarded a grant of $2,300 from the Fund to purchase a photomultiplier tube for Mt. Tamborine Observatory (Ward, 1990).

Dr Shinohara, a Japanese astrophysicist from the University of Kamazawa and an expert on T Tauri and Herbig–Haro objects, collaborated with Mt. Tamborine Observatory during 1990 in a search for southern cluster flare stars (Page, 1990).

The following year, Arthur was elected an Honorary Fellow of the Australian Institute of Physics. He also presented a poster paper at the October Annual General Meeting of the ASA on “Continuation of the search for cluster flare stars.” This research, using the Uppsala Schmidt Telescope at Siding Spring, extended from 1987 to 1990. In 1991 two probable flares from AU Mic were recorded during an international program that included the Hubble Space Telescope. From 1990, the automated blink comparator constructed for the Physics Department at the UQ was used to measure stellar images on Uppsala Schmidt Telescope plates and identify suspected variable stars (Thomas et al., 1994). Arthur then co-authored a paper on automated telescopes for photometry and imaging in Australia (Carter et al., 1992).

In 1992, Arthur Page was awarded Honorary Life Membership of the AAQ upon his 70th birthday. It was fittingly presented to him by his colleague Greg Bond, who was President at the time (see Figure 17).

9 THE END OF AN ERA: FROM MT. TAMBORINE TO MT KENT

But in its turn, Mt. Tamborine Observatory was becoming unsuitable for the observations that were being carried out and a new approach was necessary. In 1989 Arthur’s UQ colleague, Dr Jim O’Mara approached the Physics Department at the Darling Downs Institute...
of Advanced Education (soon to become the University of Southern Queensland, or USQ) about a joint venture to build a 34-cm Cassegrain robotic telescope which would be housed at an observatory site that USQ were hoping to develop. This venture was supported by John Mainstone, Professor of Physics at UQ.

Site inspections were conducted by Jim O’Mara and USQ staff to the west of Brisbane, at Leyburn (either initially or as a possible future replacement site for a larger telescope because of its darker skies), and at Mt Kent, to the southwest of USQ’s main campus in the city of Toowoomba (see Figure 3 for these localities). The USQ had already used Mt Kent as a ‘dark sky site’ for some time, but only employed portable telescopes there. Arthur had a role in discussing Mt Kent and other potential sites, and Mt Kent was ultimately chosen for the permanent facility because of existing infrastructure, including an access road and electric power as a result of a hilltop Telstra communications tower. The robotic telescope project progressed, and a curious rotating octagonal observatory was built for that purpose and remains on site and functional to this day.

Arthur’s 1993 publication about the History of Mt Tamborine Observatory concludes with the following paragraph:

Plans have been instituted for Arthur Page to construct two Schmidt telescopes for Mt. Kent Observatory. This will include the refurbishing of the author’s original f/3 0.2m/0.3m instrument, and as well a new 0.225m/0.36m f/3 larger Schmidt. Work on these will commence in the near future. When completed, they will be used for student projects at the new Mt Kent Observatory (Page, 1993b).

By 1993, the value of Mt. Tamborine as an astronomical observatory for Milky Way studies had degraded considerably. A new television tower two and a half times the height of the original one had been erected alongside and light pollution from the expanding Gold Coast region had become very obtrusive. Consequently, the Observatory was closed down and the telescope, hardware, and library were all donated to the Physics Department at the UQ and moved on 2 December 1993 (ibid.).

As part of the USQ/UQ joint venture, a separate agreement was reached to relocate Arthur’s Mt. Tamborine telescope to a dome purchased and established at the USQ site. Prior to the closure of Mt. Tamborine Observatory in June 1993, Arthur and Aileen Page moved to Toowoomba in view of the imminent relocation of his telescope to nearby Mt Kent Observatory. However, this was a two-step process. In late September 1992 the Pages moved their residence to Mt. Tamborine from
17 Hillhouse Street, Aspley, in Brisbane, and on 6 June 1993 they moved to Toowoomba upon completion of a new block of home units at 70 Herries Street that were being developed by Aileen.

In his report to the AAQ about these transfer arrangements Arthur stated:

The Physics Department UQ is arranging for a new dome to be erected at Mt Kent to house the instruments after refurbishment. They hope to obtain a 0.4 metre Cassegrain system – to be installed in a new dome to be called ‘The Tamborine Dome’. (Page 1993).

