



Tiempo y clima: un espacio de cooperación Cuba-Estados Unidos (1855-2024)

Weather and climate: an area for cooperation Cuba-US (1855-2024)

Prof. Luis E. Ramos-Guadalupe

Sociedad Meteorológica de Cuba - Unión de Historiadores de Cuba



WEATHER SERVICE IN CUBA



**Observatorio Físico-Meteorológico de La Habana
(1861-1869)**



Servicio Meteorológico de las Antillas (1889-1898)



United States Weather Bureau (1898-1902)



**Estación Central Meteorológica, Climatológica y de
Cosechas (1902-1808)**



Observatorio Nacional (1908-1964)



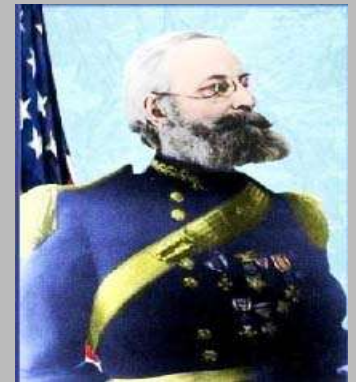
Instituto de Meteorología (1965)



Andrés Poey was the first Cuban meteorologist to establish cooperative relations (1855) with scientists from the United States. Poey corresponded with Joseph Henry, Secretary of the Smithsonian Institution.



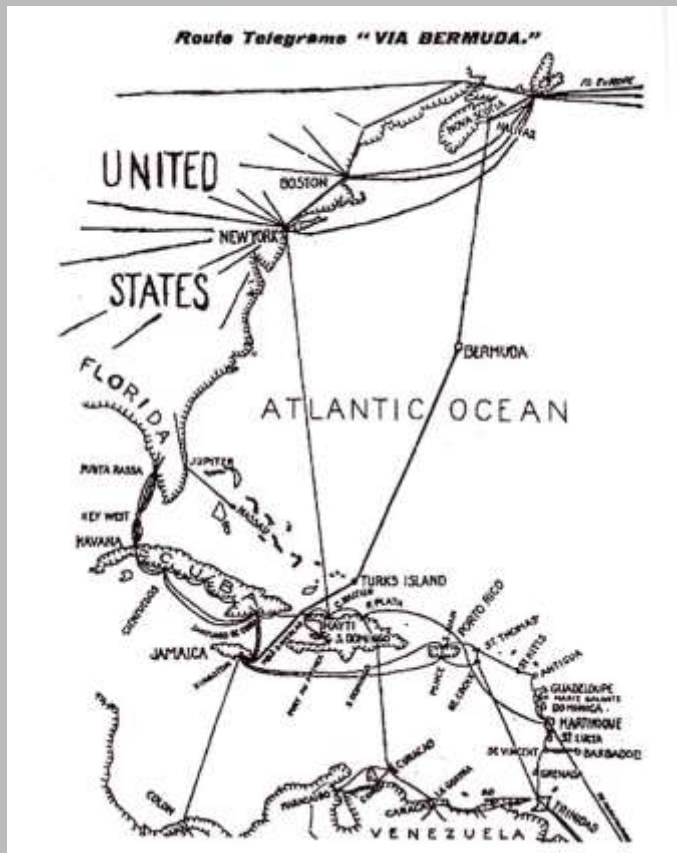
Since 1877, the Spanish Jesuit Father Benito Viñes, Director of the Observatory of the College of Belen (Jesuit priests), sent and received from the Signal Service of the United States reports on the weather in the Caribbean Sea.



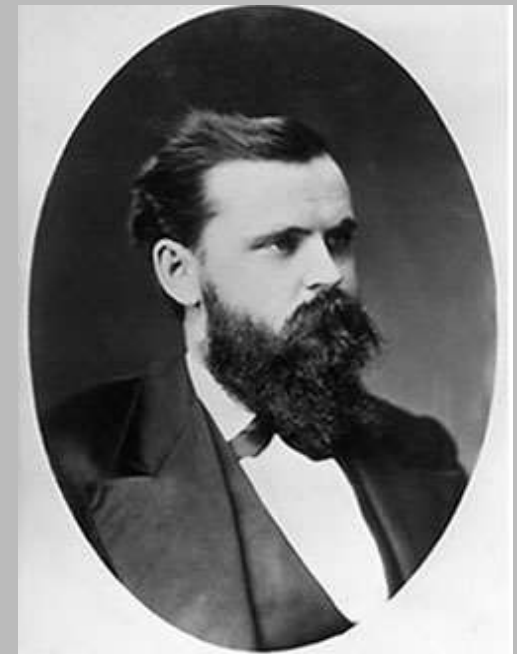
Adolphus W. Greely



The first tropical cyclone forecast and hurricane warning, were issued by an Spanish meteorologist. Father Benito Viñes Martorell, on September 11, 1875. Observatorio del Colegio de Belén, La Habana.



