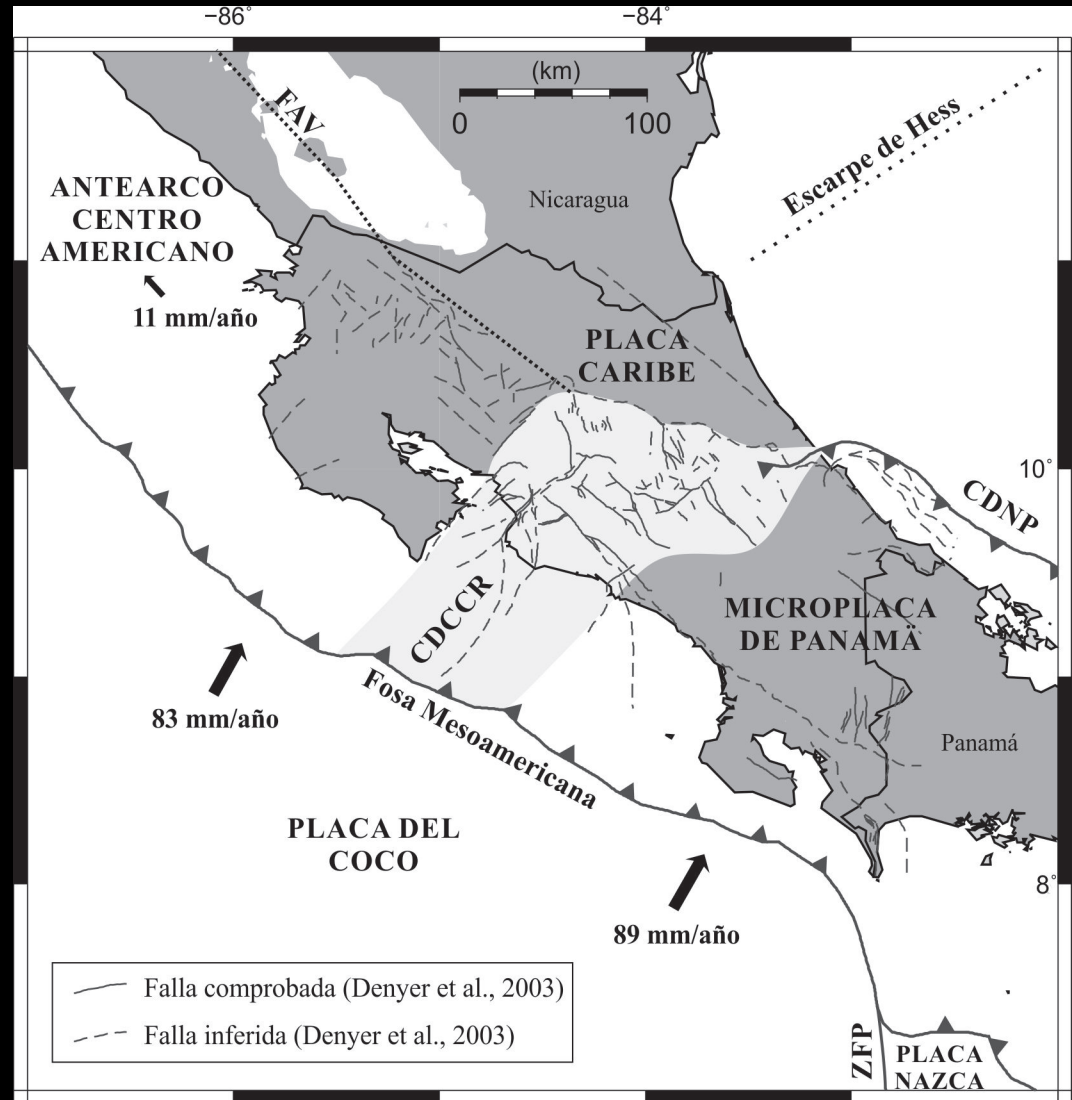


Costa Rica: An Earthquake Playground

- Tiny country about the size of Lake Michigan.
- **4 tectonic plates:** Cocos, Caribbean, Nazca Plates and Panama Microplate.
- **~150 active faults.**
- **Three seismic networks**
 - RSN:UCR-ICE
 - OVSICORI-UNA
 - LIS-UCR
- **8 seismologists (PhD)**

