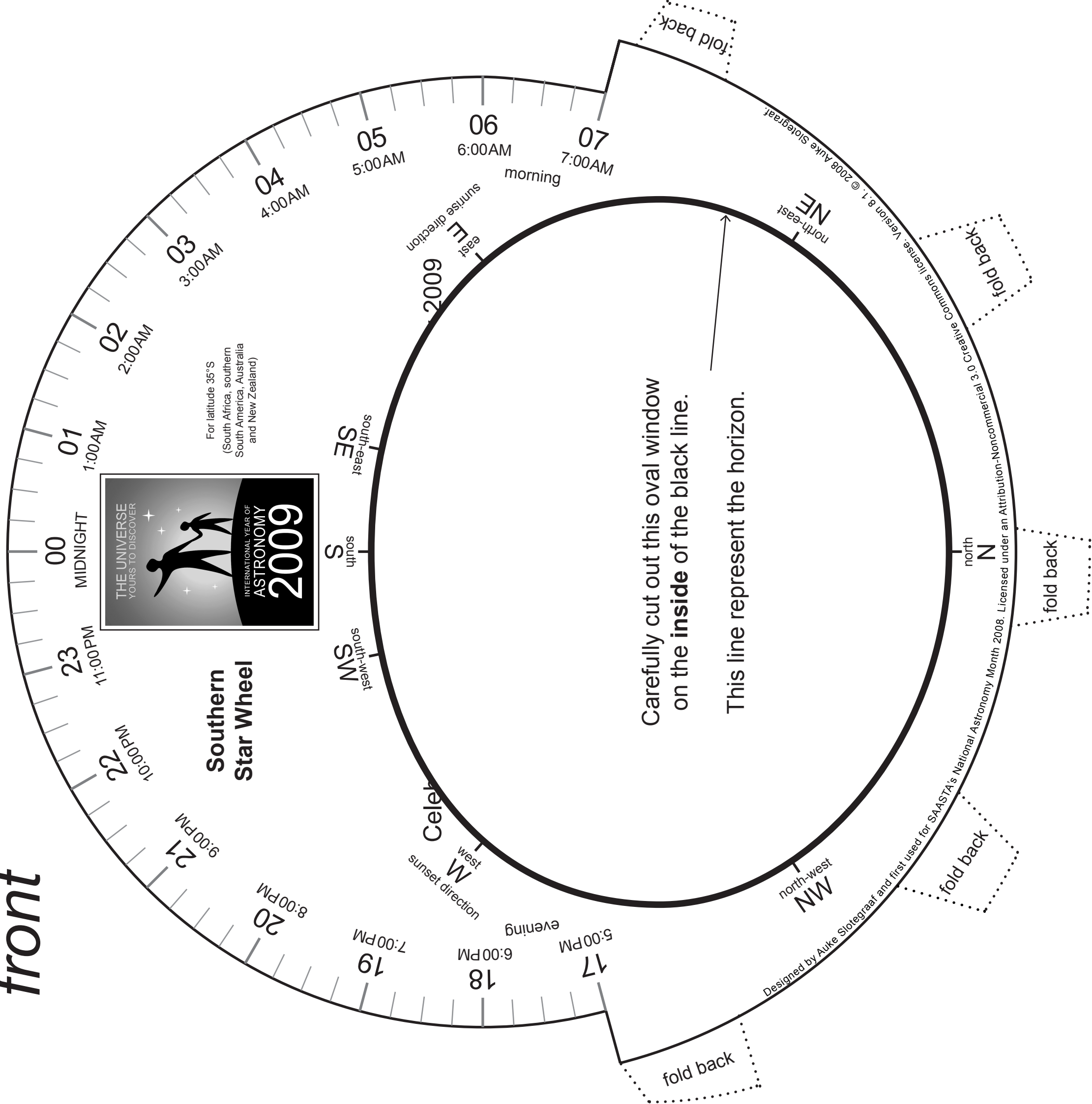


front



How to assemble your Star Wheel

The neater you cut, the better your Star Wheel will work

1. Cut out the front part of the Wheel - but don't cut off the five tabs (marked "fold back")!
2. Carefully cut out the oval window by cutting along the inside of the black line; this will leave a black frame.
3. Cut out the back part of the Wheel.
4. Place the front part on top of the back, so that you can read the "How to use your Star Wheel" through the oval window you cut out in step 2.
5. Fold back the five tabs (marked "fold back") and glue them to the reverse side of the back part, creating a pocket.
6. Cut out the round Star Disks.
7. Sit back and admire your handiwork - you're done.

