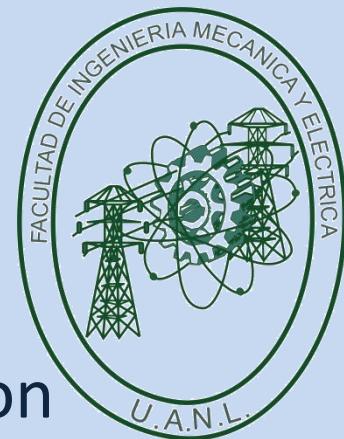




Universidad Autónoma de Nuevo Leon



Facultad de Ingeniería Mecánica y Eléctrica

**Aerospace system develop in Mexico**

Bárbara Bermúdez Reyes



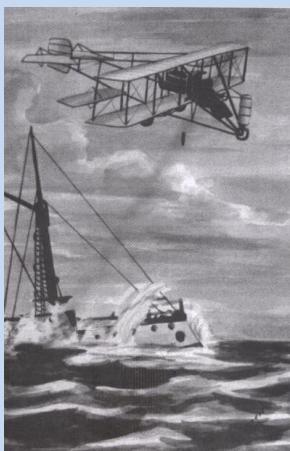
# Content

- Aerospace Mexican History
- Aerospace Mexican nowadays
- Aerospace Networks
- UNISEC- North Mexico



Rocket Launch at Nuevo León (UANL-UACH)

# Aerospace Mexican History



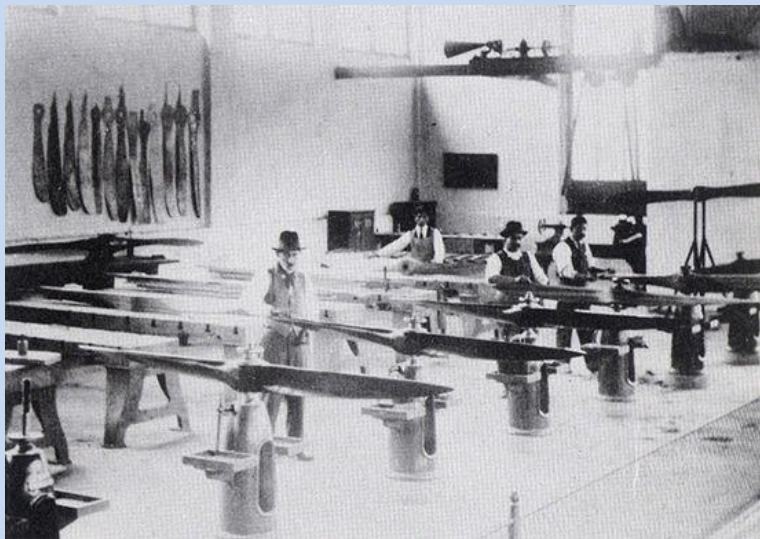
Gustavo Salinas Camina, en los controles del biplano "Sonora", atiende las evitaciones de Didier Masson. [MRK]

First naval battle in Topolobampo, Sinaloa (April 14<sup>th</sup>, 1914)

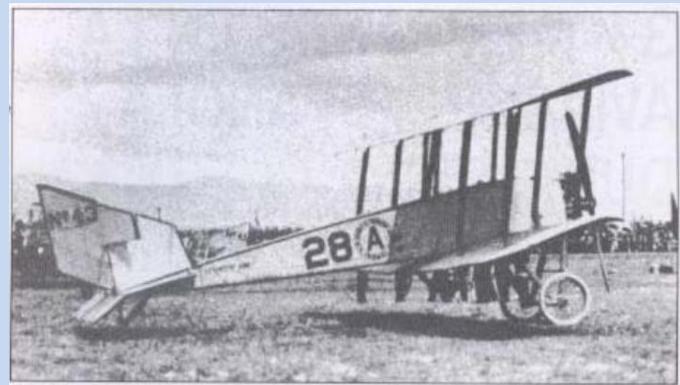


Mexican Air Force was founded on 1915.

