Obituary

Donald C. Parker, 1939–2015

With the passing on February 22 of Dr Donald C. Parker we have lost one of the most successful pioneers of telescopic CCD imaging of the planets.

Don Parker was born on 1939 January 28 in Urbana, Illinois, USA, and grew up in Highland Park, Illinois. He became interested in astronomy after a visit to the Adler Planetarium in Chicago at the age of seven, and in the early 1950s he assembled a reflecting telescope of 20 cm aperture using optics by Cave Optical. He was ready for the 1956 perihelic opposition of Mars, and it would be Mars – initially through the reading of Ray Bradbury's *Martian Chronicles* – that interested him more than any other planet.

He graduated from St Louis University, and from medical school, married his wife Maureen, served two years in the US Navy as a hospital doctor and moved to Miami some 50 years ago. There he made his career as a hospital anaesthesiologist. At that time Parker was a keen scuba diver, and this motivated a particular interest in respiratory physiology.

Parker contributed to the Mars Section of the Association of Lunar and Planetary Observers (ALPO) from 1973 onwards, at first visually and then photographically. He succeeded Charles ('Chick') Capen in the role of Mars Recorder in 1984. He was aided in this new role by J. D. Beish and other ALPO members, turning his attention to long-term changes in the polar caps, and to meteorological statistics. Capen himself was an excellent planetary photographer, and Parker always acknowledged him as his early mentor.

Image of Mars taken by Don Parker with a ST9XE camera on the 410mm refl., 2003 Sept 8, CML= 287°, in very good seeing. Note the Mountains of Mitchell detached from the S. polar cap, and the masses of fine detail within the planet's albedo features.

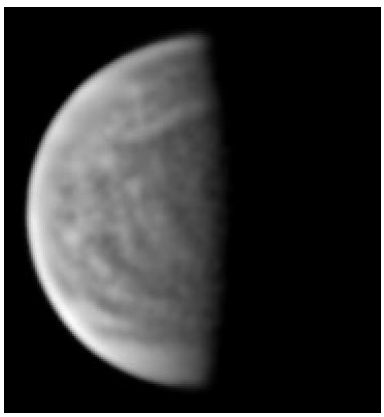
He joined the BAA in 1986, and after a short break, re-joined in 1996. He continued to be one of the ALPO's Mars Recorders up to the time of his death, and also served a term as ALPO President.

By the early 1980s Parker was well-known for his work, with many of his photos published in books, popular magazine articles and collaborative papers with professional astronomers such as Dr Leonard Martin from the Lowell Observatory (the latter taking a keen interest in the ALPO's Mars Section records). The book *Introduction to Observing and Photographing the Solar System*, which Parker co-authored with Charles Capen and Tom Dobbins, was very well-regarded.

Don Parker with his 410mm reflector (from the 1990s).

In the 1980s, Parker was one of the leading pioneers of planetary photography with Kodak's 'miracle film' TP 2415, a fine-grained yet highly responsive emulsion which for the first time enabled more detail to be photographed than could be seen visually. In conjunction with his 0.41m Newtonian (in operation from 1988) and 0.41m Schmidt–Cassegrain, Parker was able to produce remarkable portraits of the planets. Parker 'hypered' the emulsion with hydrogen gas, and his favourite developer was rather dilute Rodinal, with which he secured excellent negatives for making prints. He had a knack for producing prints that were not too contrasty, and these seemed to give the best reproduction in the magazines and journals of that time. Parker's well-practised darkroom techniques included the advanced and very exacting business of image-stacking, so when the webcam revolution arrived a few decades later he was particularly well-placed to appreciate and exploit its lessons.

Living at a low-latitude site in a suburb of Miami was a great help in planetary work, in which seeing quality rather than artificial lighting is the enemy, and Parker was able to watch a planetary apparition over a longer period of time than many others could manage. He maintained a punishing observing schedule, including much early morning work, and as a result he would often be the first to spot some new planetary phenomenon such as a dust storm on Mars or a white spot on Saturn. His photographs of Jupiter in 1985 and of Mars in 1988 were of superb quality.