Benito Viñes, S. J.
Director of the Belén
Observatory (1870-1893)



Mark Harrington
Appointed first director of
the U S Weather Bureau

The exchange of weather information was sent in both directions by submarine telegraph cable. Shipping and insurance companies paid for this service during the hurricane season months.



In 1898, the US Weather Bureau moved its Weather Forecast Office to the Caribbean area from Kingston, Jamaica, to La Habana, Cuba. William Stockman was appointed Forecaster Officer and Head of the U. S. Weather Service at La Habana.

U. S. DEPARTMENT OF AGRICULTURE,
CLIMATE AND CROP SERVICE
 OF THE
WEATHER BUREAU

CENTRAL OFFICE: WASHINGTON D. C.

CUBA SECTION

WM. B. STOCKMAN, Section Director.
 HAVANA, CUBA W. I.

VOL. I.

HAVANA, CUBA.

NO. I

The issuance of this, the first monthly weather report of the Cuba Section of the Climate and Crop Service of the U. S. Weather Bureau, has been greatly delayed by a number of unavoidable circumstances, but it is hoped to quickly follow this issue with the reports for subsequent months until the reports are brought up to date, and thenceforth promptly issued, at the end of each month.

In order, however, that this may be done in such a manner as to best subserve all the interests concerned, observers are urged to mail their reports as soon as possible after the completion of the month.

DEPARTAMENTO DE AGRICULTURA DE LOS E. U.
SERVICIO CLIMATOLOGICO Y DE COSECHAS
 DEL
WEATHER BUREAU.

OFICINA CENTRAL: WASHINGTON D. C.

SECCION DE CUBA

WM. B. STOCKMAN, Director de Sección.
 HABANA, CUBA.

TOMO I.

HABANA, CUBA.

NUM. I.

La salida de este boletín, que es el primer informe mensual que publica la Sección de Cuba, del servicio climatológico y de Cosechas del Weather Bureau de los E. U., se ha demorado por un cúmulo de circunstancias inevitables; pero nos prometemos que sigan pronto a éste los de los meses subsiguientes hasta que se pongan al corriente estos informes; y que de ahí en adelante se publiquen inmediatamente después del fin de cada mes.

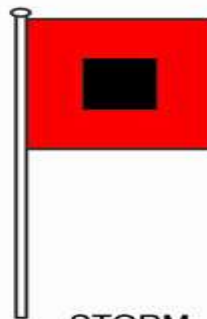
Pero, con objeto de que esto pueda ser, en beneficio de aquellos a quienes interesa este asunto, se recomienda a los observadores que envíen sus informes lo más pronto que puedan, a la terminación del mes.



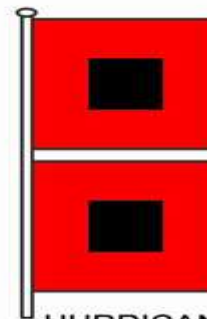
**SMALL CRAFT
 ADVISORY**
 20-33 knots
 (23-38 mph)



GALE WARNING
 34-47 knots
 (39-54 mph)



**STORM
 WARNING**
 48-63 knots
 (55-73 mph)



**HURRICANE
 WARNING**
 64 knots or higher
 (74 mph or higher)



L. García Carbonell (1840-1921)

Garcia Carbonell was appointed Officer to Climatological Department at the US Weather Station in La Habana (1898-1902).

At the end of US Intervention in Cuba, was appointed first Director of the National Weather Service of the Republic of Cuba (1902-1921).