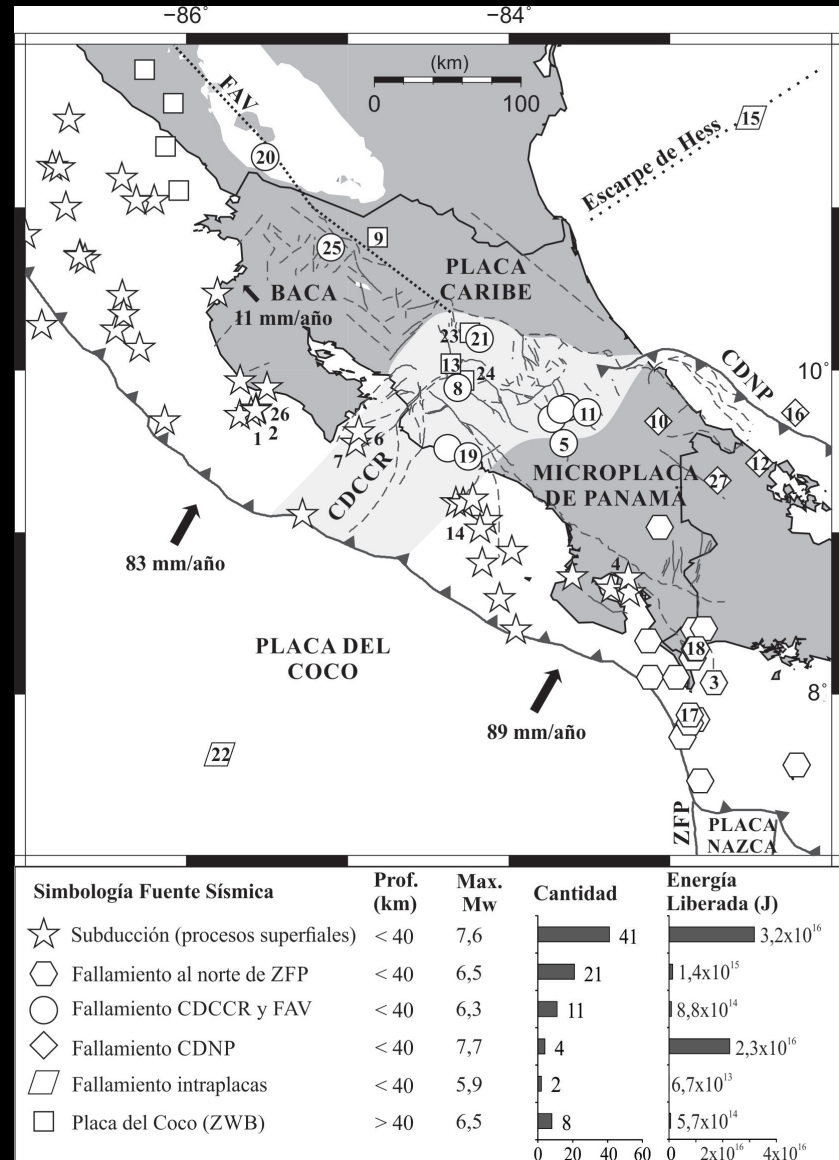


Costa Rica Earthquake Numbers

- 67 damaging earthquakes since 1821 (on average one every ~3 years).
- 14 magnitude ≥ 7.0 since 1821 (on average one every ~13 years).