# Aerospace Mexican History



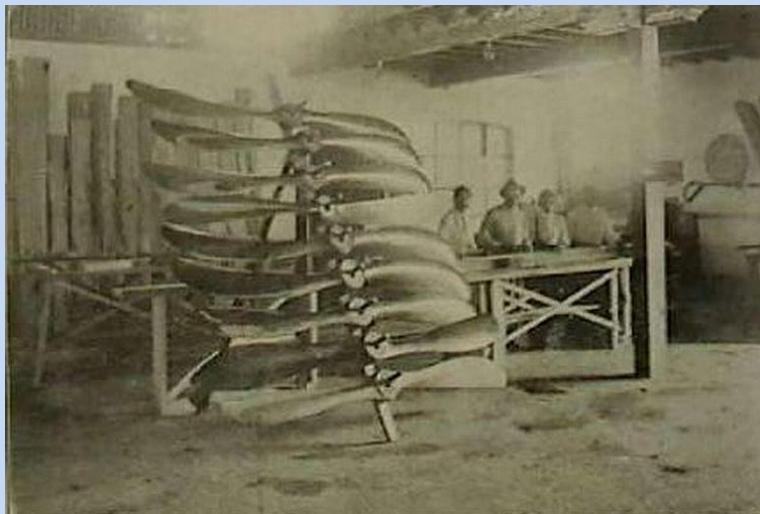
Aeronautics National Workshop



A Serie airplane



C Serie airplane

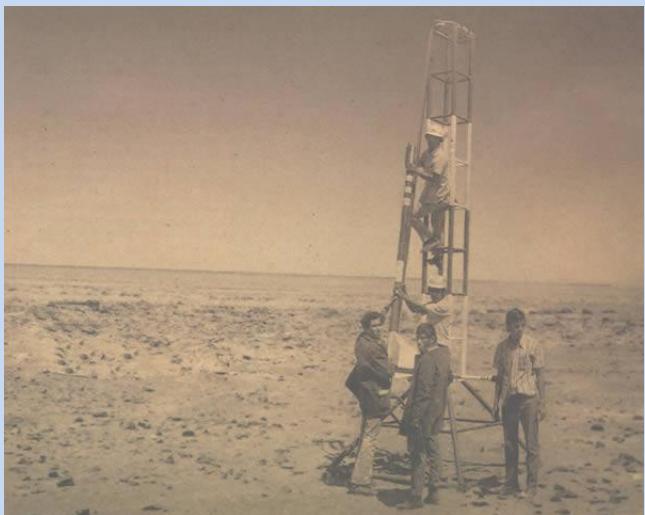


Anahuac Propeller



H Serie airplane

# Aerospace Mexican History

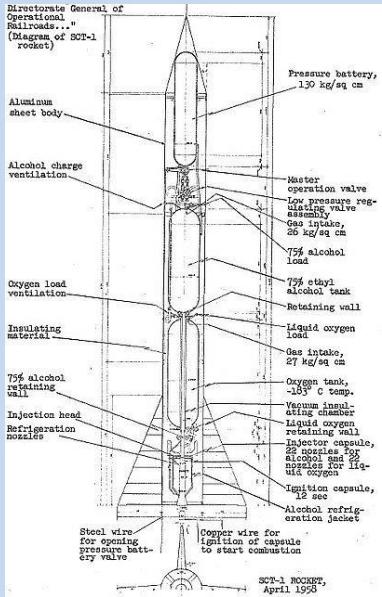


Cabo Tuna, San Luis Potosí (1957)



Cabo Mina, Nuevo Leon (1961)