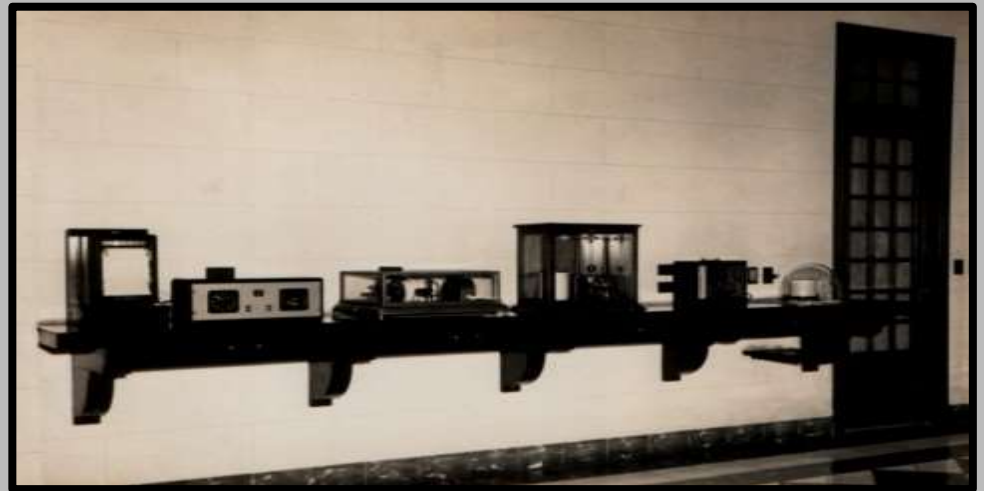


Prof. Willis Gregg
US WEATHER BUREAU



Dr. José Carlos Millás
OBSERVATORIO NACIONAL DE CUBA

1936, December 8: Dr. Willis Gregg, Director of the United States Weather Bureau, visits Cuba to coordinate actions in order to expand cooperation between both National Meteorological Services.

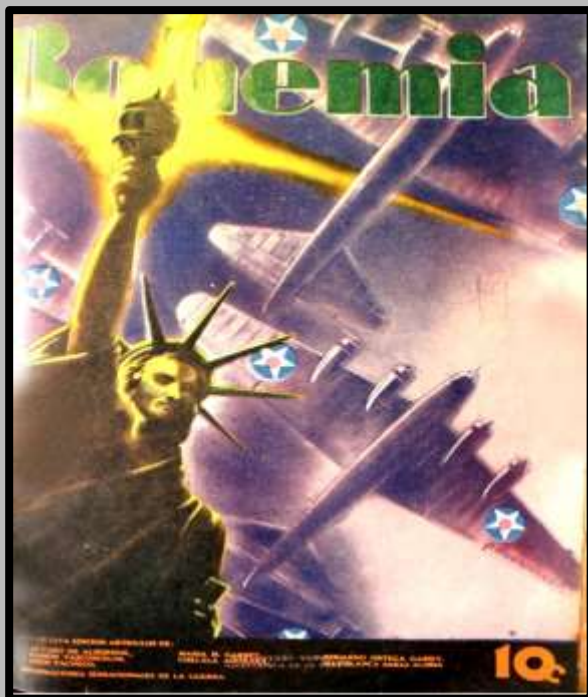


Cooperation US-Cuba includes meteorological instruments, supplies, and technical equipment to launch and tracking pilot balloons (“Piballs”).

Military and meteorological cooperation Cuba-United States reached its highest level during the Second World War

1941, December 7th: Pearl Harbor under attack.

1941, December 11th: Government of Cuba proclaims the war against Japan, Germany and Italy.



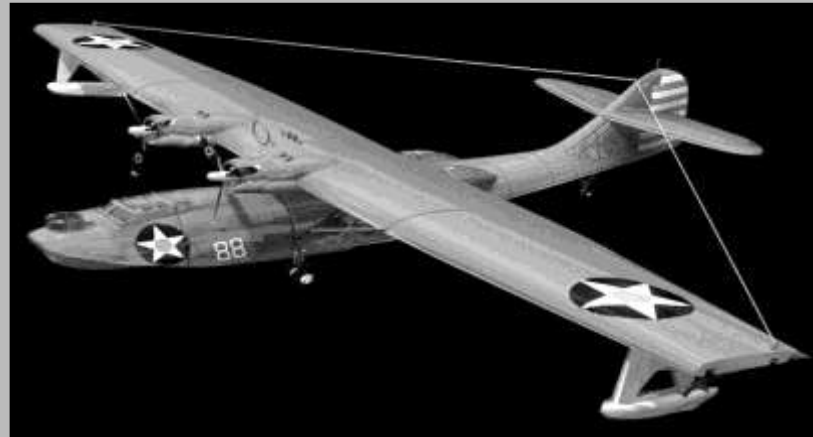


Synoptic analyzes and weather forecasts classified as strategic information.

