

MARCH SKY

By MALCOLM MILLER

Jupiter's swirling colours shine in the north-west

IS there life on other worlds? It seems strange that despite the marvellous discoveries in astronomy this century, and the vast increase in instrument power, we can't yet answer this basic question. What has defeated us so far is the sheer size and scale of the universe. Other stars are just too far away for us ever to see their planets from here although one day we may be able to detect them with certainty. Within our own solar system, we've had a close look only at a few square metres of Mars, and a few square metres of Venus. We know that Venus is too hot for the organised molecules of life to combine. Mars remains a mystery, but possible.

Both these planets are early morning objects. Indeed, Venus has

morning objects. Indeed, Venus has once again been identified as a "UFO" as it passed maximum brightness in February and viewers unused to its cycle of visibility couldn't believe it was just a nearby planet. On March 7, Mars and Venus will be at their closest for some time, but still separated by nearly eight degrees — 16 times the width of the full moon!

When two solar system objects are closest in the sky it is called a "conjunction". This is one of the words taken over from astrology by the early astronomers. The moon and Venus will be in conjunction on March 23, only two degrees apart. There will be a conjunction between the moon and Jupiter on March 5, when they pass at a distance of 4½ degrees. But these events have no astronomical importance. Two

astronomical importance. Two planets that appear close in the sky may be separated by a billion kilometres.

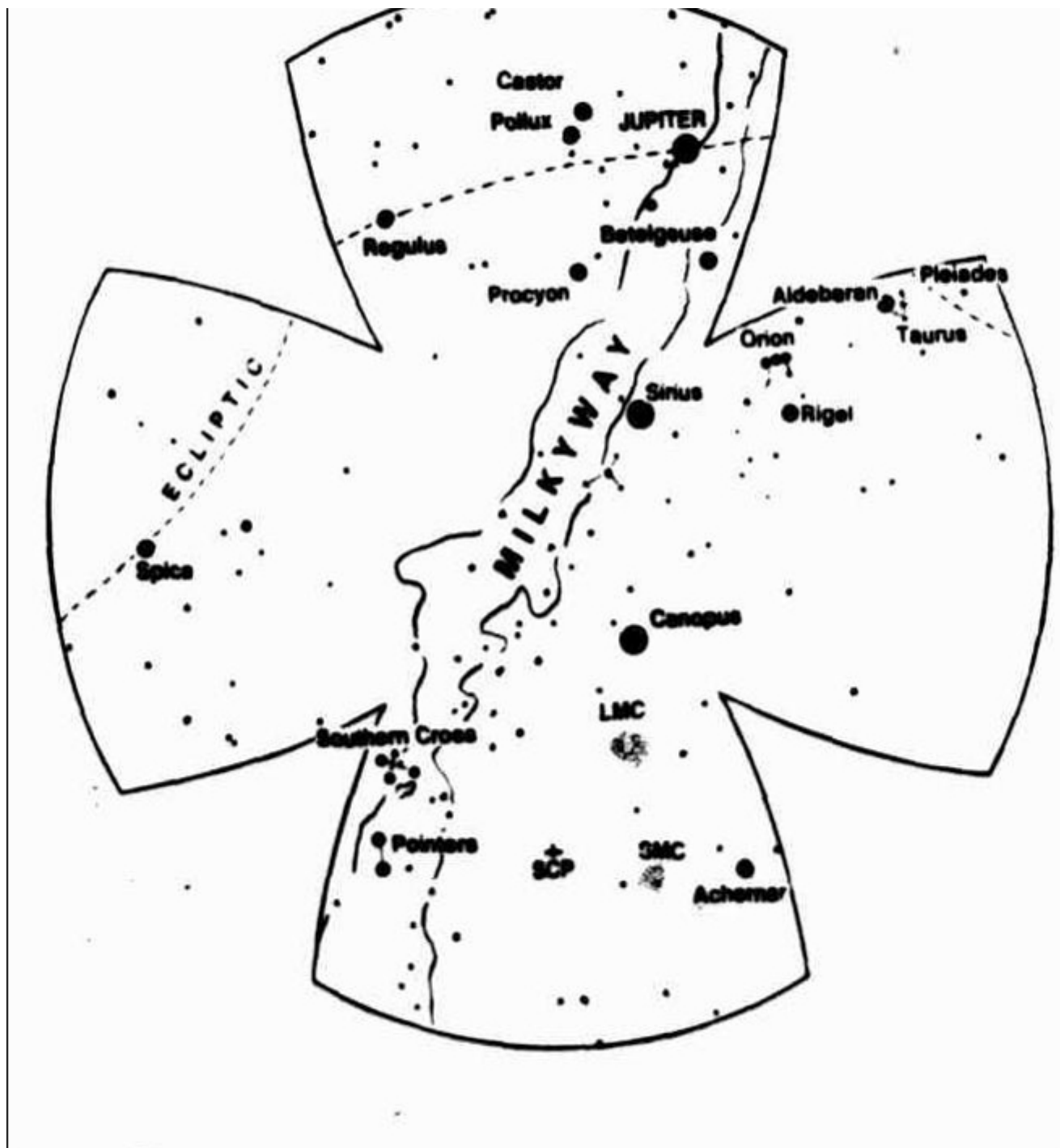
Jupiter is low in the north-west, but still very bright. If you get the