back

Cut on the outside of this black line



How to use your Star Wheel

1. Choose which Star Disk you want to view:

- **Bright Stars** (only the brightest stars, typically visible from light-polluted urban areas)
- **Indigenous Stars** (some of the stars recorded by the indigenous peoples of southern Africa)
- **Advanced Disk 1** (showing all constellations visible from your location, stars down to 4th magnitude, and the brightest deep sky objects)
- **Advanced Disk 2** (same as the Advanced Disk 1 but without labels and constellation lines)

2. Slide the loose Disk into the Star Wheel.

3. Turn the Star Disk to the date and time. The stars on the Disk visible through the opening in the Wheel will be the stars visible in the night sky at that date and time.

4. To see the stars visible in, say, the west, hold the Star Wheel straight up and orient it so that the "West" marking is nearest the ground. The curved thick black line represents the horizon. If you now stand looking west, you can match up the stars you see in the sky with those shown on the Wheel.

Other Star Disks may be available for free download from my website from time to time. Visit <http://www.psychohistorian.org> or e-mail me at auke@psychohistorian.org

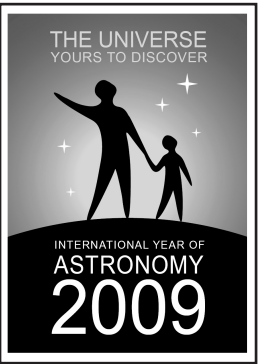
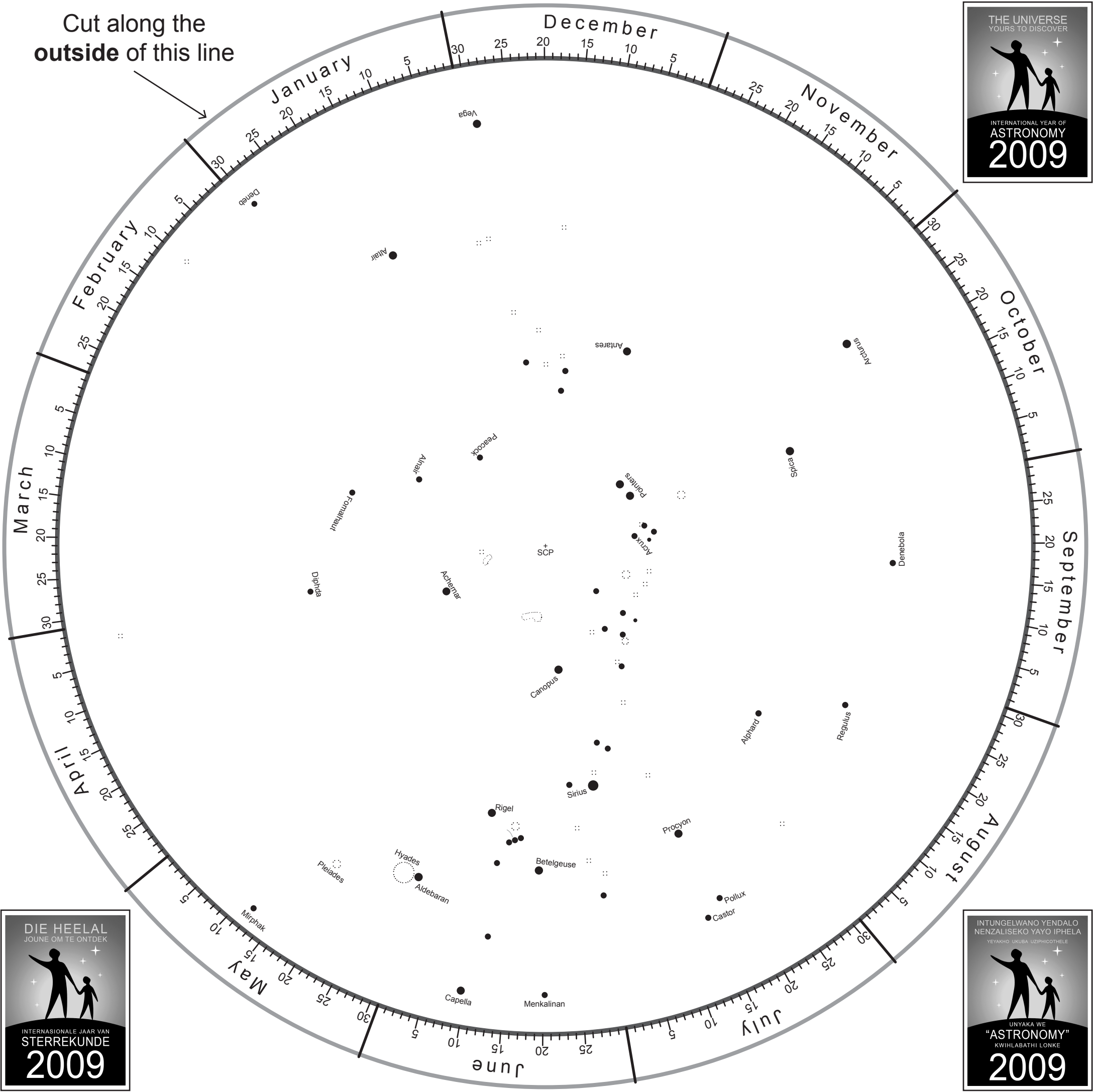
I hope you enjoy using your Star Wheel and have fun observing the beautiful night sky!

