

Perseids & Geminids
2009

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Briefing

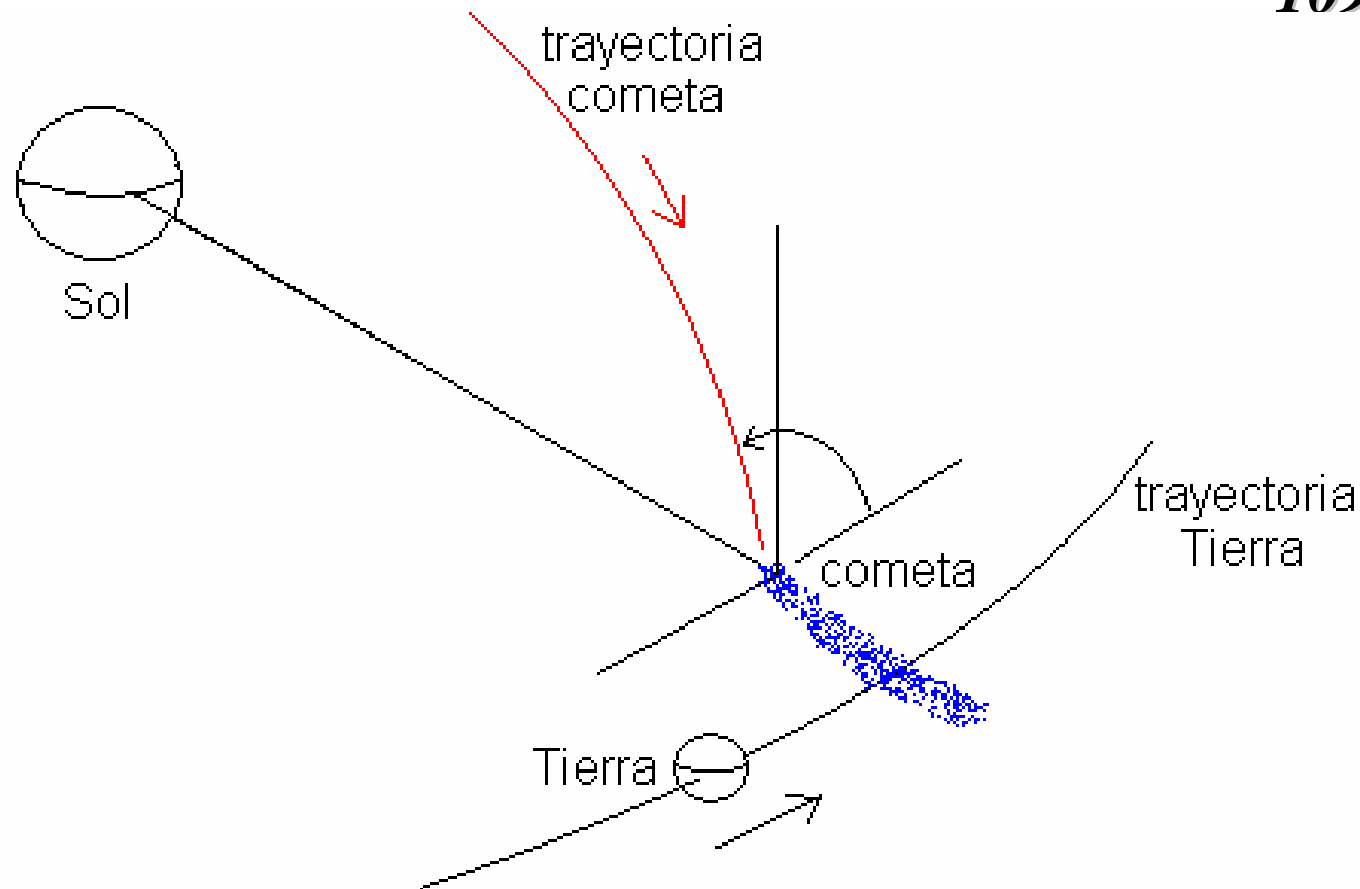
Perseids are rests from 109P/ Swift-Tuttle Comet, discovered in July 1962. El body has a diameter about 9,7 Kms and transit throught its orbits on a 35 years period. Its last incursion into Inner Solar System occurs on 1992, in 1993 reached a Zenital Hour Rate (ZHR) up to 300 Meteos / Hr.

Comet is responsible for the Perseids Phenomenon, we are able to assist durong August, radiant's position is located in Perseus.

Many Meteors observers, year by year, waiting to assist this event, this meteor shower has been one of the most spectacular ones during last years, with high meteor rates, reaching up to 300 ZHR. On 2009, on latitudes near from Barquisimeto City, major peak was expected to be around 05:30 hrs. Members of Asociación Larense de Astronomía (ALDA) were placed in 3 diferents sites: Barbacoas, Saroche and Duaca.



109P / Swift-Tuttle



Perseids



Perseids 2009

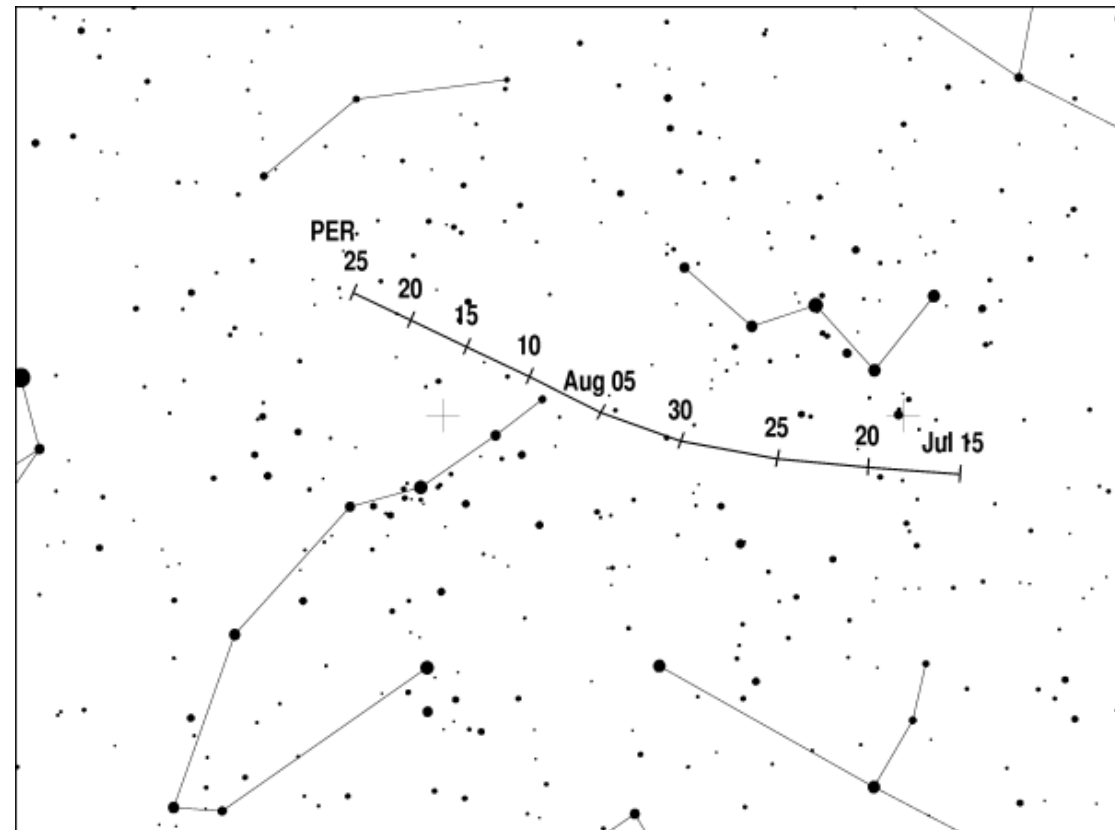
Perseids observation period for 2009, began on July 17th and finished on August 24th. The maximum activity was expected on August 12th at 05:30 hrs. (UT)