Soon after, Arthur Page was presented with an Honorary Doctor of Philosophy degree “… for his decades of flare star research.” (Carter et al., 2013) by the Chancellor of the UQ, Sir Llewellyn Edwards, at a ceremony held on 16 December 1994 (see Figure 18).

UQ then purchased a Colin Blumson dome for the Mt Kent site and UQ staff started assembling a 16-inch (0.4-m) f/13.5 reflector with classical Cassegrain optics that would replace the 12.5-inch optics. The Wray astrograph, stopped down to 8 inches, was refitted to the telescope. Extensive mechanical work was done on the mounting. The instruments were in place in their new fibreglass dome in time for the official opening of the Mt Kent complex on 10 July 1996 as part of the trans-Tasman Photoelectric Photometry 5 Conference, which was held at USQ (Page et al., 1996). The formal opening ceremony was carried out by Professor Donald S. Matheson, Emeritus Professor of Astronomy at the Australian National University and a Vice-President of the IAU (see Figure 19). Professor Brad Carter advised that the 16-inch telescope was intended for a variety of observing programs—photoelectric photometry and visual observing. This would include flare stars and eclipsing binaries. At the time, Arthur (Figure 20) was quite upbeat about the future (Page, 1996).

Mt Kent continues to provide an astronomy research and education facility (see https://en.wikipedia.org/wiki/Mount_Kent_Observatory). However, teething problems with the new Tamborine mount and drive were never resolved, and it would appear that Arthur Page was not able to conduct any significant research with the relocated instruments at Mt Kent following the close-down of Mt Tamborine Observatory in 1993.
Figure 19: Arthur Page with a telescope at the time of the Mt Kent Observatory opening (Anderson Collection).

Figure 20: Arthur Page with German visitors at Mt Kent Observatory in 1997 (Anderson Collection).
Thereafter, there was no report for the AAQ \textit{Annual Proceedings} from Arthur until 1999 when he references the Mt Kent Observatory (Tamborine Telescope). The report then relates to refurbishing the 12.5-inch telescope but states that the new 16-inch Cassegrain telescope (housed in a new fibreglass dome), displays superb definition!

10 THE TWILIGHT YEARS

During the period following the 1996 installation at Mt Kent and until the time of his death in 2011, Arthur Page is reported to have become increasingly depressed about what had happened to his equipment, and the stark reality that there was nothing he could do about it. The UQ had originally been very supportive of developing Mt Kent, but after senior staffing changes, funding was applied to other projects and priorities. UQ’s involvement, interest, and support then diminished. As a result, despite Arthur’s best efforts, the telescopes were never again operational and used for research. And because the equipment was no longer his, there was little that he could do about it.

In 1999 Arthur’s son, Robert, and his daughter, Merry, returned from the United Kingdom after having been abroad for more than two decades and they settled in Forest Lake, a Brisbane suburb (see Figure 2), and Aileen’s daughter, Samantha (Sam), also returned from Sydney. Family reasons would then have played a part in Arthur’s decision to relocate from Toowoomba to Forest Lake after having resided in Toowoomba for six frustrating years. The instrumentation problems at Mt Kent Observatory had not been adequately addressed since 1996 and there appeared to be little that Arthur could achieve by remaining in Toowoomba. And so the move back to Brisbane was made.

In 2000 Arthur prepared a short report for the Corbould Fund regarding the photomultiplier tube for which he had received a grant some years earlier. No observations had been made but systems were being checked, and telescope tracking errors remained an issue. Thus, four years after installation the tracking problems had still not been fixed. Arthur’s listed address was a Post Office Box in Forest Lake, and he and Aileen had moved to a home at 13 Montego Way, Forest Lake (where he remained until his death in February 2011).

In 2001 his report regarding the Corbould Fund grant was a mere five lines, and he commented that tracking problems were still an issue. Arthur did not submit a report in the following few years.

We understand that eventually the Mt Kent telescope was removed from the dome and the mounting was dismantled. In 2007 Greg Bond’s report states:

In July, Tony Dutton and I helped the University of Southern Queensland, [which by now had sole control of the Mt Kent site], with the setting up of Arthur Page’s observatory which had been moved from Mt Kent to a position on the edge of one of the playing fields on the USQ campus [in Toowoomba].