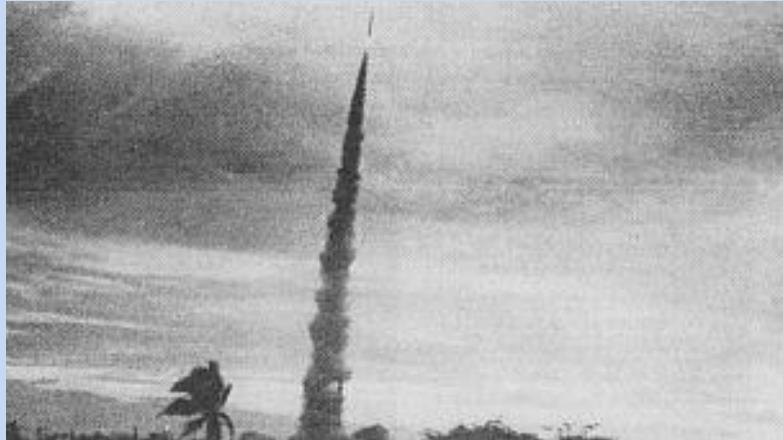
# Aerospace Mexican History



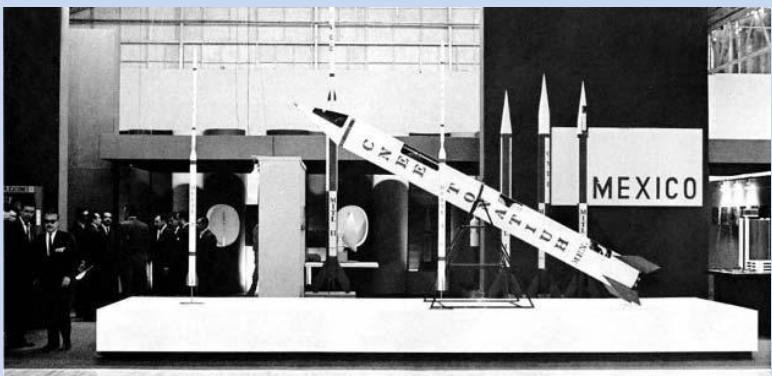
SCT-1 (1959)



SCT-2 (1960)



Mitl-1 (1967)

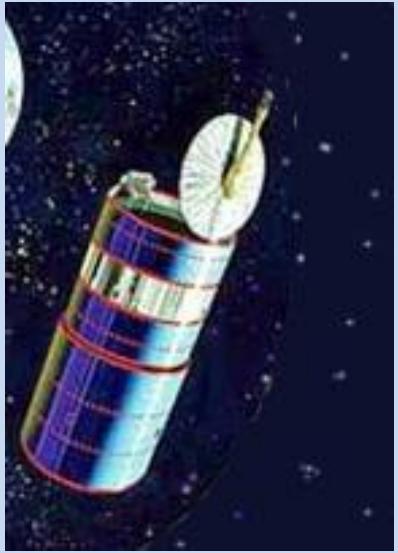


Tonatiuh (1962)

In 1962, Outer Space National Commission was created, but it disappeared in 1977.



# Aerospace Mexican History



Morelos (1985)



Solidaridad (1994)



SatMex (since 1998)



UNAMSAT-B (1996)

Mexican  
Satellites

# Aerospace Mexican Nowadays



Mexican Space Agency is created in 2010.