Learning the constellations

During the course of a single evening, new stars appear above the eastern horizon, while other stars set below the western horizon. This changing aspect is caused by the Earth's rotation on its own axis (once in 24 hours). During the course of a month, different stars can be seen as the nights follow each other. This more gradual change is caused by the Earth moving along its orbit around the Sun. The table below suggests approximate times of the year when individual constellations may be seen early in the evening:

Early January	Taurus, Eridanus, Caelum	Early July	Lupus, Norma, Serpens
Late January	Orion, Lepus, Auriga	Late July	Scorpius, Ophiuchus, Ara, Hercules
Early February	Columba, Pictor, Dorado	Early August	Sagittarius, Serpens, Lyra
Late February	Canis Major, Canis Minor, Gemini, Monoceros	Late August	Aquila, Corona Australis, Scutum, Telescopium
Early March	Vela, Puppis, Pyxis, Cancer	Early September	Pavo, Octans, Cygnus, Sagitta, Vulpecula
Late March	Carina, Volans, Hydra, Lynx	Late September	Capricornus, Delphinus, Equuleus, Indus, Microscopium
Early April	Corvus, Crater, Hydra, Antlia	Early October	Aquarius, Grus, Piscis Austrinus
Late April	Leo, Leo Minor, Sextans	Late October	Pegasus, Lacerta, Tucana
Early May	Crux, Musca, Chamaeleon, Ursa Major	Early November	Pisces, Sculptor
Late May	Virgo, Coma Berenices, Canes Venatici	Late November	Cetus, Fornax, Phoenix
Early June	Centaurus, Triangulum Australe, Circinus, Apus	Early December	Andromeda, Aries, Triangulum
Late June	Boötes, Corona Borealis, Libra	Late December	Perseus, Mensa, Reticulum, Horologium, Hydrus

