



## ***Proyecto RONMAC***

**OEA-NOAA-CRRH**

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RONMAC Project First Training Workshop on Sea Level Data Processing

May 15<sup>th</sup>-18<sup>th</sup>, 2001

Antigua, Guatemala

Sponsor Organization: Comité Regional de Recursos Hidráulicos, CRRH  
Contact: Jim A. Navarro

### *Speakers:*

Dr. Patrick Michaud: An existing Monitoring, Collecting and Plotting Sea Level Data Network in the Area of Texas.

- Presentation of the TCOON Network
- Web Site and Internet Processing.
- Collecting the data
- Definition and Methods to establish the Datum
- Other operational procedures for data analysis
- Future plans

Mr. Patrick Caldwell: An Introduction to Sea Level Data Processing, Analysis and Forecasting.

- Introduction and history of the Software (NMPR2)
- Unzipping the package
- Filenames convention
- File Data Formats
- Conversion to NMPR2 format
- Hourly data Quality Control.
- Tidal Analysis and forecast
- Plot analysis
- Quality Control Techniques
- Hourly and monthly data filters
- Database management
- Case Study from each country
- Questions and Remarks

Mr. Jim A. Navarro: Status of the RONMAC Network and future plans.

- A presentation on the status of the RONMAC Network
- Future installations



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- Design of a Web Site for RONMAC PROJECT, purposes and feedback
- Future plans of a Tidal Regional Database
- Comments of Data Analysis and Processing
- Procedure for Downloading information from DCP
- Questions and Comments.

### *Attendees:*

#### Honduras:

Arturo Pineda, Chief Calculos Office, IGN  
Constantino Pineda, Vice-Chief Hydrology Department

#### Nicaragua:

Sergio Cordonero, Chief of the Hydrology Department, INETER  
Javier González, technician

#### El Salvador

Luis Hernández, Chief of the Hydrology Department, IGN  
Rolando Mejía, technician

#### Guatemala

Pedro Tax, Chief of the Hydrology Department, INSIVUMEH  
Luis Santos, Hydrology Department, INSIVUMEH

#### Others participants

##### Guatemala

Francisco Lima, technician, OBIMAR/Portuaria  
Nicolás Solares, technician



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Brief:

The workshop started right on schedule follow the introductory speeches and some welcome words of:

Dr. José-Felix Palma/OAS-Guatemala Director, who talked about how important this kind of projects are for the region

Mr. Eddy Sanchez, INSIVUMEH Director and CRRH-Board Director, who mentioned the real significance of the collection ,analysis, and processing of the information through the RONMAC Project,

Mr. Doug Martin, NOAA-NOS, who insisted on the importance of keeping and studying historical records of the region.

Mr. Max Campos, CRRH/Executive Secretary, who welcomed all participants and opened the workshop.

The open speech was given by Dr. Pat Michaud who clearly explained the TCOON Network from its beginning through present. Special emphasis was given to the operational and installation components, as well as the QA/QC of the data. The students showed to be more interested on the applications given to the data collected from the network, and seemed to be a little bit skeptical that the RONMAC Project Network could reach such state. However, by the end of the week, almost all of them change their minds and agreed that such effort could be achieved for this region with a common effort.

The second speaker was Jim A. Navarro who gave a brief speech on the Current status of the RONMAC Network and future plans, and aimed that the final objective of it is to have a Regional Network like TCOON. He also mentioned the construction of a web site where the complete RONMAC Database will be available for all users. He also indicated that a good performance of this network could only be accomplished with the contributions of all the participants countries and their offices.

The third and last speaker was Mr. Patrick Caldwell, who not only was in charge of most of the workshop, but taught his class in a magisterial and personal way(individual). His class referred to sea level data analysis from data plots and residuals plots from the difference of data and “first given” forecast data plots. His conference was focused of a completion of a very good one year hourly data series in order to minimized residuals to a certain given value(tolerance) and then to have a very good constituents values(at least 68) for each station. Once this goal was accomplished, forecast tidal values could then be obtained.

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This class used a preset database as it is illustrated on the “Technical Booklet”, so students could go home and recreate the exercises. Once all the students were confident with the procedures, software and datasets, a particular dataset for each country was given to each student so they could practice the exercises with their own datasets.

Questions were resolved along the workshop, so the students could continue with the next step of the practice.

Each student was provided with a Booklet and a Compact Disk containing software and datasets used during the workshop.

### Special Comments:

From the workshop participants, Luis Hernández, from El Salvador, demonstrated to be the only one who understands the concepts and the procedures of Sea Level Data Analysis. He also seemed to be the only one who has used this software in the past.

Except for participants from Honduras, who demonstrated to be not very good computer operators, all other participants did well along this workshop.

### Recommendations:

In order to really put together all these countries and have them work as a Regional Project, closed contacts must be established among them. A continuous monitoring of success and progress must be stated between each country and the Data Receiving and Collection Center Coordinator.