

Solar Eclipse: a didactic alternative for education in Astronomy

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Abstract. Influence of astronomy education, in other disciplines, can give some possible explanation even in the history field. We propose to link astronomy, history and heritage through Big Data, without a telescope.

If we look to the Dacian Draco flag we can find a similitude with Draco constellation and that was a little bit intriguing. In the era of digitalization we can use computers to see back in time.

Keywords. Didactic experience, Teacher training, Astronomy.

This extraordinary symposia “Education and Heritage in the era of Big Data in Astronomy” hosted by IAU was a big opportunity for each of us to contribute with different and original materials in this interesting field of study. My students also are very interested in astronomy and the links with other sciences like history, archeology or geography but also computer science are a benefit. They were curious about the historical and archeological heritage since the era of dacians and the new modern tools we have today like Stellarium application.

We found that astronomy education used in other disciplines, can give some possible explanation even in the history field.

Stellarium as an educational instrument easy to use in the classroom, represents a planetarium software that shows exactly what you can see when you look up to the sky. But the most interesting quality is that you can change the place and time of observation. Going back in time using Stellarium, for the period of ancient ancestors you can contribute with a small part in historical research, in the explanation of some symbols or some legends. The intrigue was about the shape of Dragon constellation and the same style for the battle banner for our ancestries living here in Dacia, Sarmizegetusa Regia.(Dacian Kingdom, 168 BC-106 AD).

Therefore we were wondering, the people living here in those times what they saw when they were looking up to the sky. Now, using stellarium we can answer this question. Mostly at their latitude they saw the Dragon constellation above their heads. If we look to the Dacian Draco flag we can find a similitude with Draco constellation and that was a little bit intriguing.

Among the Dacians, the draco was undoubtedly seen by the army as a special protective symbol, while it also played an important role in the religious life of the people (Oltean 2007), maybe like the Draco constellation which guided them from the sky.

One of the most important evidence is that on the Trajan’s Column (113 AD), Dacian soldiers are represented carrying a draco in 20 scenes. Another evidence we can find on the Roman coins of Dacia.The draco appears on coins of Roman Emperor Antoninus Pius (r.138–161 AD), indicating that it was still the characteristic emblem in the 2nd century. On Arch of Galerius in Thessaloniki: the characteristic Dacian dragon emblem



Figure 1. Draco constellation, sculpture from center of Orastie city.



Figure 2. Draco in the Stellarium 100 AD.

is carried by a group of Dacian horsemen depicted on the Arch of Galerius and Rotunda in Thessaloniki, Greece.

Our ancestries carried with them the symbol of Draco constellation from zenith to the ground. During Dacian era the constellation above that latitude was Draco and the traditional name of Alpha Draconis, Thuban, means “head of the serpent”, all these might be just a legend, or an impressive history story but this is what our students need to be curious, to research and find answers, more than that to make connections between the areas of study.

Reference

Oltean, D., 2007, Burebista si Sarmizegetusa. Ed. SAECULUM I.O., ISBN/COD: 978-973-642-125-9