Cut along the
outside of this line



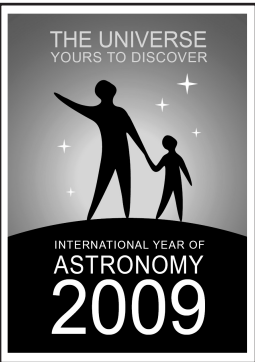
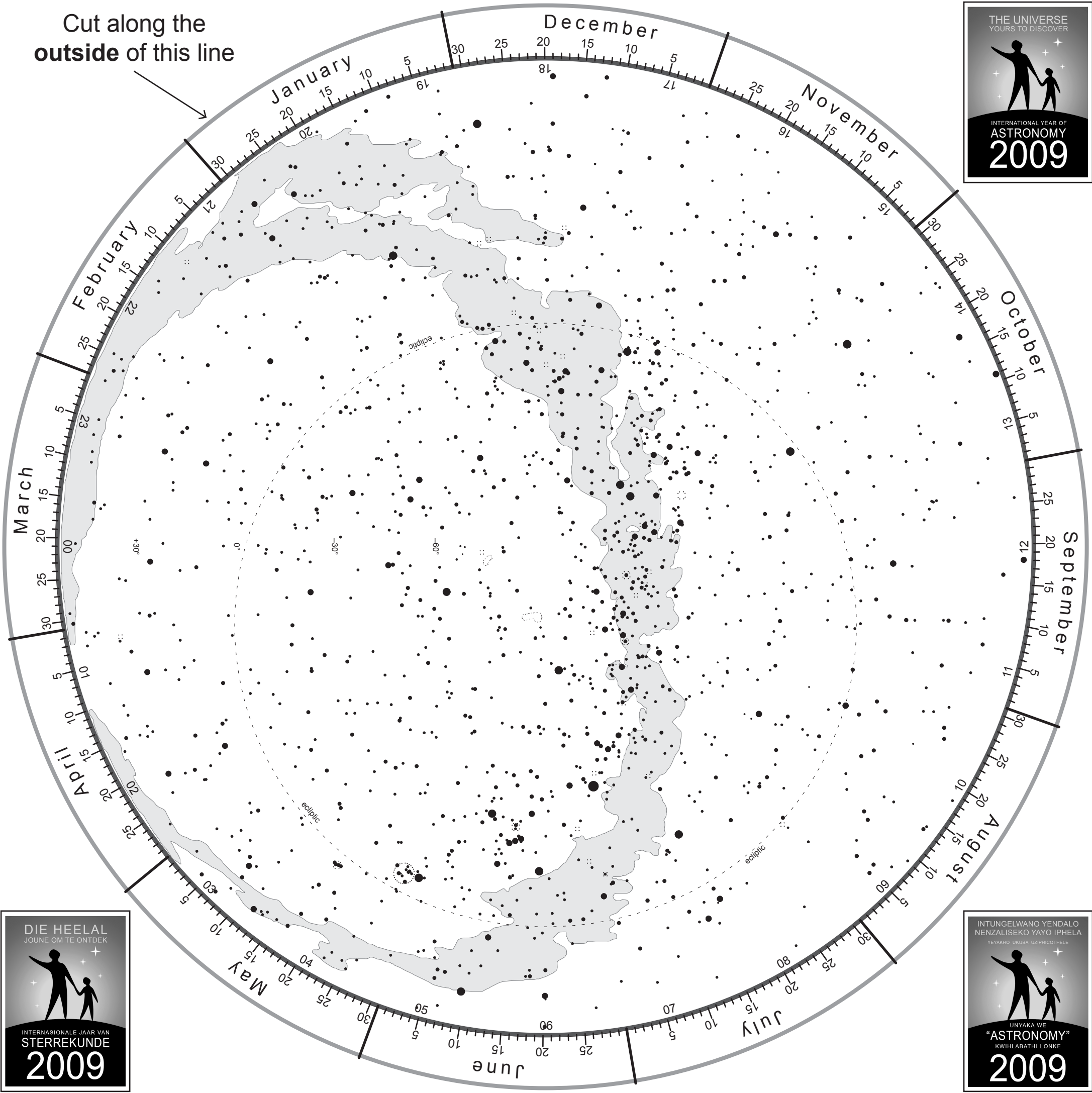
Constellation checklist

Tick off the constellations as you learn to identify them.