Superbly detailed ultraviolet (355nm) image of Venus taken by Don Parker with a Skynyx 2-0 camera and a 254mm refl., 2008 Dec 28, 20:04UT, in excellent seeing.

However, living on the eastern seaboard of the USA, he sometimes had to contend with incoming hurricanes, and in the autumn of 1992 Hurricane Andrew removed the roof from his house, as well as causing much devastation locally. He later recalled that hot and humid Miami summer when in the absence of air-conditioning he was obliged to sleep outside, but always with a revolver under his pillow to deter looters. The hurricane also wrecked his darkroom, and at that point he switched over completely to electronic imaging.

Thus Parker became a pioneer of the second imaging revolution. Planetary work now took a different direction when (initially in conjunction with Richard Berry) he began systematic imaging with a CCD camera (though he had already done some excellent CCD colour filter work on Jupiter in 1991). In those days one took many single frames and simply picked the best. Before the widespread use of the internet for distributing images and other information, these precious results had to be stored on floppy disks and sent to organisations such as the BAA and ALPO by post.

The third revolution came soon after 2000: using webcams in conjunction with commercial software such as

Registax, for selecting and stacking the best frames. Parker was one of the first to adopt this technology, and by the time of the great perihelic opposition of Mars in 2003 he was one of a growing number of amateurs who were generating first-class images. The webcam revolution would change the face of amateur astronomy.

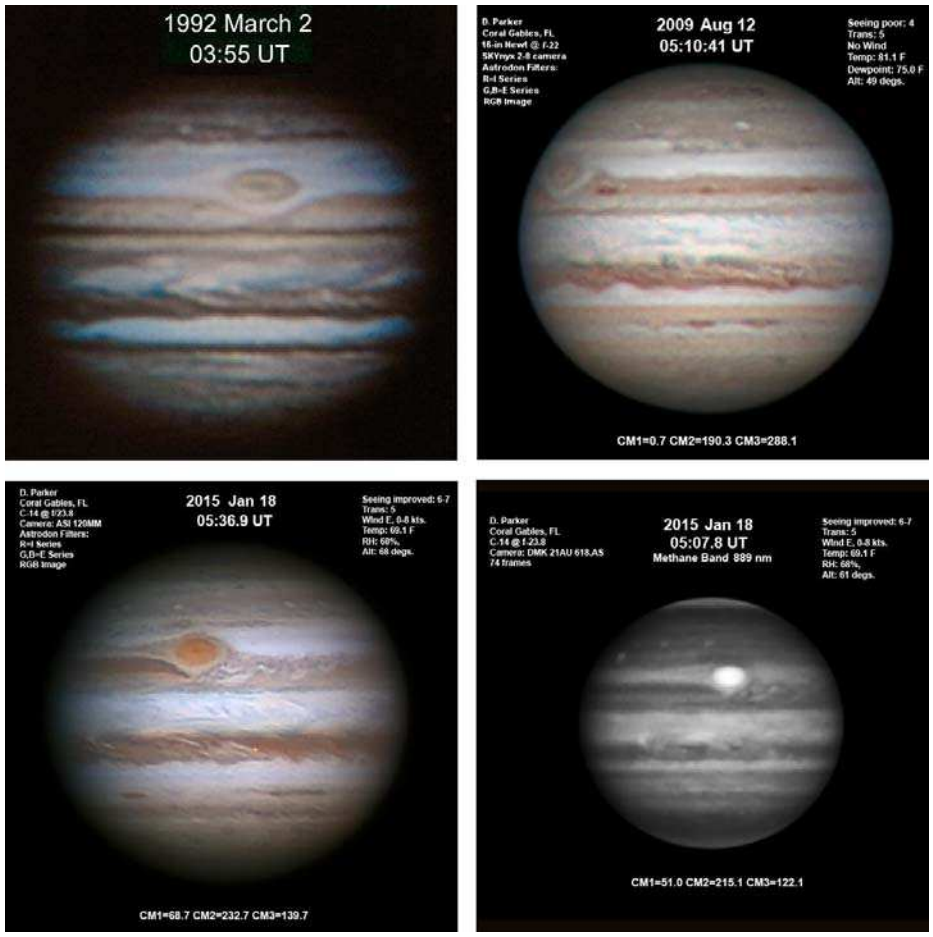
Parker's images were always in great demand by BAA Section Directors, ALPO Recorders, NASA and professional astronomers. He was one of the amateurs most respected by professional planetary scientists, and was co-author of a letter to the journal *Nature* on the subject of an abnormally high martian cloud only a few weeks before his death.