The expected Zenital Hour Rate: 100 Meteor / Hr

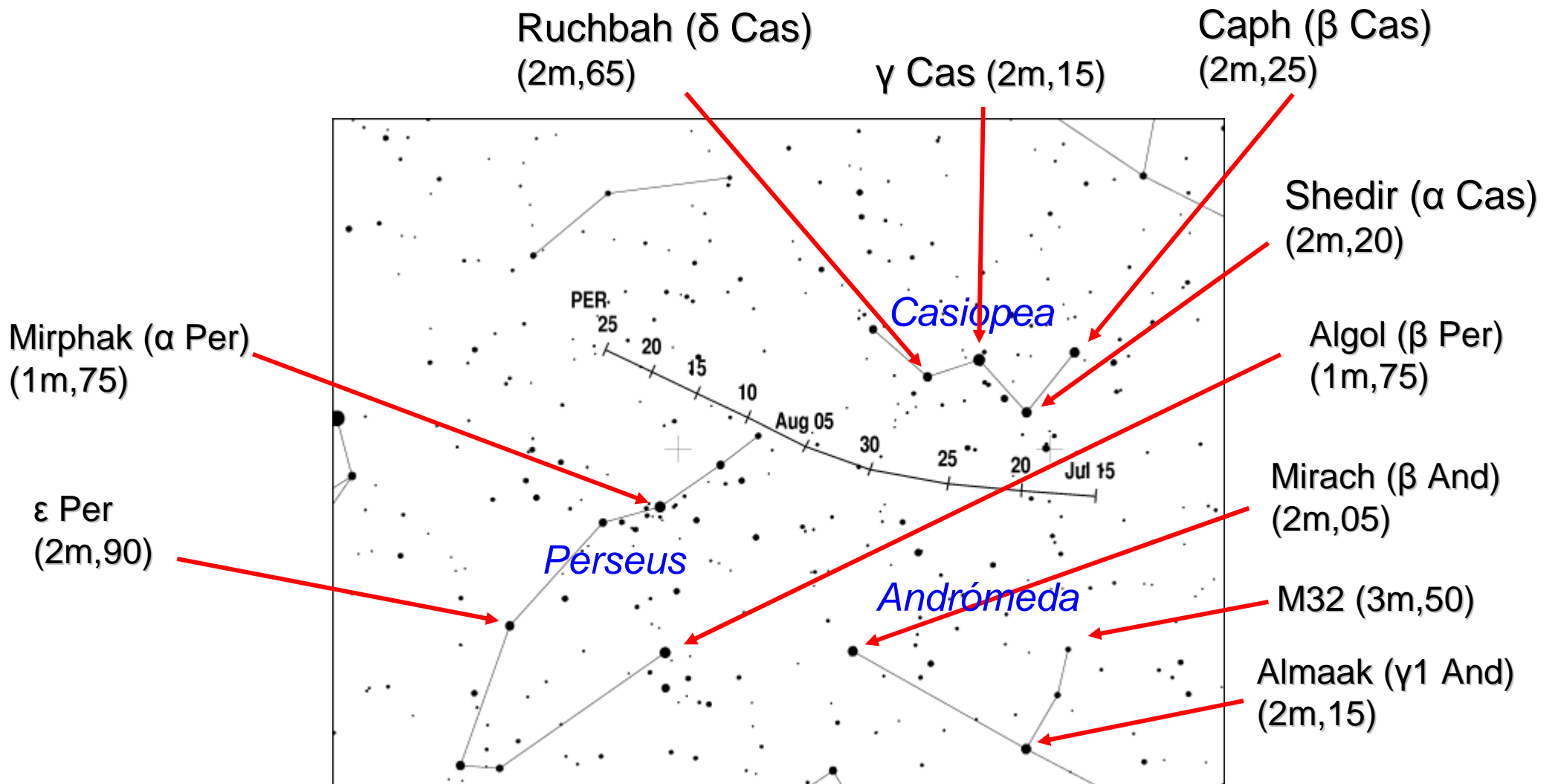
Dec: 58° ; AR: 48°

Total Observing time: **7,35 hr**

Registered Perseids: **131**

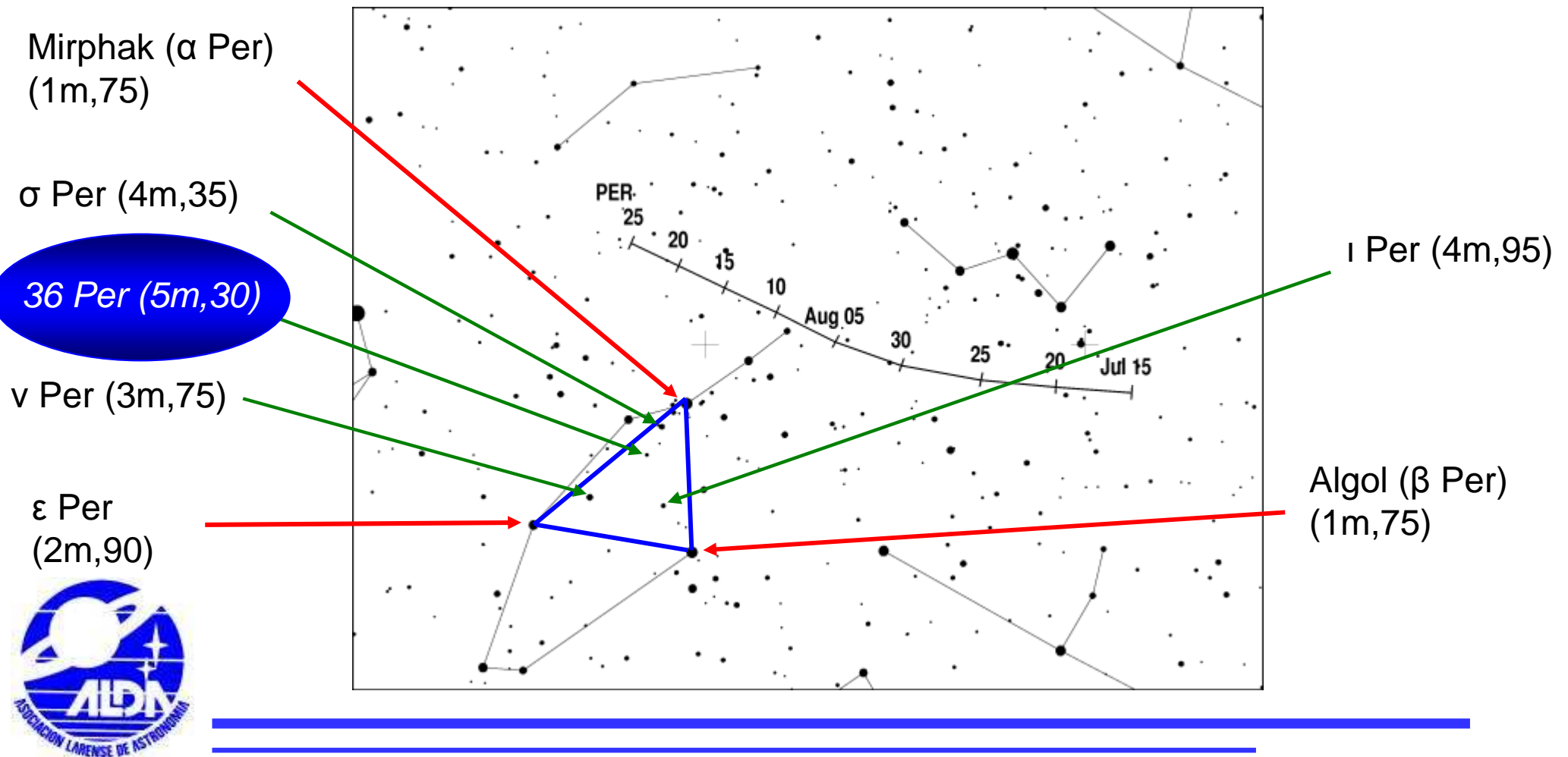


Perseids 2009 – Sky Recognition



Perseids 2009 – Visual Stellar Magnitude Limit

To determine the Visual Stellar Magnitude Limit, usually use triangles as references. On