Constellation	Date learnt	Constellation	Date learnt
And Andromeda		LMi Leo Minor	
Ant Antlia		Lep Lepus	
Aps Apus		Lib Libra	
Aqr Aquarius		Lup Lupus	
Aql Aquila		Lyn Lynx	
Ara Ara		Lyr Lyra	
Ari Aries		Men Mensa	
Aur Auriga		Mic Microscopium	
Boo Boötes		Mon Monoceros	
Cae Caelum		Mus Musca	
Cnc Cancer		Nor Norma	
CVn Canes Venatici		Oct Octans	
CMa Canis Major		Oph Ophiuchus	
Cmi Canis Minor		Ori Orion	
Cap Capricornus		Pav Pavo	
Car Carina		Peg Pegasus	
Cen Centaurus		Per Perseus	
Cet Cetus		Phe Phoenix	
Cha Chamaeleon		Pic Pictor	
Cir Circinus		Psc Pisces	
Col Columba		PsA Piscis Austrinus	
Com Coma Berenices		Pup Puppis	
CrA Corona Australis		Pyx Pyxis	
CrB Corona Borealis		Ret Reticulum	
Crv Corvus		Sge Sagitta	
Crt Crater		Sgr Sagittarius	
Cru Crux		Sco Scorpius	
Cyg Cygnus		Scl Sculptor	
Del Delphinus		Sct Scutum	
Dor Dorado		Ser Serpens (Caput)	
Equ Equuleus		Ser Serpens (Cauda)	
Eri Eridanus		Sex Sextans	
For Fornax		Tau Taurus	
Gem Gemini		Tel Telescopium	
Gru Grus		Tri Triangulum	
Her Hercules		TrA Triangulum Australe	
Hor Horologium		Tuc Tucana	
Hya Hydra		UMa Ursa Major	
Hyi Hydrus		Vel Vela	
Ind Indus		Vir Virgo	
Lac Lacerta		Vol Volans	
Leo Leo		Vul Vulpecula	



Cut along the
outside of this line



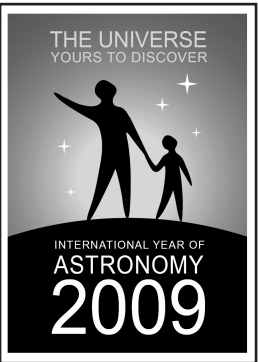
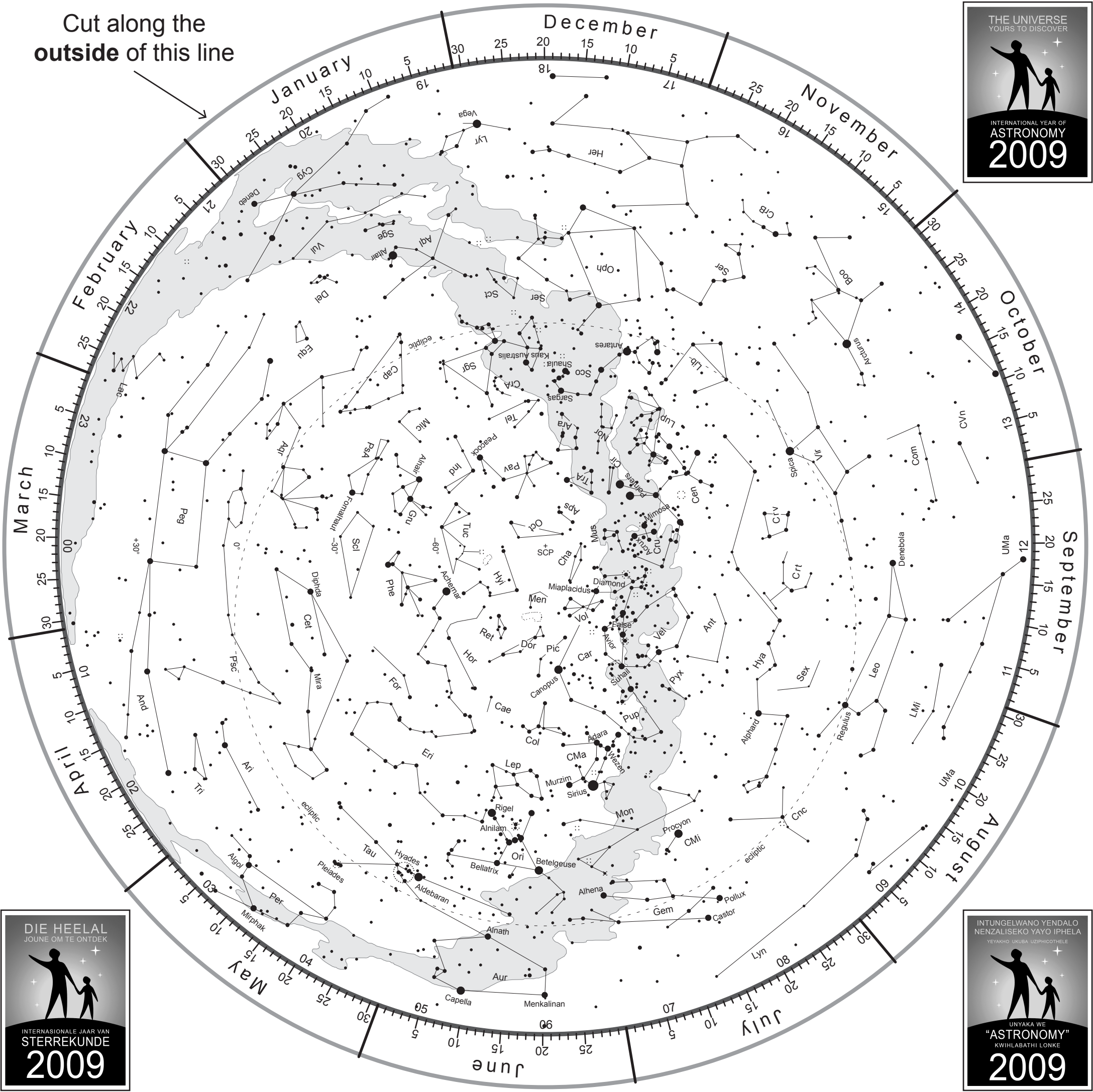
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Leo Leo		Vul Vulpecula	