National Weather Service is transferred from the Secretary of Agriculture to the Command of the Cuban Navy.



Weather reports are censored in Cuban newspapers and radio broadcastings.



The naval aviation of Cuba and the US Navy carried out joint anti-submarine patrol operations in the Caribbean Sea, the Gulf of Mexico and the Straits of Florida, for providing protection of ships in convoy.



Theater of military operations in the Caribbean Sea and the southern United States. For the task forces of the Navy to develop their missions, it was necessary to know with certainty the operative meteorological situation in the whole area and to have effective weather forecasts.




Main bases in Cuban territory used by the US Air Force and US Navy for training, patrol operations and anti-submarine defense (1942-1945)



To accomplish their missions, task forces needed reliable meteorological forecasts.



Technological equipment sent by the US Weather Bureau to the National Observatory of Cuba (National Weather Service) included teletypes, radio-facsimile, radio transmitter/receiver, and balloon radiosondes.



The atmospheric soundings with Bendix balloon radiometeorographs. First launch in Havana, Cuba on September 8, 1944, with the assistance of civil and military authorities. Shortly after, the same technology was installed at the Camaguey airport and at the Guantanamo naval base.





Technological equipment included an instrument stock for 12 weather stations. Its was located on the Cuban Navy bases on shorelines.





AFTER THE II WORLD WAR



AIR MAIL

OBSERVATORIO NACIONAL.
Cama Blanca, Havana.
November 27, 1944.

Dr. F. W. Reichelderfer,
Chief of the Weather Bureau,
Washington, D.C.

Dear Dr. Reichelderfer:

I have sent you through the Cuban Embassy in Washington copies of the barograms of the hurricane of October 18, and also of wind directions and velocities. Time is 75th meridian. One of the barograms is the original registered by one of the Prime Barographs you sent for the auxiliary stations. All the wind gusts are not well seen in the copies, the highest a few minutes before 10 a.m., above the 160 - mile level, shown by an arrow.

The copies are not what I wanted, but just as received I send them to you.

Cordially yours,

José Carlos Millás
Capitán de Corbeta,
Director del Observatorio Nacional.

MANIFIESTA DE GUERRA
CARTAS Y CABLES NACIONALES
Fecha 28 Nov 1944
Número 784-A-24

229/12.



