

THE NEW SOUTH AFRICAN DICTIONARY OF ASTRONOMY: CAN IT HELP TOWARDS POPULARISING ASTRONOMY AMONGST AFRIKAANS-SPEAKING CHILDREN?

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ABSTRACT. It is a well-known fact that the interest in astronomy of the South African public in general, and the Afrikaans-speaking children in particular, is at a very low level. Some reasons for this situation are discussed, among others, the lack of Afrikaans literature on astronomy at primary and secondary school-levels. A new bilingual Dictionary of Astronomy has been available for a year now. However small its contribution may prove to be, we shall discuss how it can be used in popularising astronomy amongst Afrikaans-speaking children.

Tell any non-astronomer that the Moon moves from west to east, and he will stare at you in total disbelief. Ask any secondary school pupil to name the planets of the Sun in the correct order from Mercury to Pluto, and he will most probably not be able to do so. Ask any person under which zodiacal sign he or she was born, and the question will almost certainly be answered correctly – but the person will probably also not know the difference between the zodiac and the ecliptic!

These are only a few examples to illustrate the poor general knowledge of astronomy of most people. The following questions therefore arise: “What is the reason for this illiteracy in astronomy?” and, “Is there any method by which this state of affairs can be remedied?” In this talk we shall first give attention to a few reasons for the illiteracy in astronomy of our people and secondly we shall focus on the role – however small – that the new Dictionary of Astronomy can play to improve matters.

REASONS FOR THE ILLITERACY IN ASTRONOMY

First it can be stated that astronomy generally receives very little attention at school. In geography classes some attention is given to the motion of the planets around the Sun, as well as to some other general aspects of the solar system. In some schools astronomy clubs or other interest groups exist, but it is not a general feature. Even at university level – at least at pre-graduate level at Afrikaans universities – astronomy receives very little attention. The result of this lack of interest in astronomy at school and university, effects all levels of our society. There is only one ultimate result: illiteracy in astronomy.

Secondly, it is also true that the South African public is just not astronomy-minded. Nowadays everyone is concerned with air pollution, water pollution and even sound pollution. But when it comes to light pollution, it worries very few people. The biggest daily Afrikaans newspaper, *Beeld*, has regular columns on chess, postage stamps, books and nature conservation. There is also a multitude of information on different forms of the arts – but it is in vain that one looks for a column on astronomy. The general public is not attracted at all by the beauty and splendour of the celestial vault. Whenever anything

with a theme related to astronomy does appear in the newspapers, it is usually of a sensational character, like the appearance of four or more planets in a straight line (with the imagined belief that something evil is going to happen to everyone on Earth!) or like the close approach to the Earth of a minor planet (with the possibility of colliding with the Earth, even if it misses the Earth by a few million kilometers!).

Finally some attention should also be given to the state of South African astronomy books and other literature which are presently available for Afrikaans-speaking readers – and in particular, Afrikaans-speaking pupils. The present state is almost pathetic. There is really so little available on astronomy that it is no wonder that the average Afrikaans matric pupil knows almost nothing about astronomy. Fortunately there are quite a number of English books available, but most of them are written from a northern hemispherical viewpoint. What we need here in our country is Afrikaans and English books, written from a southern hemispherical viewpoint. Of course, it would also help if one had a dictionary – and if it gave some supplementary information on matters of astronomy, it would be so much the better.

THE ROLE OF THE DICTIONARY OF ASTRONOMY

Next we would like to give attention to some aspects of the Dictionary of Astronomy, thereby showing to what extent it may help to stimulate the general interest in astronomy. This section is presented in the form of transparencies, giving attention to some specific groups of interest:

People with an interest in linguistics – especially in the nomenclature and meaning of proper names – and who are attracted by poetical expressions, can consider Appendix 7.2 on General star names. Some examples are: **Alpheratz** and **Sirrah** (the horse's navel); **Al Bali** (the good fortune of the swallower); **Deneb Kaitos** (the tale of the whale), **Baten Kaitos** (the belly of the whale) and **Baten Kaitos Sjemali** (the belly of the whale to the north); **Nair al Zaurak** (the bright one in the boat).