Cut along the
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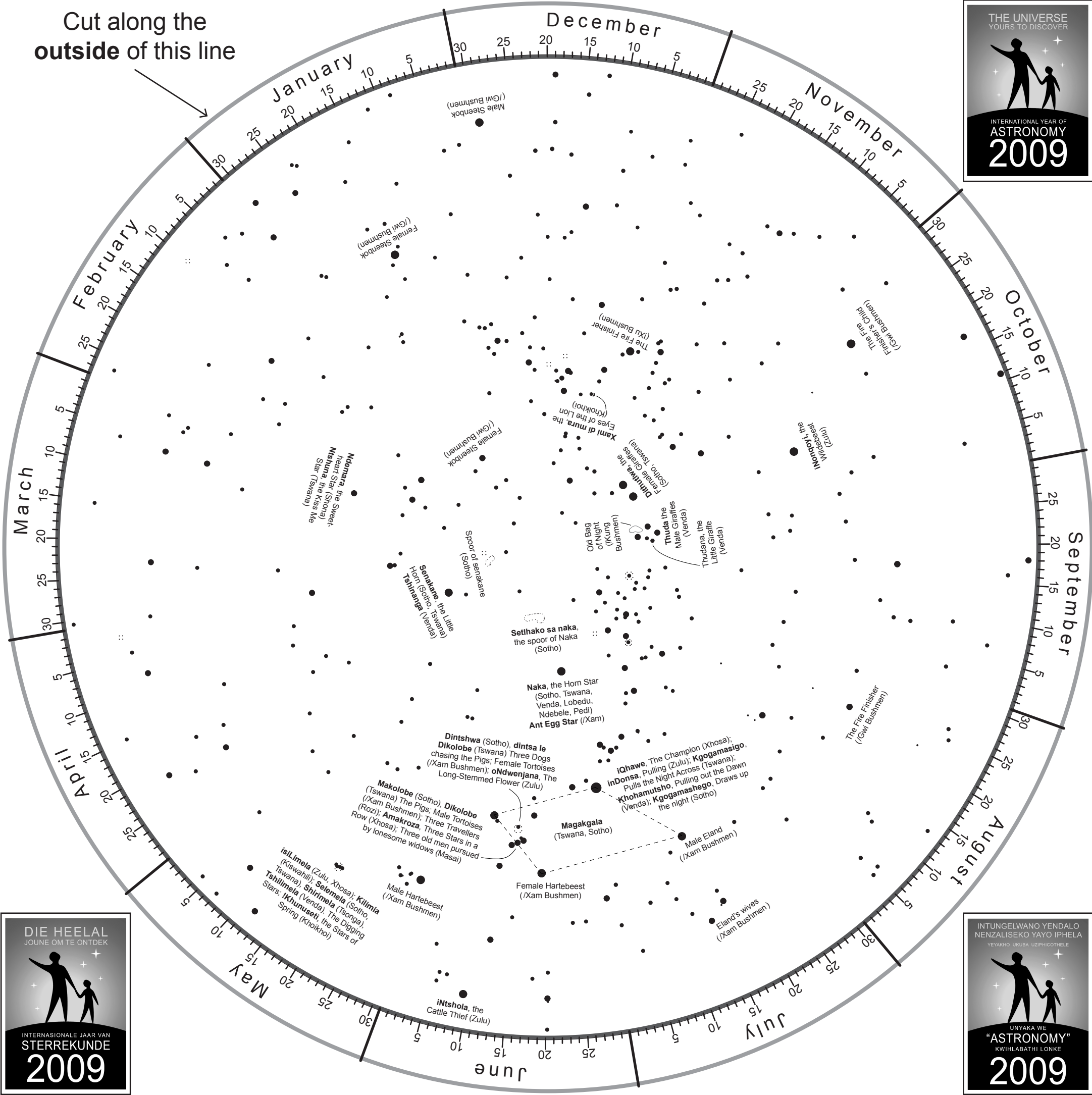