the lower image it is easy to recognize which star has the highest visual magnitude, the one that a single person can identify using his naked eye. It may vary according to sky and weather conditions, visual defect, etc.



Perseids 2009 - Observations

Observers around the World:



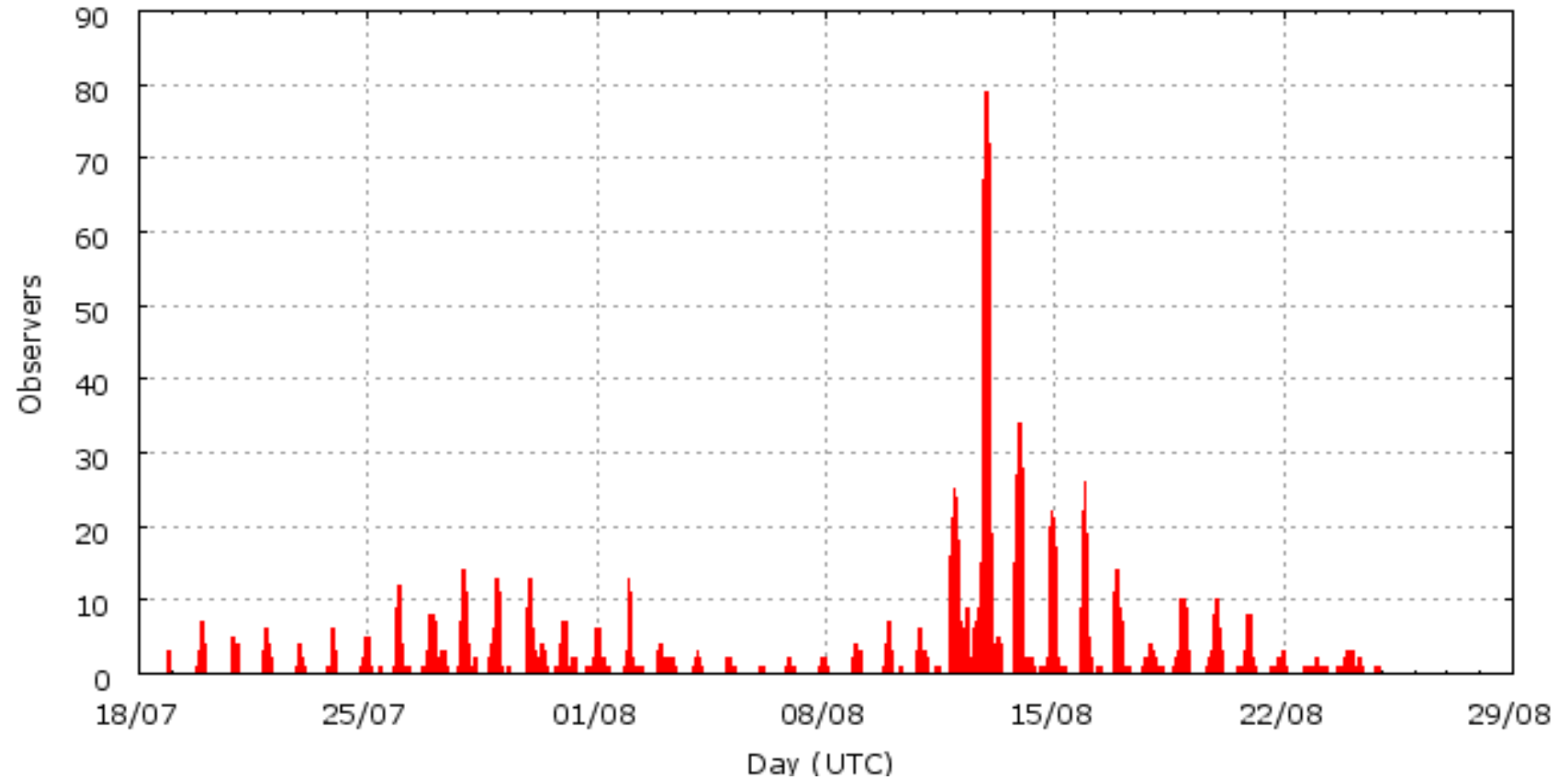
Perseids 2009 - Observations

Venezuela's observers:



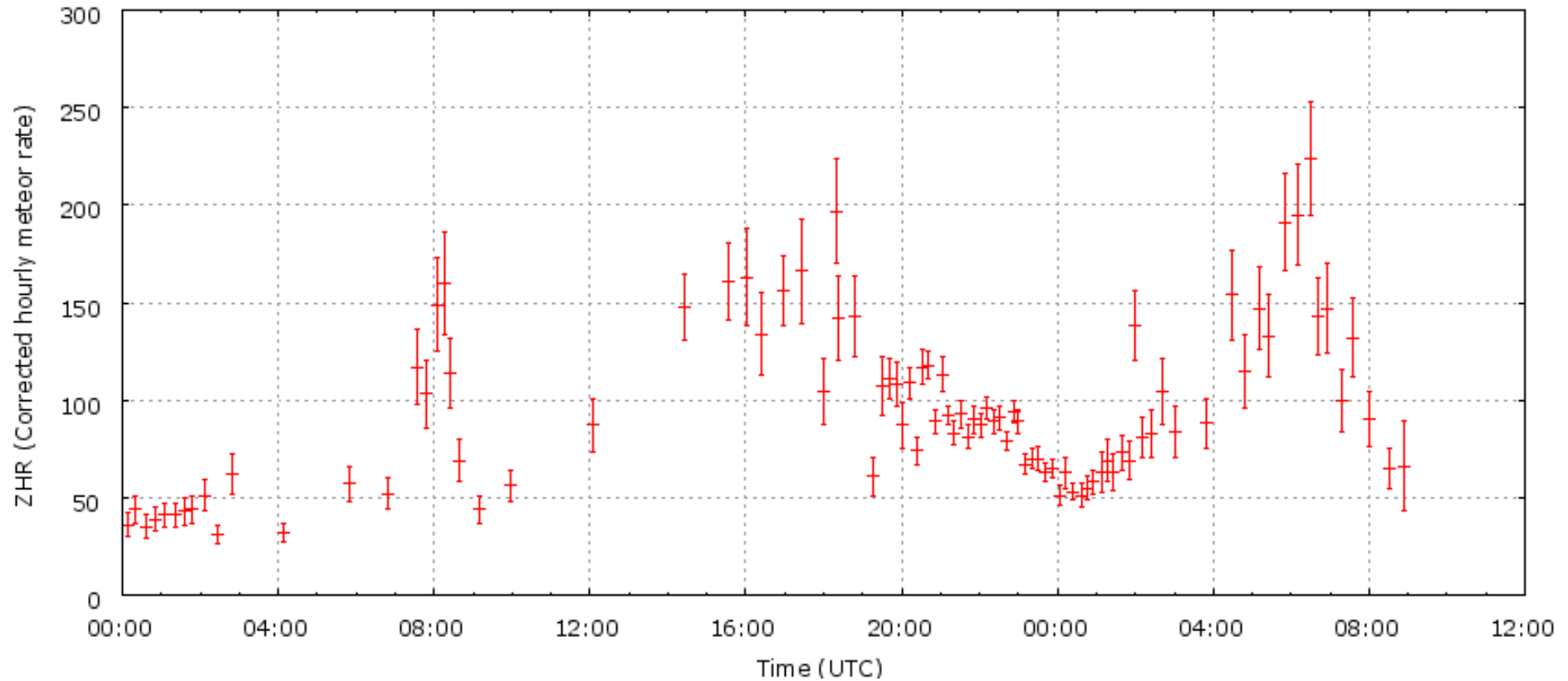
Perseids 2009 - Observations

Temporal Observers Distribution Chart:



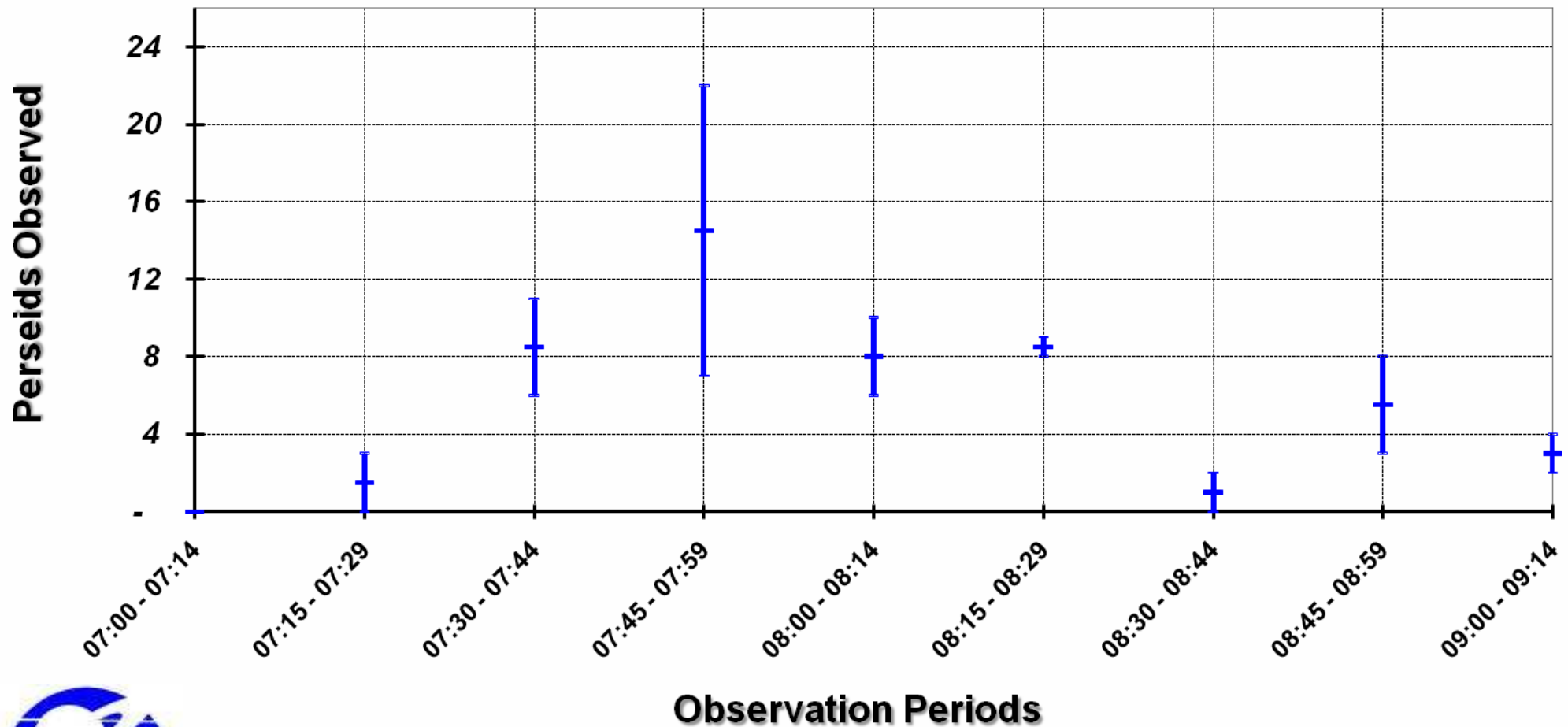
Perseids 2009 - Observations

Hour by hour shower behaviour:



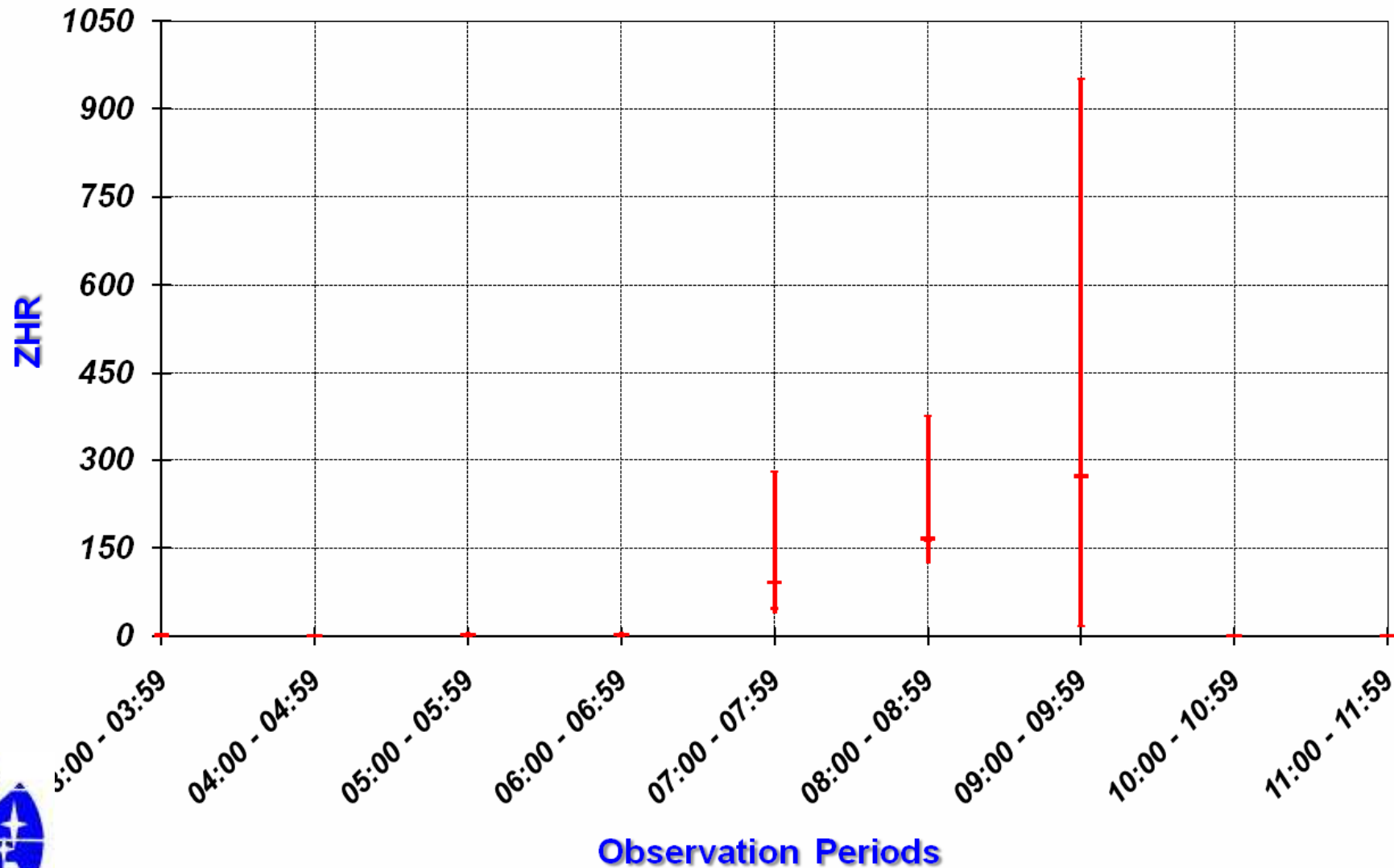
Perseids 2009 - Observations

Behaviour on Perseids 2009 (Venezuela)



Perseids 2009 - Observations

Behaviour on Perseids 2009 (Venezuela)



Perseids 2009 - Others

During observational work there were detected meteors with different kind of trazes, different colours also. Based on the color of those trazes it can sense meteor and comet composition:

Green: 19%, presence of *Nickel (Ni)*, *Thallium (Tl)*, *Barium (Ba)*

Yellow: 17%, presence of *Sodium (Na)*

Blue: 2% , *Magnesium (Mg)*, *Selenium (Se)*, *Plumb (Pb)*

White: 53%, *Iron (Fe)*, *Copper (Cu)*, *Arsenio (As)*,
Antimony (Sb), *Cesium (Cs)*

Red: 4%, *Strontium (Sr)*, *Lithium (Li)*



Geminids



Briefing

(3200) Phaeton is an asteroid, responsible for this meteor shower, update, scientists consider that this is an extinct comet, which particles were scattered many centuries ago. Year by year, Earth come across this wake showing us a magnificent spectacle.

Many Meteors observers, year by year, waiting to assist this event, this meteor shower, on latitudes near from Barquisimeto City, major peak was expected to be around 05:00 hrs UT. Members of Asociación Larense de Astronomía (ALDA) were placed in 2 diferents sites: Barbacoas and Saroche.