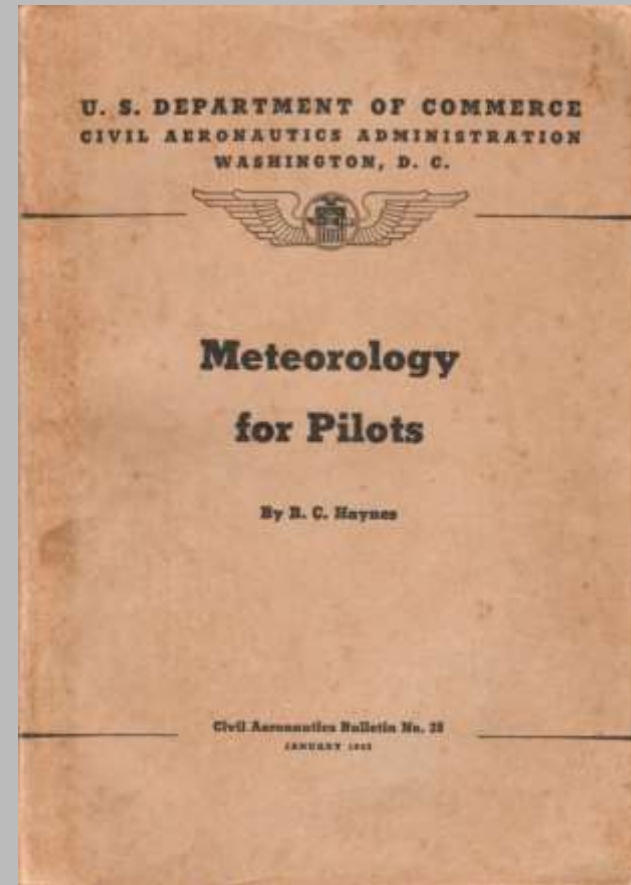
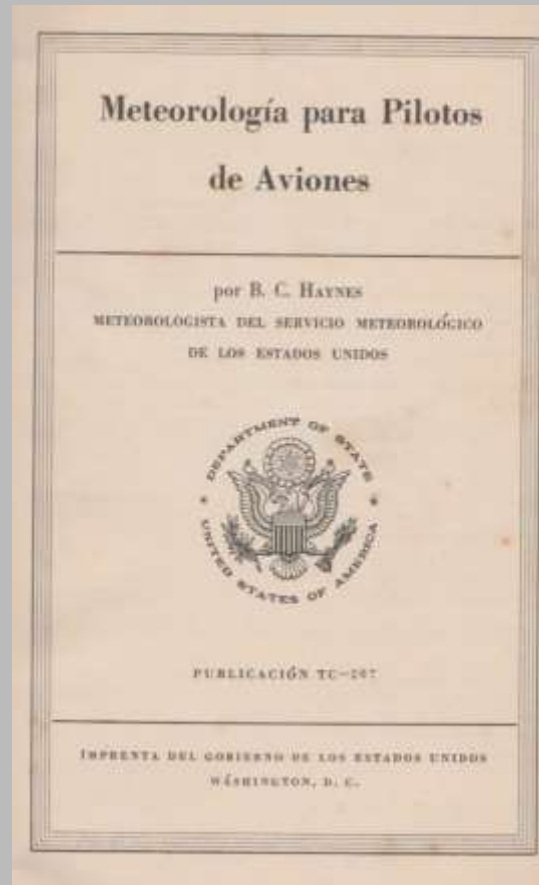
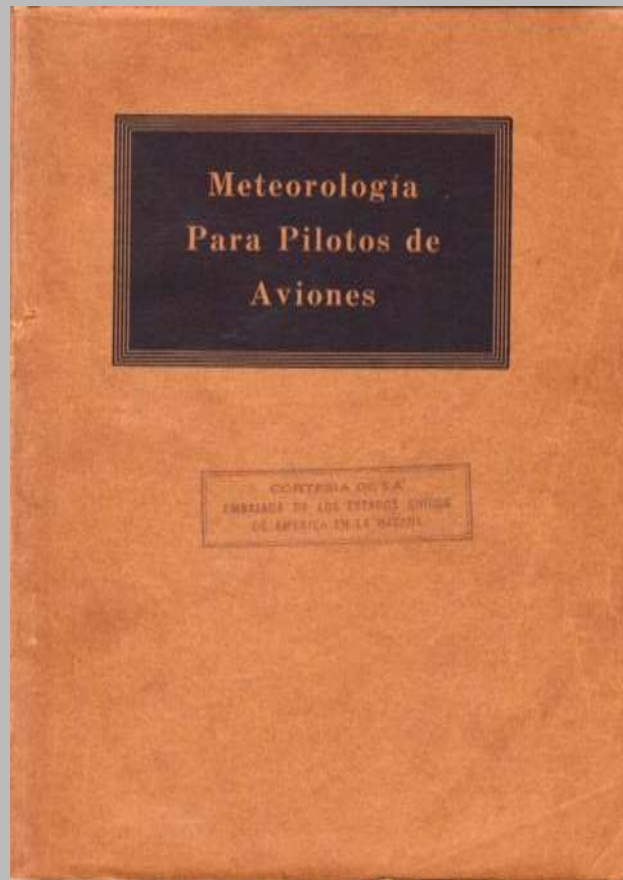
Dr. Francis W. Reichelderfer



Dr. José Carlos Millás



**Rawin (Radio-Wind) model SCR-658 array, at the Observatorio Nacional, La Habana.
Similar model at Camaguey Cuban Air Force Base and International Airport (circa 1948)**



Text Books for teaching Meteorology



After 1959

After diplomatic and commercial relations between Cuba and the United States broke down, the Meteorological Service was left lacking technical supplies that included scientific instruments and parts, and even gas for the radiosonde balloons.

UNITED STATES DEPARTMENT OF COMMERCE
WEATHER BUREAU
Miami 30, Florida
August 31, 1959

Dr. Jose Carlos Millas
National Observatory
Havana, Cuba

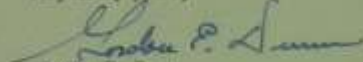
Dear Dr. Millas:

It appears that the teletype speedup of the CAOSMT broadcast has been postponed indefinitely. So at least for awhile you will not have to worry about new teletype equipment.