In 2008 the IAU reported that it had named Asteroid 11516 ‘Arthur Page’ in his honour.

The first author of this paper was President of the AAQ when Arthur attended the Annual General Meeting in February 2009 and presented the Association with a copy of his recently published book \textit{Between Victor and Vanquished}, about his World War II experiences (Figure 21). This book had been a major effort for Arthur so late in life, and it brought to the fore many harrowing incidents. Nonetheless, to his credit Arthur had persevered, and his wartime history is now recorded for posterity. Both authors of this paper have copies, and we highly recommend this entertaining read.

There were no references to Arthur’s astronomical activities in the 2009 and 2010 AAQ \textit{Annual Proceedings}.

Apart from astronomy and military history, Arthur maintained an interest in clay target shooting, in which he was very proficient. He was a long-time member of the Sporting Shooters Association of Australia, and even represented Queensland in the Australian National Clay Target Championships. In fact, he is reported to have pursued this interest until a few months before his death.

During his life, Arthur also developed a deep interest in Freemasonry, and he held various positions in the Grand Lodge (Queensland), with an achievement in reaching the ultimate 33rd degree.

As can be seen, Arthur maintained a number of parallel ‘lives’, and contributed much to each. We have simply chosen to focus on one of these ‘lives’ in this paper.

At the end of December 2010, together with several other long-term friends, the first author of this paper visited a seriously ill Arthur Page at the Greenslopes Repatriation Hospital. The prognosis was not good but he was keen to survive so that he could attend the 2012 NACAA, which was to be held in Brisbane.
Some days later he was sent home, as little more could be done. It was just a matter of time. In order to provide a distraction, PA suggested that Arthur might like to write a history of his astronomical life. After all, he had written Between Victor and Vanquished several years earlier about his wartime exploits, so why not a book on his astronomical experiences and achievements? He replied expressing interest, but it was not to be. Although still outwardly in reasonable health, his condition deteriorated on 28 January and he died on the morning of 1 February 2011 with his daughter Merry at his bedside. He was 6 months short of his 90th birthday. His funeral on 9 February was well attended with mourners from all facets of his long and productive life.

Later, the AAQ received a collection of library books from his estate.

11 DISCUSSION

The story may be over but the legacy remains. Arthur Page stands tall as a dedicated amateur astronomer who carefully developed and honed his skills to reach and maintain a professional standard in his chosen field for three decades, publishing more than fifty papers and monographs, including star catalogues, as listed in Section 15 below. Through his astronomical research he was respected internationally, as indicated by the awards he received.

Over the years, he encouraged many amateur astronomers to take up variable star observing. He also inspired and guided people who took up a lifelong interest or career. One notable example is Professor Brad Carter, now Head of Astronomy at USQ, long an enthusiast, who carried out his BSc Honours research project at Mt. Tamborine Observatory under Arthur's guidance.

The American Astronomical Society obituary states:

Arthur is honoured at Mt. Kent through the Arthur Page dome. While the original ‘Page Telescope’ from Mt Tamborine has been taken off-site, the replacement ‘Louisville’ telescope has been dubbed by some: the ‘Arthur Page’ telescope.

Ironically, there has recently been an elevated interest at Mt. Tamborine in restoring the original observatory and installing instruments there.9

In Arthur's honour, the AAQ has instituted
an annual ‘Arthur Page Lecture’ with an invited guest speaker. Meanwhile, the 2012 Annual Proceedings of the Astronomical Association of Queensland reported that ‘The Berenice Page Research Fund’ had been renamed the ‘Arthur and Berenice Page Research Fund’ after Arthur’s death. This fund was transferred to the ASA for the award and medal issued by that Society at every biennial NACAA convention. The website of the ASA elaborates:

The Berenice Page Medal was inaugurated by the Astronomical Society of Australia in 1972 in memory of Mrs Berenice Page, an exceptional amateur astronomer and foundation member of the Society. Although amateur astronomers, Berenice and her husband Arthur, were readily accepted into the Society because of the indispensible part they played in the IAU Flare Star Programme in the 1960’s. Arthur Page remained an ASA member until his death in 2011 and, with his family’s agreement, the Society renamed the medal as the Berenice and Arthur Page Medal. The medal is generally awarded biennially for scientific contributions by an amateur astronomer that has served to advance astronomy.