chance, have a look at it through some kind of telescope. The swirling patterns in its cloud belts and the subtle pastel tints are quite beautiful, and the four big moons, Io, Europa, Ganymede and Callisto can be seen even with low-powered binoculars. Jupiter has many other tiny moons and even a system of rings that are best seen from a spacecraft. Two such craft are on the way to planets just now: Magellan, launched from the space shuttle, is on the way to Venus, and Galileo is travelling to Jupiter. Space vehicles of this kind, although not cheap, have multiplied a thousandfold our knowledge of the solar system.

NOT MANY realise that they have also given us important knowledge about our own earth, knowledge which will be vitally important if we want to preserve the planet as a place to live. Space travel is very different from travel on Earth: to get to Jupiter, Galileo has first gone to Venus! A gravitational "slingshot" manoeuvre around the inner planet will get it to distant Jupiter with much lower fuel consumption.

Saturn rises after midnight, a bit earlier than Mars. Mercury can't be





seen until just before sunrise. Although it can be fairly bright, it's no wonder that most people have never noticed this innermost planet, since its proximity to the sun means it's never in a part of the sky that's really dark.

The Equinox occurs on March

The Equinox occurs on March 21, at 7.19am, Eastern Australian Standard Time.

The map shows the sky in the middle of the month at about 9.30pm, daylight saving time. SCP is the South Celestial Pole, around which the stars appear to revolve once each day. LMC and SMC are

once each day. LMC and SMC are the Large and Small Magellanic Clouds, the two small galaxies in orbit around our own galaxy, the Milky Way. The easiest way to find your way around the sky is to start at something easy to recognise. The bright planet Jupiter low in the north-west, and the nearby constellation of Orion, with its distinctive "saucepan" shape, should help you orient yourself and the map. Sky maps show east and west apparently reversed because we look up at them, unlike maps of the earth beneath our feet.

Moon phases

The following table shows the phases of the Moon, with dates and times of occurrence, for the next six months. All times are given in Eastern Australian Standard Time. For periods of daylight saving, add one hour.

First Quarter	Mar 4	12.05am
Full Moon	Mar 11	8.58pm
Last Quarter	Mar 20	12.30pm
New Moon	Mar 27	5.48am
First Quarter	Apr 2	8.24pm
Full Moon	Apr 10	1.18pm
Last Quarter	Apr 18	5.02pm
New Moon	Apr 25	2.27pm
First Quarter	May 2	6.18am
Full Moon	May 10	5.31am
Last Quarter	May 18	5.45am
New Moon	May 24	9.47pm
First Quarter	May 31	6.11pm
Full Moon	Jun 8	9.01pm
Last Quarter	Jun 16	2.48pm
New Moon	Jun 23	4.55am
First Quarter	Jun 30	8.07am
Full Moon	Jul 8	11.23am

Full Moon	Jul 8	11.23am
Last Quarter	Jul 15	9.04pm
New Moon	Jul 22	12.54am
First Quarter	Jul 30	12.01pm
Full Moon	Aug 7	12.19pm
Last Quarter	Aug 14	1.54am
New Moon	Aug 20	8.22pm
First Quarter	Aug 28	5.34pm