



SYNOPSIS

The Sun is sometimes regarded to be a fairly normal star. When scrutinised, however, it stands out with respect to other solar-type stars. For instance, it is a single star and it seems to be relatively metal-rich for its age. Also, its chemical composition is characterised by having a significantly higher ratio of volatile relative to refractory chemical elements, i.e. the ratio of, e.g. C, N, S, Zn, relative Ti, Sc, Zr and Al, is higher than normal for the Sun. Some possible reasons for this and other solar special characteristics are discussed. One possibility is that this solar peculiarity is even linked to the existence of habitable planets in the Solar system.



BIOGRAPHICAL PROFILE: Prof Gustafsson

In addition to being a famous astrophysicist, an eloquent speaker and a gifted teacher, Prof Gustafsson has worked and published in cross-disciplinary areas including research ethics, social responsibilities of science, science-religion interaction, science policy, science teaching and more. He has held posts as Professor in Stockholm and Uppsala Universities and is Corresponding Fellow at the Nordic Institute for Theoretical Physics. Prof Gustafsson has held important positions within Sweden including that of Secretary General of the Advisory Council on Research of the Swedish Government, as a board

member of the Swedish National Agency for Higher Education and on the Nobel Committee for Physics. He is a member of the Swedish Royal Academy of Science and of the Balzan Prize Committee. The international community has benefited from his service to ICSU (International Council for Science) for which he co-chaired a review committee on Science and Society, and chaired the committee on Freedom and Responsibility in the Conduct of Science. Prof Gustafsson is well known for his popularisation of science, and astronomy in particular. He regularly participates in Swedish radio and TV programmes and has been involved in writing and performing two science theatre plays. He has received the Lars Salvius Prize and the Nils Gustav Rosén Prize, the foremost Swedish award for popularization of science, in recognition of these activities.



Brief background about the Academy of Science of South Africa:

The Academy of Science of South Africa (ASSAf) is the officially recognised national science academy of South Africa. Its mandate is, first, to promote and inspire outstanding achievements in all fields of scientific enquiry and to grant recognition for excellence; and second, either at its own initiative, or upon request, to undertake studies on matters of public interest with a view to providing evidence-based scientific advice to government and other constituencies. The academy's members include scholars from across the natural and social sciences and humanities, engineering, and health sciences.

THE COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE School of Mathematics, Statistics and Computer Science Astrophysics and Cosmology Research Unit

cordially invite you to attend a

Public Talk

"Under a lucky star?" If so, find out what is so special about our Sun."

by

Prof Bengt Gustafsson

Distinguished Visiting Scholar for 2014/15,
Academy of Science of South Africa (ASSAf)



Date: Monday, 2 March 2015

Venue: Senate Chamber, UKZN Westville Campus

Time: 6:00 for 6:15 PM

The lecture will be followed by light refreshments

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