12 CONCLUDING REMARKS

We should note that aspects of Arthur’s research were significantly hampered during his lifetime. Self-funding his instrumentation and research projects was not always possible, so there was often a reliance on grants and support provided by an academic or research institution. However, generally this support appears to have been based on assurances and verbal agreements and not on any formal arrangements that were binding on all parties. Consequently, delays or non-completion due to or caused by changing institutional priorities and staffing would inevitably have an impact. Here are two examples that were mentioned earlier in this paper:

1. The new telescope mounting proposed by CSIRO’s Bruce Sleee in December 1970 could not be completed until August 1978, with the major work having to be done locally. It was then not in operation until March 1979, a delay of over 8 years. Fortunately, Arthur could continue his research projects in the interim using existing instrumentation.

2. Even though the upgraded and relocated Mt. Tamborine instruments were installed at the Mt Kent site by July 1996 (after a two and a half year delay), they were never again operational because of a lack of funding for essential final adjustments. As the equipment had already been donated to the University by Arthur and thus was beyond his control, this put a stop to all further research.

It is a great pity that the constant flow of research, so effectively commenced with the establishment of Chermside Observatory in 1965 and continued at Mt. Tamborine Observatory from 1973 to 1993, effectively came to a grinding halt. As previously detailed, changing priorities meant that the significant shortcomings in the mounting and drive of the new Mt Kent telescope were not addressed, even though in 1996 the basics were already in place on site at Mt Kent—namely, the instrument, the observatory, and its astronomer. Professor Brad Carter, elaborates (pers. comm., 2020):

The problems with the UQ 16” (0.4-m) telescope arose from a combination of a narrow optical field of view and a mount incapable of accurate and reliable pointing and tracking, and suggests the difficulty of developing from scratch all the mechanics, electronics and software needed for a research telescope. With the untimely death of UQ astrophysicist Dr Jim O’Mara, UQ’s involvement in Mt Kent Observatory largely disappeared, and USQ has since developed and operated Mt Kent Observatory.

Professional astronomy has a long history in Australia, and was especially strong in optical and radio astronomy by the time Arthur Page appeared on the scene (Haynes et al., 1996; Orchiston, 2016; Orchiston et al., 2012). Unlike in neighbouring New Zealand where professional astronomy was slow to develop and leading amateur astronomers therefore were able to contribute in a meaningful way to astrophysics (Orchiston, 2017), most twentieth century Australian amateurs astronomers were marginalised. Arthur Page was one of the few exceptions and therefore occupies an unusual place in Australian astronomy.

The Canadian sociologist Professor Robert Stebbins has researched avocational astronomy and developed an international classification of amateur astronomers (Stebbins, 1980; 1981; 1982a; 1982b; 1987). Arthur Page clearly ranks as an ‘active astronomer’ who was a ‘devotee’, and he was also a ‘Master’ in that he published papers in professional astronomical journals, presented papers at international conferences, and was able to communicate effectively with professional astronomers working in his own chosen fields of research.
What is not clear is whether Arthur Page should also be seen as an ‘ATP’—an amateur–turned–professional—once he was appointed a University of Queensland Honorary Research Consultant in Astronomy and was armed with an honorary doctorate. The ATP syndrome was a conspicuous feature of New Zealand astronomy during the nineteenth and twentieth centuries (Orchiston, 2017) and also was found in late nineteenth century Australia (Orchiston, 2015). But during the twentieth century it was rarely in evidence in Australia following Nangle’s rise to the Sydney Observatory Directorship in 1925 (Wood, 1958). Yet Queensland was unusual in that two Brisbane amateur astronomers were able to transfer to professional ranks in 1977 and 1985 following the founding of the Sir Thomas Brisbane Planetarium in Brisbane (Anderson and Orchiston, 2021), so perhaps Arthur Page should be seen as yet another example of a SE Queensland amateur astronomer who was able to make the transition. But in his particular case the boundaries of amateur and professional astronomy are blurred, so he remains an enigma.

13 NOTES

1. Unless stated otherwise, all ‘Page’ references listed in this paper relate specifically to Arthur Page, or A.A. Page as he wished to be known from 1967 when he began publishing in national and international astronomical journals.