Geminids 2009

Geminids observation period for 2009, began on December 7th and finished on December 17th. The maximum activity was expected on December 14th at 05:00 hrs. (UT)

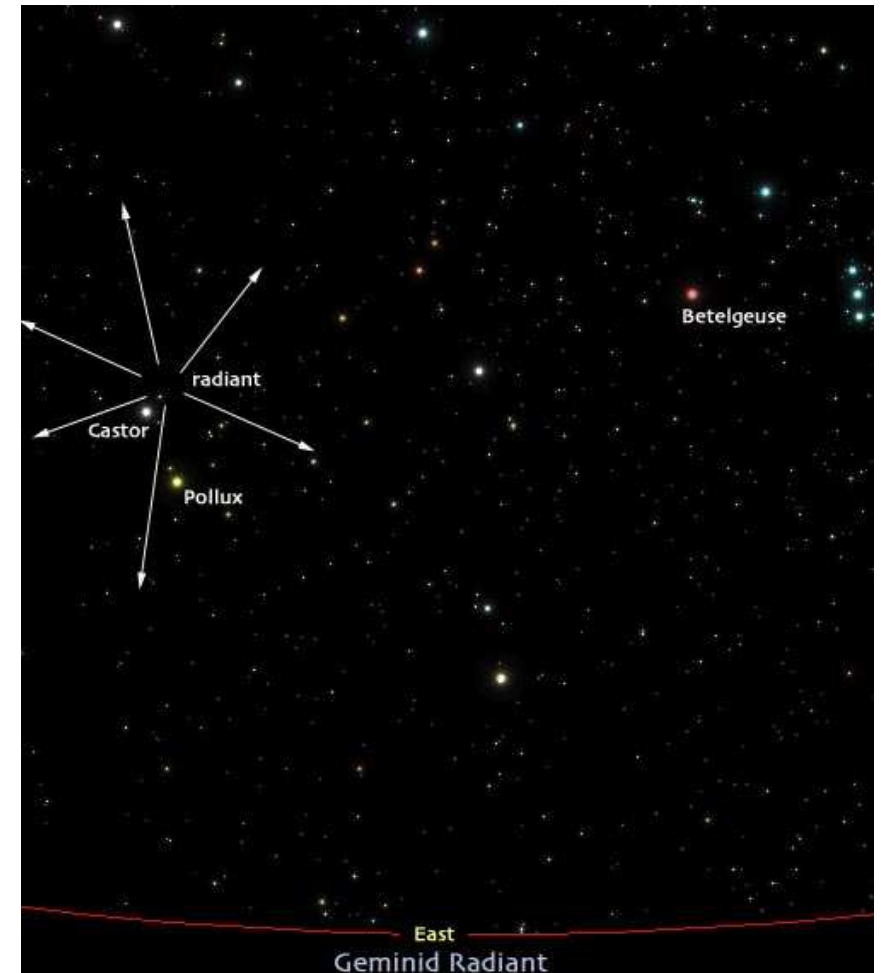
Expected Zenital Hour Rate: 120 Meteor / Hr

Dec: 33° ; AR: 112°

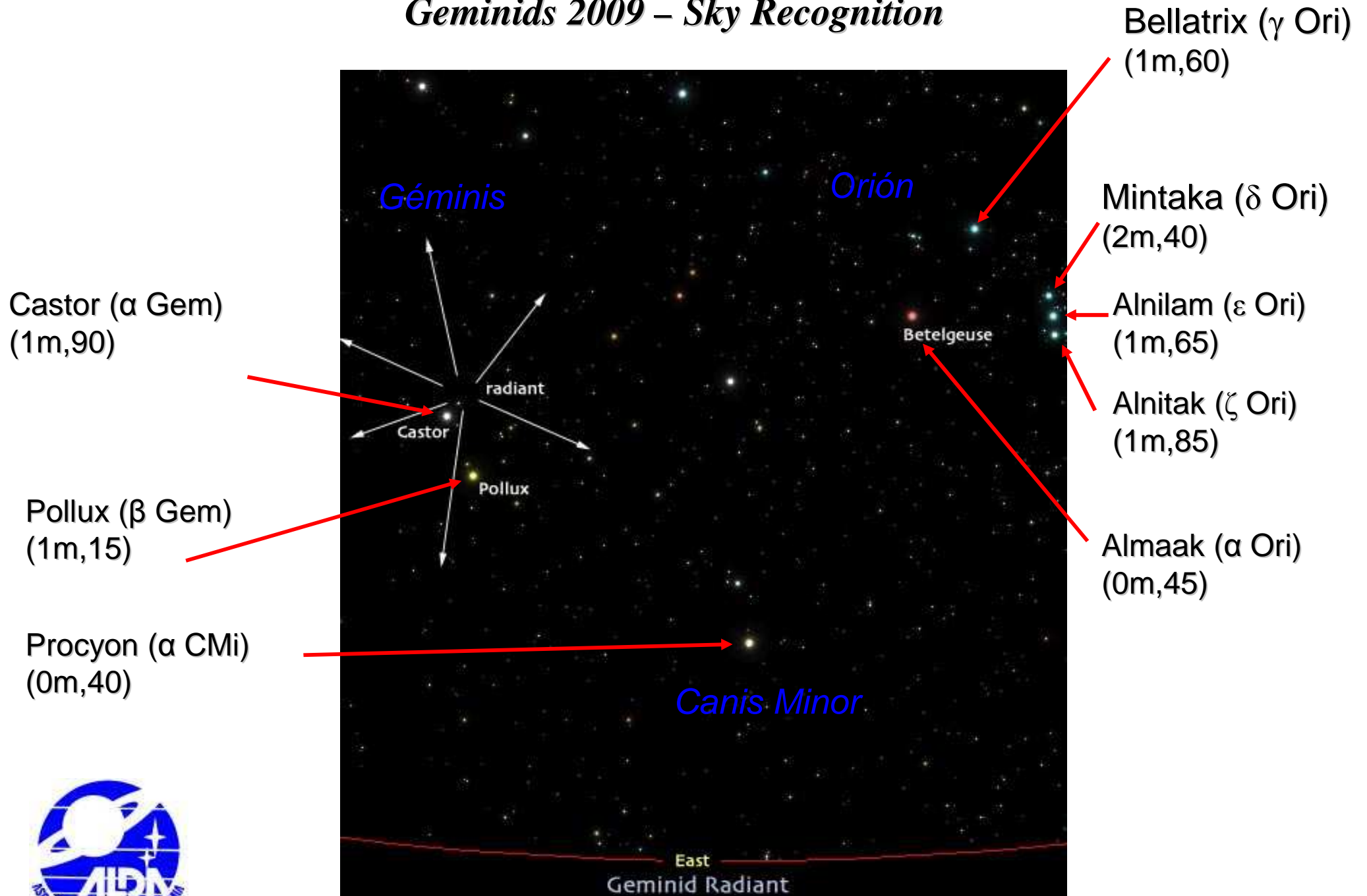
Total Observing time: **9,00 hr**

Registered Geminids: **389**

Not Reported Geminids: **241**



Geminids 2009 – Sky Recognition



Geminids 2009 – Visual Stellar Magnitude Limit

To determine the Visual Stellar Magnitude Limit, using same procedure as used for Perseids, it follows:

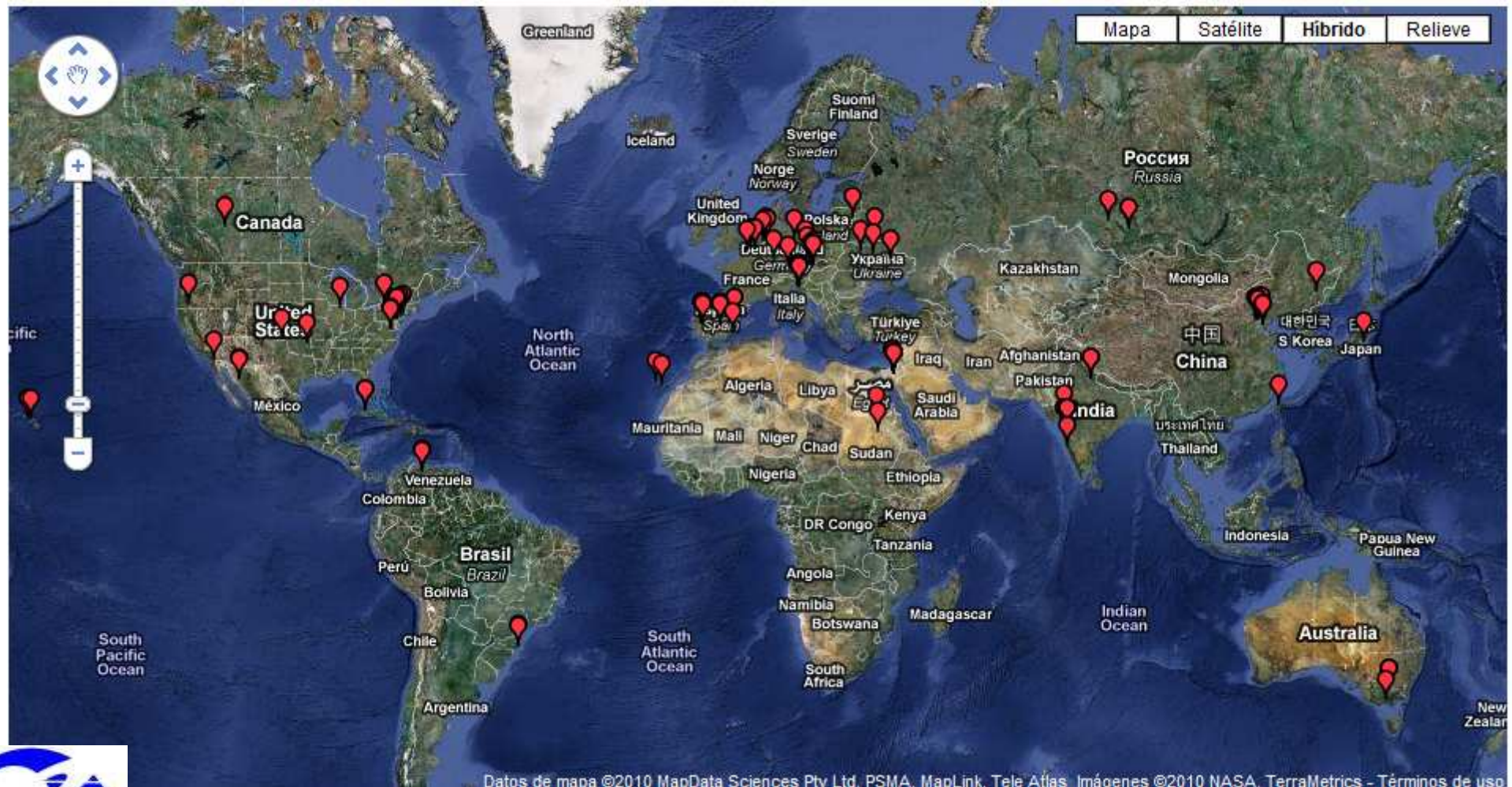
In the Triangle formed by: Castor – Pollux – Alhena:

HIP 36896 A
(6m,05)