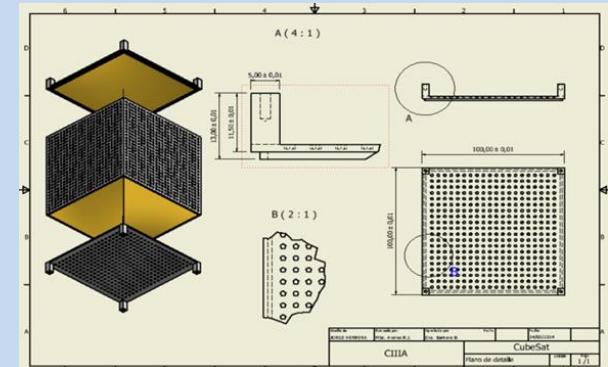
## Research



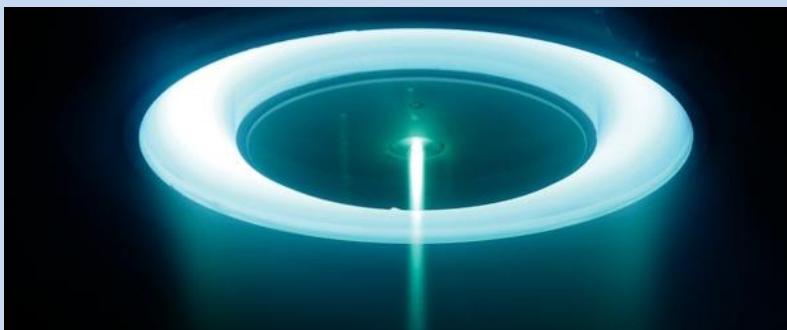
Telemedicine



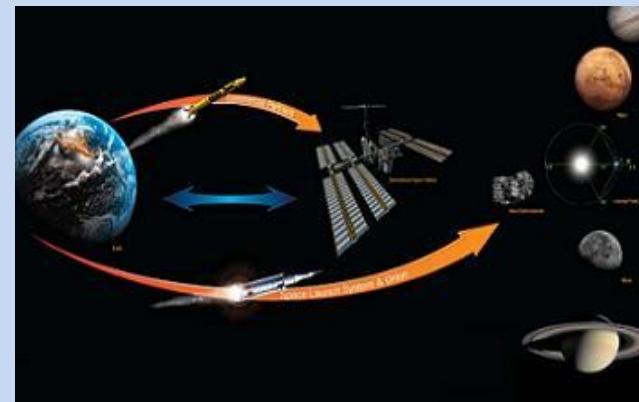
Thermal barrier coatings  
for satellite systems



Satellite Structures



Space propulsion



Telemetry

# Aerospace Mexican Networks



**REDCyTE**

Space Science and  
Technology Network  
(since 2011)

Development of metallic and ceramic coatings  
for thermal changes and tolerant to cosmic  
radiation in satellite systems (since 2011)



(2014)



# UNISEC North Mexico

- Cansat Course in Universidad Autónoma de Baja California in collaboration with Universidad Autónoma de Nuevo León (August, 2014).
- Cansat Course in Mexican Space Agency in collaboration with Universidad Autónoma de Baja California and Universidad Autónoma Nuevo León (October, 2014).
- Collaboration between Universidad Autónoma de Nuevo León, Universidad Autónoma de Baja California and Universidad Autónoma de Chihuahua in Aerospace Regional Network (September- December 2014).
- Collaboration between Universidad Autónoma de Nuevo León and Universidad Autónoma de Mexico in the Master Science Thesis “Cubesat Structural Design to apply a Protective Thermal Barrier Coating” (2014-2015).
- Rocket design and airmodeling workshops. In collaboration with Universidad Autónoma de Nuevo León, Universidad Autónoma de Chihuahua and Mexican Air Force (October 2014).
- UNISEC- North Mexico web site: under construction

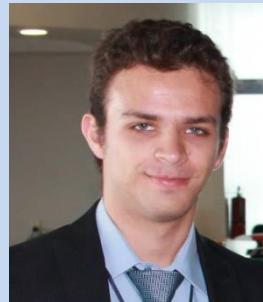


# UNISEC - North Mexico

Universidad Autónoma de Baja California  
Aerospace Engineering



M. C. Antonio  
Gómez Roa



Student: Erick Norberto  
Bustamante López

Universidad Nacional Autónoma de México  
High Technology Center



Dr. Jorge Alfredo  
Ferrer Pérez



Student: Eng. Rigoberto  
Reyes Morales

Universidad Autónoma de Chihuahua  
Aerospace Engineering



Lic. Adriana  
Ruiz Anchondo



Dr. Hermes  
Moreno  
Álvarez

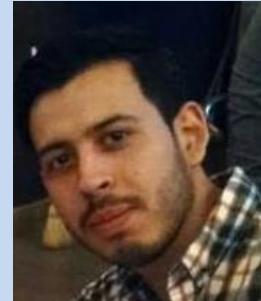


Student: Janeth  
Loya Ruiz

Universidad Autónoma de Nuevo León  
Aeronautics Engineering Research and  
Innovation Center



Dr. Bárbara Bermúdez  
Reyes



Student: Octavio  
Rafael Farías Altamira



**UNISEC North Mexico Contact:**

Bárbara Bermúdez Reyes  
[barbara.bermudezry@uanl.edu.mx](mailto:barbara.bermudezry@uanl.edu.mx)