One of us (RM) had the pleasure of meeting Parker at a Pro-Am Mars conference in Tucson, Arizona in 1997 at which we were both speakers. Although he was a very serious astronomer, Parker was a warm and friendly man, well described as having been 'larger than life'. He had a legendary sense of humour which had to be experienced to be appreciated, and telling jokes against himself was all part of his ritual. Parker never tried to hide any aspect of his imaging skills, and he freely passed on advice to others. An observer totally new to imaging at the last Mars apparition recently told RM how he had received an encouraging email from Parker, right out of the blue, complimenting him upon his work.

Parker was supported in all his activities by his wife Maureen and their children. Maureen tragically died a few years ago, but he was able to carry on for a time with his astronomical pursuits, though by then he was suffering from mobility problems. In his final year, he was diagnosed with lung cancer. He was still able to make good images during the 2014 Mars opposition. In 2015 February he was able to attend the Florida Keys Winter Star Party – an annual event which was a regular date in his diary – and again spoke at the meeting, giving a retrospective on his entire life. Very shortly afterwards he was admitted to hospital with acute pancreatitis, and his death a few days later on the evening of February 22, surrounded by his three children and six grandchildren, came as a real blow to his many friends and colleagues. He was able to joke with his relatives just minutes before he died, and his final words were typical of the man: 'This will be interesting.'

He received appropriate recognition for his work. In 1994, the IAU named asteroid 5392 Parker in recognition of his contributions to solar system astronomy. His awards and medals include the Amateur Achievement Award from the Astronomical Society of the Pacific, the Leslie Peltier Award from the Astronomical League, and the gold medal of the Oriental Astronomical Association. He was honored by the ALPO with the Walter Haas Award, while the BAA honoured him with the Steavenson Award, for an outstanding observer, in 2003. We extend our sincere condolences to Don's family, particularly to his daughters Kathleen and Suzanne, and to his son Michael. Astronomy has lost one of its truly legendary figures.

Richard McKim & John Rogers



Four of Don Parker's Jupiter images:
Top left: **1992 March 2: One of his earliest colour-composite CCD images.**
Top right: **2009 Aug 12: One of his finest webcam images. The dark spot in the south polar region was an impact scar.**
Bottom left: **2015 Jan 18: Parker's last webcam image of Jupiter, showing details in the Great Red Spot.**
Bottom right: **2015 Jan 18: A companion image using a narrow-band 889nm filter to probe the methane absorption band, revealing the relative heights of the cloud-tops.**

The BAA Instrument Collection

The following instruments are currently available for loan:

- 5-inch f/11 SCT by Celestron
- 8-inch SCT by Meade
- 6-inch f/5 Newtonian reflector by Celestron
- 90-mm f/13.8 Meade ETX
- 150-mm Newtonian reflector by Tal
- 200-mm Schmidt camera by Celestron
- 10-inch Newtonian reflector, Dobsonian mount
- 100-mm f/13 Moonraker refractor by Turner

Additional specifications can be supplied on request. Older instruments are also available, but require refurbishment. For the conditions of loan, see *Regulations for the loan of instruments*, published in the 2014 December *Journal* (p. 347).

Further information on the instrument collection, including the *Regulations*, is available on the website of the Instruments and Imaging Section: **http://www.britastro.org/iandi/**. All enquiries and applications should be addressed to the undersigned.

R.A. Marriott, *Curator of Instruments*
[ram@hamal.demon.co.uk.Tel: 01604 765190]

The 100-mm f/13 Moonraker refractor by Turner.