2. Nor was Arthur alone in this, for we understand that other leading Australian amateur astronomers found exactly the same thing.

3. By a happy coincidence, the second author of this paper also was using an almost identical equatorially mounted refractor (it was 3.65 inches aperture) for his observing, in Sydney, at precisely the same time (in 1960). However this latter telescope was not home-made but was an historic instrument on loan from the New South Wales Branch of the BAA, and it lacked a drive.

4. Later the Schmidt was masked off to 0.0175m because of a turned down edge on the corrector plate.

5. During the 1960s the second author of this paper worked at the CSIRO’s Division of Radiophysics, in the Solar Group, which was then headed by Paul Wild. From time to time WO also assisted Bruce Slee in his quest to detect radio emission from flare stars.

6. By a happy coincidence, the second author of this paper also was elected to IAU membership at exactly the same time.

7. Patrick Moore also visited the observatory of PA, the first author of this paper, where there was informal gathering so that Patrick could meet local amateur astronomers. Patrick’s Brisbane visit was well covered by the local media.

8. Don Mathewson was a radio astronomer who was at the Division of Radiophysics when the second author of this paper worked there. Later, Don transferred to optical astronomy and became the Director of Mt Stromlo and Siding Spring Observatories. In 1985 he arranged for WO to spend his sabbatical leave at the Observatories.

9. In hindsight it has been suggested by Greg Bond that with the advances in CCD technology the observatory could well have continued. The new TV tower was not fitted with a blinking red light, although the problem of orographic cloud and rainfall and increasing light pollution and air traffic remained.

14 ACKNOWLEDGEMENTS

We are particularly grateful for the assistance provided by Greg Bond who was closely associated with Arthur Page from the 1980s, while Professor Brad Carter, Ken Mottram, and Des Janke from the USQ all supplied valuable information about Arthur’s Toowoomba years. Arthur’s stepdaughter, Samantha Goddard, was also of great assistance on family matters.

Finally, we wish to thank the referees for their helpful comments, and Greg Bond, for kindly supplying Figures 12, 15, 16, and 17, and John Salini for Figure 21.

15 REFERENCES

AAQ Annual Proceedings, cover photograph (1982).
Transits. Cham (Switzerland), Springer.

Orchiston, W., 2017. John Tebbutt: Rebuilding and Strengthening the Foundations of Australian Astronomy. Cham (Switzerland), Springer.


Page, A.A., 1982a. Catalogue, Spectrum and Magnitude Data Bank of B(e), B(p) and B(pe) Stars. Centre De Donnees Stellaires, Strasbourg Observatory, France.


Peter Anderson (born 1942) has been an active amateur astronomer since 1958. Operating from Brisbane, Australia, he established his observatory in 1980 atop a ridge running off Mt Coot-tha, the highest feature in the immediate Brisbane area. From there, with a 41-cm Newtonian reflector and a range of smaller telescopes he has conducted systematic observations, mainly of lunar, and to a lesser degree, asteroidal occultations of stars. To date, around 10,500 lunar occultations have been reported, initially to Her Majesty’s Nautical Almanac Office in England, then to the International Lunar Occultation Centre in Japan, and subsequently to the International Occultation Timing Association (which is based in the USA). Peter has also made a range of other observations over the past 60 years or so. As one example, during the 1980s he collaborated with the Reverend Bob Evans by providing photographic investigation or confirmation of suspected supernova for this well-known Australian visual discoverer.

A member of the British Astronomical Association since 1969, Peter actively contributes to several sections of that organisation. As a part of the local astronomical community, he has been President of the Astronomical Association of Queensland and its predecessors on five occasions since 1966.

In addition to active participation in astronomical tourism, especially to observe total solar eclipses, Peter also lectured on astronomical topics on cruise ships for nine years between 2009 and 2018. As a consequence of the foregoing there has been the opportunity to visit many observatories and installations around the world. He has contributed many articles and images that were published in astronomical journals and magazines. Recent articles have also dealt with the optical performance and application of popular amateur instruments and accessories.

Peter also maintains a strong interest in the history of Queensland astronomy and in recent years has conducted original research into the history of astronomy in Southeast Queensland. To date, he has published several research papers in collaboration with Wayne Orchiston.