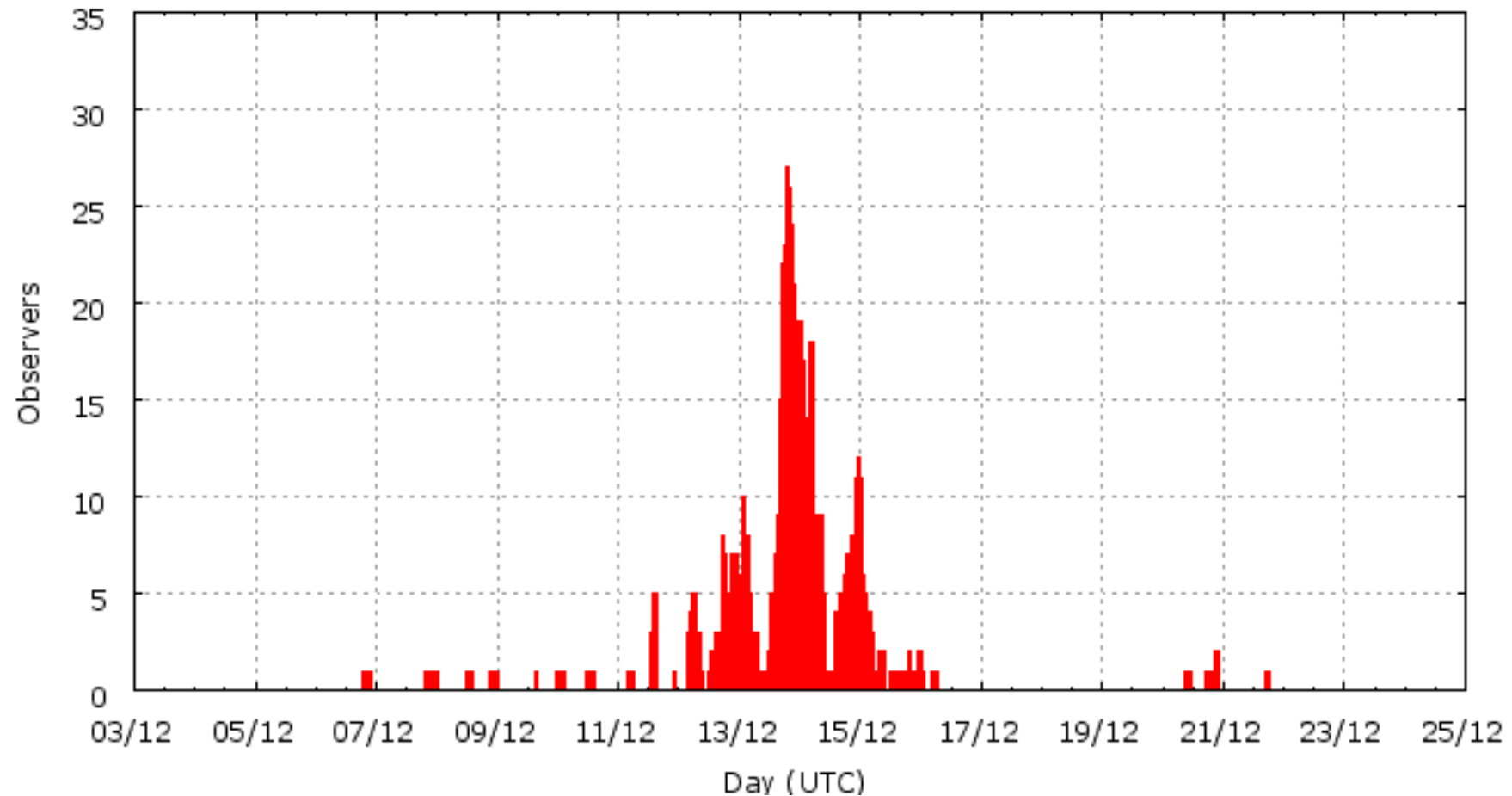
Geminids 2009 - Observations

Observers around the World:



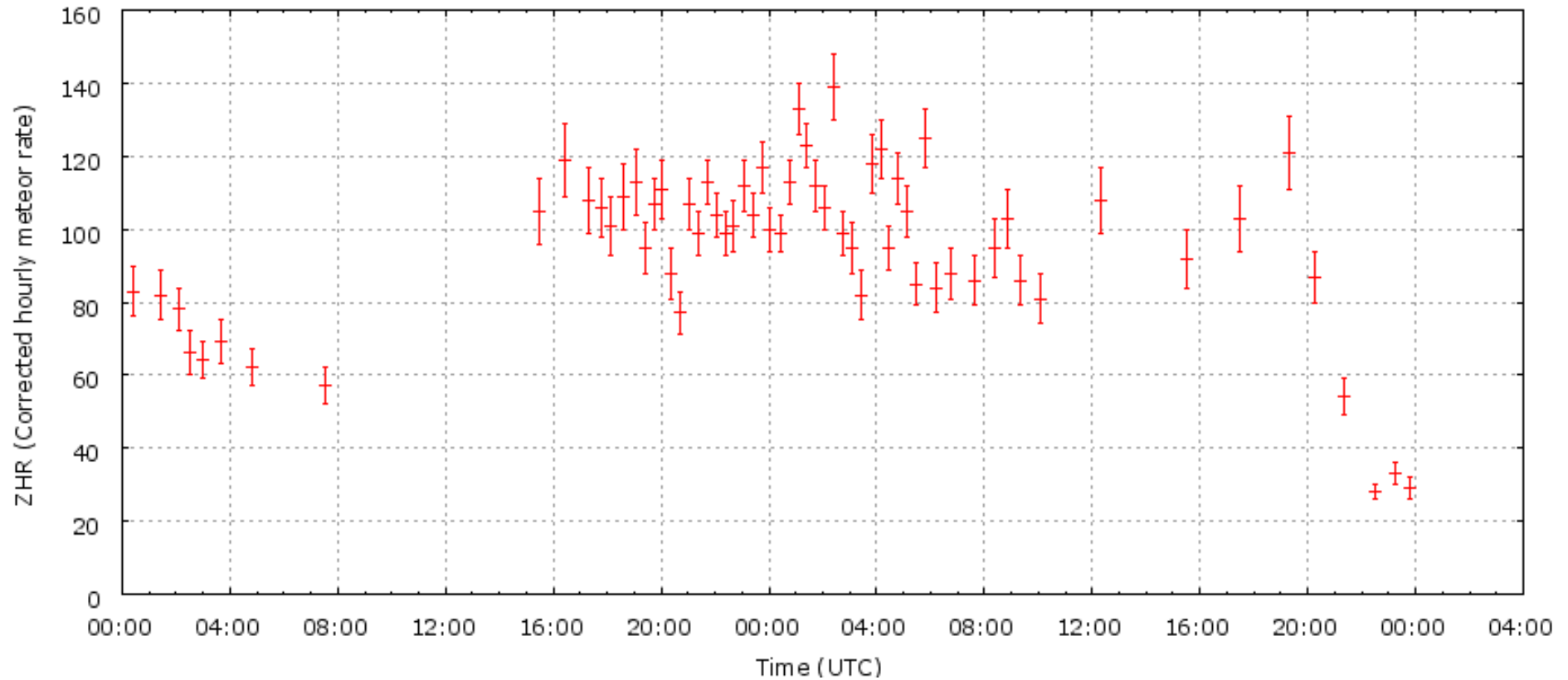
Geminids 2009 - Observations

Temporal Observers Distribution Chart:



Geminids 2009 - Observations

Hour by hour shower behaviour:



Geminids 2009 - Others

During observational work there were detected meteors with different kind of trazes, different colours also. Based on the color of those trazes it can sense meteor and comet composition:

White: 71%, *Iron (Fe), Copper (Cu), Arsenio (As), Antimony (Sb), Cesium (Cs)*

Green: 17%, presence of *Nickel (Ni), Thallium (Tl), Barium (Ba)*

Yellow: 1%, presence of *Sodium (Na)*

Blue: 1% , *Magnesium (Mg), Selenium (Se), Plumb (Pb)*



Perseids & Geminids 2009 - Observations

ALDA Members location by the time of the showers:

Barbacoas:

Carlos Torres

Gilbert Sánchez

Héctor Suárez

Francisco Suárez

Francis Falcón

José Escalona

Imelda Colmenarez

Eddy Valera

Tito Lizardo

Rafael Barrios B.

Saroché:

Jesús Guerrero

Rafael Garcia

María F. Garcia

José V. Histol

Ricardo Bernardinez

Isaías Pérez

Duaca:

Jhonny Torres



International Meteor Conference 2010



Thanks!!!

Participants

IMO 's Crew Support

Hoping to see you on next IMC