For the person who is interested in the history of astronomy the dictionary will also offer something, e.g., **Canals of Mars**, **Carte du Ciel**, **International Geophysical Year**, **Kepler's nova**, **Mons Mensae** and the **Rudolphine tables**.

While somebody with an interest in the earlier aspects of astronomy will also be satisfied by words like **Cerberus**, **Lynx sive Tigris**, **quadrant**, **Vulcanus** and **Vulpecula cum Anseres**.

Even the person interested in the classics and mythology will find many interesting head-words in the dictionary: From Appendix 5.2 (Properties of planetary satellites), we have from Shakespeare's works the following satellites of Uranus: **Cordelia**, **Ophelia**, **Bianca**, **Cressida**, **Desdemona**, **Juliet**, **Portia**, **Rosalind**, **Belinda** and **Puck**.

From the story of Jason and the golden fleece, we have: Jason, who had been brought up by **Chiron**, one of the **Centaur**s, took several friends with him on his epic journey in search of the golden fleece. One of them was Argus, the builder of the ship **Argo**. On his journey he met, among others, the **Titans**, a race of giants, children of **Uranus** and **Gaia**. Among their sons were **Hyperion** and **Iapetus**. Among their daughters were **Thea**, **Rhea**, **Themis**, **Mnemosyne**, **Phoebe** and **Thetis**. Among their grandchildren were **Atlas** and **Prometheus**.

Somebody with an interest in the development of the calendar should consider the entries about different calendars in Appendix 2.1.

For the naked eye observer information about asterisms is given, for example: The **Diamond of Virgo** in Virgo, Leo, Boötes and Canes Venatici; the **Lozenge** in Draco; the **Summer Triangle** in Lyra, Aquila and Cygnus; and the **Teapot** in Sagittarius.

For an observer of meteor showers the dictionary gives among others, information on the **Orionids**, the **Quadrantids** and the **Taurid-Arietids**. And for the comet seeker some comets with a South-African connection are **Bennett's comet** and the **Johannesburg comet** of 1910, also known as the **Great January comet** or **Miner's comet**.

Finally there is also some information for those with an interest in linguistic oddities. Two examples are: (a) The stars α and β **Delphini**, were named **Sualocin** and **Rotanev** after the Italian astronomer Niccolo Cacciadore's latinized name Nicolaus Venator (spelled backwards). (b) The English 'globule' is translated by the Afrikaans synonyms 'bolletjie' and 'globule'. In the compilation of the dictionary the general rule was always to list all synonyms in the case of compound words. Therefore the translation for **Bok's globules** should have been **Bok se globules** as well as 'Bok se bolletjies'. However, it was wisely decided rather to leave out the last possibility!

To summarize: It is clear that much work has still to be done to get more people interested in astronomy – at least to a level of an average general knowledge. Let us not forget that the responsibilities of both professional and amateur astronomers also include getting the public, and especially our young people, interested in astronomy. However, it shouldn't be an interest flaring up and fading down like a nova. It should be an interest that lasts for at least the sidereal period of Jupiter, or better still, Saturn or Uranus! Else, we shall finally find ourselves to be like a colony of astronomers on a far-off desolate planet in a large galaxy.

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ASTRONOMY, THE SCIENCE MOVEMENT AND POLITICS IN THE FUTURE OF SOUTH AFRICA.

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SUMMARY

Astronomy faces an increasingly competitive environment for research funding. Success requires the astronomical family of sciences to institutionalize lobbying for the profession's interests.

Additionally, organizing a public constituency of supporters will best defend and advance astronomy's future. Astronomy's strongest political credibility with future governments clearly lies in demonstrating its usefulness for, and commitment to, science education in schools.