Professor Wayne Orchiston was born in Auckland (New Zealand) in 1943, and has a BA First Class Honours and a PhD from the University of Sydney. He is employed by the University of Science and Technology of China in Hefei as the Co-editor of the Journal of Astronomical History and Heritage. He is also an Adjunct Professor of Astronomy in the Centre for Astrophysics at the University of Southern Queensland (USQ) in Toowoomba, Australia. Formerly, Wayne worked at the National Astronomical Research Institute of Thailand (Chiang Mai), James Cook University (JCU, Townsville, Australia), the Australia Telescope National Facility (Sydney), Carter Observatory (Wellington, New Zealand), Victoria College (now Deakin University, in Melbourne), and the CSIRO’s Division of Radiophysics in Sydney.

Over the past two decades Wayne has supervised more than 35 Master of Astronomy and PhD history of astronomy research projects through JCU, USQ and Western Sydney University.

Wayne has wide-ranging research interests and has published extensively, but mainly on historic transits of Venus; historic solar eclipses; historic telescopes and observatories; the emergence of astrophysics; the history of cometary and meteor astronomy; the astronomy of James Cook’s three voyages to the Pacific; amateur astronomy and the amateur–professional interface; the history of meteoritics; Indian, Southeast Asian and Māori ethnoastronomy; and the history of radio astronomy. Since moving to Thailand in 2013 he has published extensively on aspects of Asian astronomical history. Meanwhile, this Arthur Page paper touches a soft spot, as in earlier years Wayne was a keen amateur astronomer, and an avid naked eye and p.e.p. observer of variable stars. He also was very active in (predominantly) amateur astronomical societies in Australia and New Zealand and served as the President of the BAA New South Wales Branch in Sydney and the Astronomical Society of Victoria in Melbourne.

Recent books by Wayne include Exploring the History of New Zealand Astronomy... (2016, Springer); John Tebbutt: Rebuilding and Strengthening the Foundations of Australian Astronomy (2017, Springer); The Emergence of Astrophysics in Asia ... (2017, Springer, co-edited by Tsuko Nakamura); Exploring the History of Southeast Asian Astronomy ... (2021, Springer, co-edited by Mayank Vahia) and Golden Years of Australian Radio Astronomy ... (2021, Springer, co-authored by Peter Robertson and Woody Sullivan). In addition, Wayne has edited or co-edited a succession of conference proceedings.

Since 1985 Wayne has been a member of the IAU, and he is a Past President of Commission C3 (History of Astronomy). In 2003 he founded the IAU’s Historical Radio Astronomy Working Group, and is the current Radio Astronomy Subject Editor of Springer’s Biographical Encyclopedia of Astronomers, Volume 3. He also founded the IAU Working Group on Historic Transits of Venus, and is the Founding Chair of the History & Heritage Working Group of the SE Asian Astronomy Network and Director of the Historical Section of the Royal Astronomical Society of New Zealand.
In 1998 Wayne co-founded the *Journal of Astronomical History and Heritage*, and was the Managing Editor until 31 July 2022 when he passed ownership of the journal to the University of Science and Technology of China. In 2013 the IAU named minor planet 48471 ‘Orchiston’, and in 2019 he and Dr Stella Cottam were co-recipients of the American Astronomical Society Historical Astronomy Division’s Donald E. Osterbrock Book Prize for their 2015 Springer book, *Eclipses, Transits and Comets of the Nineteenth Century: How America’s Perception of the Skies Changed*. In 2023 Springer published the following Festschrift: Gullberg, S., and Robertson, P. (eds.), *Essays in Astronomical History and Heritage: A Tribute to Wayne Orchiston on His 80th Birthday*. In June 2023 Wayne was elected an Honorary Member of the the Royal Astronomical Society of New Zealand (one of only three in the world), and in January 2024 he will go to New Orleans and receive the American Astronomical Society Historical Astronomy Division’s highest award, the 2024 Le Roy Doggett Prize for Historical Astronomy.

Wayne and his wife (his part-time Research Assistant), Darunee Linlging Orchiston, live in a quiet village about 1 hour by road from Chiang Mai, in far northern Thailand. When not involved in astronomy Wayne enjoys gardening and cycling, and following international motor racing and New Zealand athletics.