It also appears that improved radiocade equipment will be furnished you for Havana and Camaguey, and should arrive early next year.

Best personal regards.

Very truly yours,



Gordon E. Dunn
Chief District Meteorologist

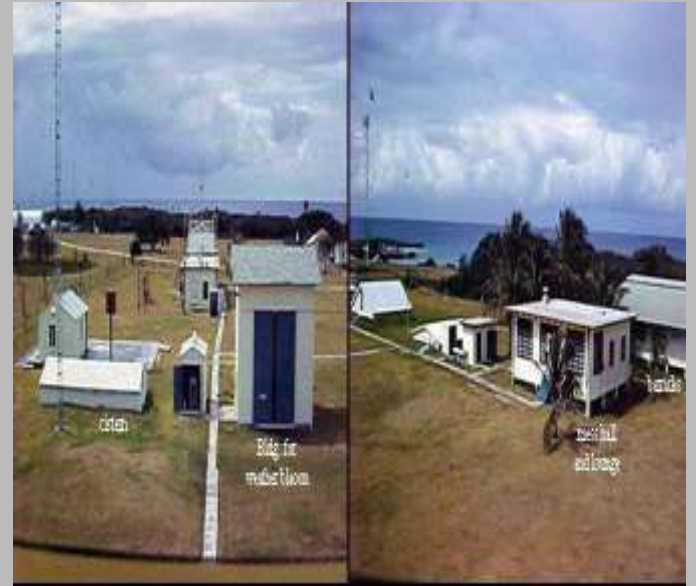
GER:ds



Prof. Gordon Dunn



Dr. José Carlos Millás



Swan Islands, which housed a U. S. seismological and meteorological station of utmost importance for early warning of hurricanes in the Caribbean Sea, became the headquarters of a radio station used by the CIA to stimulate and organize subversion within Cuba.



Because hurricanes are meteorological systems of regional interest, scientific relations between the Cuban Meteorological Service and the National Hurricane Center were never interrupted.



The recent years 1999-2024

**NOAA Hurricane Hunters on
their tour of the Caribbean
before the start of the 1999
hurricane season. Visit to
Havana, Cuba. March 16-18.**





Rutgers University, has collaborated with Cuban meteorologists to obtain doctoral degree training. In the photo: Professor Alan Robock and Juan Carlos Antuña.



**Alan Robock (PhD). Rutgers University.
CLIMATE CHANGE AND NUCLEAR WINTER.**



September 14-16, 2010



National Center for Atmospheric Research (NCAR), of Boulder, Colorado, has collaborated in upper troposphere investigations with laser sounding technology based on GIS and GPS.

Photo: Dr. Rick Anthes (NCAR) and Dr. Celso Pazos, director of the Institute of Meteorology, with meteorologists from Cuba and the United States at the Camaguey Meteorological Center. January 19, 2015.



Los Angeles Times

INTERNATIONAL

EEUU y Cuba acuerdan cooperar en clima y meteorología

EFE
18A 21L 2016 8:36 PM PT

Share

Washington — La Administración Nacional Oceánica y Atmosférica (NOAA, en inglés) de Estados Unidos y el Instituto de Meteorología (INSMET) cubano firmaron hoy un acuerdo para cooperar en la investigación sobre clima y meteorología.

El memorándum fue suscrito en Washington por el vicesecretario de la NOAA, el vicealmirante Manson Brown, y por el viceministro primero cubano de Ciencia, Tecnología y Medioambiente, Fernando González, según informó la parte cubana en un comunicado.

El objetivo del acuerdo es fomentar la investigación mutua y el intercambio de información en la predicción de huracanes, combate al cambio climático, contaminación atmosférica y oceanografía, entre otros aspectos relevantes en materia de meteorología y clima.

THE CASE OF A LEGEND
MEMORIALIZED
Fernando Valesquez's legacy



Memorandum signed in Washington by the Deputy Administrator of NOAA, Vice Admiral Manson Brown, and by the Cuban First Deputy Minister of Science, Technology and Environment, Fernando González. December 21, 2016.



Finally

Finally...



**SOME DAY, AT THE END OF THE
UNITED STATES EMBARGO/BLOCKADE
AGAINST CUBA, OUR OPPORTUNITIES
FOR SCIENTIFIC COOPERATION WILL
GROW MORE THAN EVER BEFORE.**

THANKS FOR JOIN US!