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Hyi Hydrus		Vel Vela	
Ind Indus		Vir Virgo	
Lac Lacerta		Vol Volans	
Leo Leo		Vul Vulpecula	





Indigenous stars shown on the *Southern Star Wheel*

Scientific name	English name	Indigenous name
Achernar	The Little Horn	Senakane (Sotho, Tswana); Tshinanga (Venda)
Aldebaran	The Male Hartbeest	/Xam Bushmen
alpha & beta Crucis	The Male Giraffes	Thuda (Venda)
Altair	The Female Steenbok	/Gwi Bushmen
Antares	The Fire-Finishing Star	!Xu Bushmen
Arcturus	The Fire Finisher's Child	/Gwi Bushmen
Betelgeuse	Female Hartbeest	/Xam Bushmen
Canopus	The Horn Star	Naka (Sotho, Tswana, Venda, Lobedu, Ndebele, Pedi)
Canopus	The Ant Egg Star	/Xam Bushmen
Capella	The Cattle Thief	iNtshola (Zulu)
Castor	The Female Eland	/Xam Bushmen
Coal Sack	Old Bag of the Night	Nyae Nyae !Kung Bushmen
Fomalhaut	The Sweetheart Star	Ndemara (Shona)
Fomalhaut	The Kiss Me Star	Ntshuna (Tswana)
gamma & delta Crucis	The Little Giraffe	Thudana (Venda)
Large Magellanic Cloud	The Spoor of the Horn Star	Setlhako sa naka (Sotho)
mu-1 & mu-2 Sco	The Eyes of the Lion	xami di mura (Khoikhoi)
Orion's Belt	The Pigs	Makolobe (Sotho); Dikolobe (Tswana)
Orion's Belt	The Male Tortoises	/Xam Bushmen
Orion's Belt	The Three Travellers	Rozi
Orion's Belt	Three Stars in a Row	Amakroza (Xhosa)
Orion's Belt	Three old men pursued by lonesome widows	Masai
Orion's Sword	Three Dogs chasing the Pigs	Dintshwa (Sotho); dintsa le Dikolobe (Tswana)
Orion's Sword	The Female Tortoises	/Xam Bushmen
Orion's Sword	The Long-Stemmed Flower	oNdwenjana (Zulu)
Peacock	The Female Steenbok	/Gwi Bushmen
Pleiades	The Digging Stars	isiLimela (Zulu, Xhosa); Kilimia (Kiswahili); Selemela (Sotho, Tswana); Shirimela (Tsonga); Tshilimela (Venda)
Pleiades	The Stars of Spring	!Khunuseti (Khoikhoi)
Pointers	The Female Giraffes	Dithutlwa (Sotho, Tswana)
Pollux	The Female Eland	/Xam Bushmen
Procyon	The Male Eland	/Xam Bushmen
Regulus	The Fire Finisher	/Gwi Bushmen
Sirius	The Champion	iQhawe (Xhosa)
Sirius	Pulls the Night Across	Kgogamasigo (Tswana); Kgogamashego (Sotho)
Sirius	Pulling out the Dawn	Khohamutsho (Venda)
Sirius	Pulling	inDonsa (Zulu)
Small Magellanic Cloud	The Spoor of the Little Horn Star	Setlhako sa senakane (Sotho)
Spica	The Wildebeest Star	iNonqoyi (Zulu)
Vega	The Male steenbok	/Gwi Bushmen