and are the better for it, while others, such as Harland & Catchpole's *Creating the International Space Station* (2002), and the present book, do not. My advice to the series editor is to insist that, as serious technical books of hopefully lasting value, all books in the series include a full set of references to the primary literature.

None of this, however, detracts from the main value and timeliness of the book. Mars is within our grasp and, as Turner points out, there are many reasons, scientific, technological, and cultural, for wanting to visit it. The book outlines the main arguments for human Mars exploration fairly well (although I feel that the scientific reasons are in fact even stronger than as described). I certainly concur with the author's reply to those who argue that the money should be spent on 'better' things (p. 312) that all "not going to Mars will do is to contribute to human ignorance", and with his view of the educational and inspirational value of high-profile human space missions. In the latter context, he writes movingly that "it seems a pity to disappoint yet another generation by again allowing this dream to fade away." If only those responsible for UK space policy would take note! — IAN CRAWFORD.


The results of another Olympiad are carried in this tome, following the rekindling of the solar flame (polarized) at the Third International Workshop held in Tenerife, Canary Islands, in 2002 September/October, it being almost exactly four years since the last meeting of its kind was held — see my review of the 2nd meeting. This time around, the proceedings are presented in the familiar, white-backed ASP format. The workshop was divided into nine sections, resulting in 70 papers.

The aims of the solar polarimetrist are to advance the sensitivity of the measurements, to improve the spatial resolution at which the surface inhomogeneities are investigated, and to improve the inversion techniques for reducing the data to provide intelligent interpretation of the geometry and physics that produce the polarization signals. The major focus of solar spectro-polarimetry relates to the study of local magnetic fields within the photosphere, chromosphere, and corona, but other topics such as 'impact polarization' and 'resonance scattering' are also important. All these topics are well covered. As would be expected of workshop proceedings, the emphasis is on the current status of the subject and what the next steps are for instrumentation, Stokes-parameter inversions for magnetic-field diagnostics, radiative transfer involving polarization mechanisms, etc. It is not the place for looking back at achievements and there is no review of the chief advances since the previous meeting. One indication is provided on the cover, however, where a magnetogram of the quiet Sun displays the detailed magnetic polarities associated with the dark boundaries of granulation cells at an angular resolution of 0.5 arcsec.

A section is devoted to some aspects of stellar polarimetry, the topic much expanded relative to the previous workshops. Despite the title of one of the papers, none specifically relate to the possibility of making solar–stellar connections by polarimetry. Certainly the global polarization of the Sun will be exceedingly small and investigative studies so far of solar-type stars are not produc-
The stars discussed here, however, are known to be strongly magnetic or are peculiar. Magnetic Doppler-imaging techniques, although very important to the investigations of such stars, are unlikely to have any application to solar-type stellar studies. Although partially relevant to the polarimetric researches, this material contributed 70 pages to an already full 600-page book. Such discussions are perhaps more relevant in arenas more associated with stellar phenomenology and might be dropped at the next gathering.

From the nature of the subject material, it is self-evident that the presented papers are for a specialist readership, representing the current state of this expanding discipline. The editors are to be complimented on the fine production of the material. Only one very minor irritation was found, regarding the occasional use of ‘right quotation marks’ where ‘left’ ones should appear — in common with many other reports of conferences, some authors using \texttt{b'TiX} seem not to know the key procedures to achieve the “correct result”. — \textsc{David Clarke}.

\textit{Reference}

(1) D. Clarke, \textit{The Observatory}, 120, 278, 2000.


This slim, 24-page volume is a well-designed book aimed at the very beginner in astronomy, and is well suited for the school or college library. The book is divided into eight periods, early and late for each of the four seasons. Each section contains a sky chart covering the entire night sky for that period, a chart showing in detail a smaller area of sky (\textit{e.g.}, the Virgo cluster of galaxies, Orion’s belt, \textit{etc.}), and a written description of what can be seen over that period. All the charts are superbly clear, with colours chosen to maximize their visibility at night under a red light.

There is no physics in this book, and little description on individual astronomical objects, but the book describes in a general sense what can be seen ("looking like a W or an M, Cassiopeia the Queen sits on the opposite side of Polaris from Ursa Major."), and tells the mythological stories of the night sky ("[Cassiopeia] boasted of being beautiful, so to punish her vanity, the Gods chained her daughter Andromeda to a seaside rock, where Cetus, a sea monster, threatened her."). \textit{Exploring the Starry Sky} overviews these stories well — even the most experienced astronomer may learn some mythology from it.

In addition to this seasonal bulk of the book, there is a guide to planetary positions, meteor showers, and solar and lunar eclipses, but these sections only cover the years 2004, 2005, and 2006! The planetary positions are given as a monthly list indicating in which constellation the planet lies. This is rather unhelpful; the list does not help you decide when it is the best time to observe Mercury or Venus (\textit{i.e.}, when they are at greatest elongation), or when Mars is at its brightest. In addition, for the three years covered, Uranus is permanently in Aquarius, Neptune is permanently in Capricornus, and Pluto (almost) permanently in Serpens, and all are too faint for such a list to be of any use! A graphical representation of these data would have been much more useful.

Overall, it is a well-presented little book, which only touches the tip of what can be seen in the night sky, but this does keep it simple. — \textsc{Darren Baskill}. 

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