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The hypergiants VY Canis Majoris, Eta Carinae, V766 Centauri and the red supergiants Betelgeuse, Antares and Aldebaran in the 2.5K SGQ AAVSO database

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I observe variable stars since 1997. The "candidacy" of Mira Ceti as Betlehem Star because close to Jupiter-Saturn triple conjunction of 6-7 b.C. started at Pontifical University of Lateran and continued in Yale (2001-2004). Maxima correlation function ruled out Mira for having two consecutive bright maxima, but this property was confirmed in the "oldest" Myra-type: R Leonis, R Hydrae and Chi Cygni, from their almost four-century-long lightcurves.
To a bright maximum normally a dim one follows, as the correlation function of their consecutive maxima shows.
These studies were supported by historical and personal visual observations. Since 2011 I observe first magnitude variable stars, with airmass correction to reach 0.01 magnitudes accuracy with naked eye. AAVSO observer Sebastian Otero first claimed this accuracy, as for NovaCentauri 2013, observed by me from Porto Alegre and Rio de Janeiro.
Betelgeuse's 801 observations in 10 years, include the deep minimum of 2020.
My SGQ contributions to AAVSO-database, paralleled with Betelgeuse's V-band measurements, help to define the "personal equations" present in all 25M visual observations before CCD era (1911-on) going back to 1893 for Betelgeuse.
The temporal extension of lightcurves is crucial to understand the stellar behaviour.
More complicate cases are Antares and Aldebaran, less variable and with distant comparison stars.
The Southern hypergiants VY CMa, low in the roman horizon, V766 Cen and Eta Carinae from South America in 1999, 2003 and 2013-2014 are also monitored with binoculars or small telescopes.
DeltaScorpii (Be close binary at periastron) has also been studied form Rio, since 2011.
Concluding: my 2.5K direct visual observations in nearly 25 years help to understand and simulate the accuracy of the World largest visual observations database for variable stars, the AAVSO one.

References

Mira maxima long-term (JAAVSO 2001)
Four Mira-type (JAAVSO 2004)
SGQ for AAVSO

Primary author: SIGISMONDI, Costantino (ICRA Sapienza and ICRANET Pescara)

Presenter: SIGISMONDI, Costantino (ICRA Sapienza and ICRANET Pescara)

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