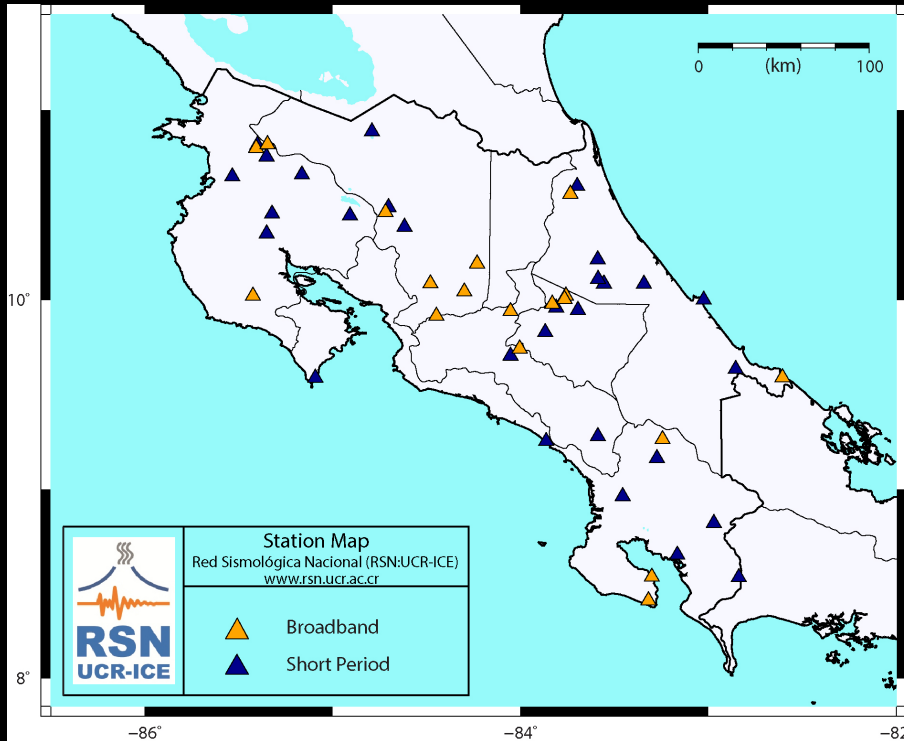
During 1973-2013:

- 90 felt earthquakes per year on average.
- five 5.0-5.9-magnitude earthquakes every year.
- one 6.0-6.9-magnitude earthquake every two years.

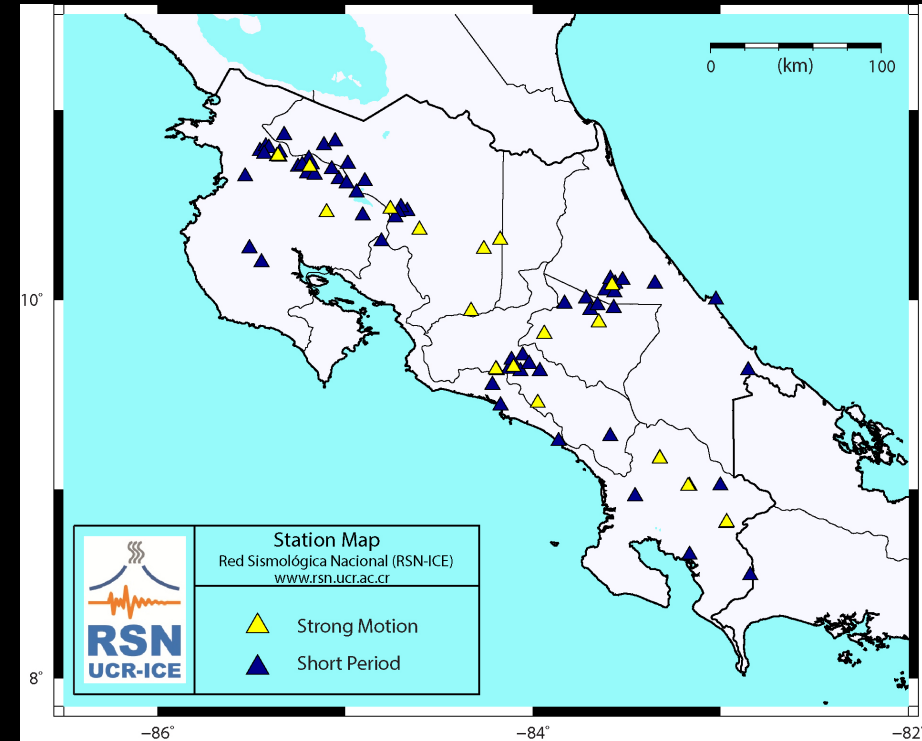


Linkimer and Alvarado (2014). Download it at: http://www.geologia.ucr.ac.cr/revista/revista/to_pdf/revista/30-aniversario/08-linkimer%20&%20alvarado.pdf

- RSN is a cooperation agreement between the Seismology Units of both the School of Geology at **University of Costa Rica (UCR)** and the **Costa Rican Institute of Electricity (ICE)**.
- Seismo Labs at the UCR and ICE started in 1973 and 1974, respectively. Work together as RSN since 1982.



- 18 Broadbands
- 32 Short Period
- 84 more Short Period to be deployed



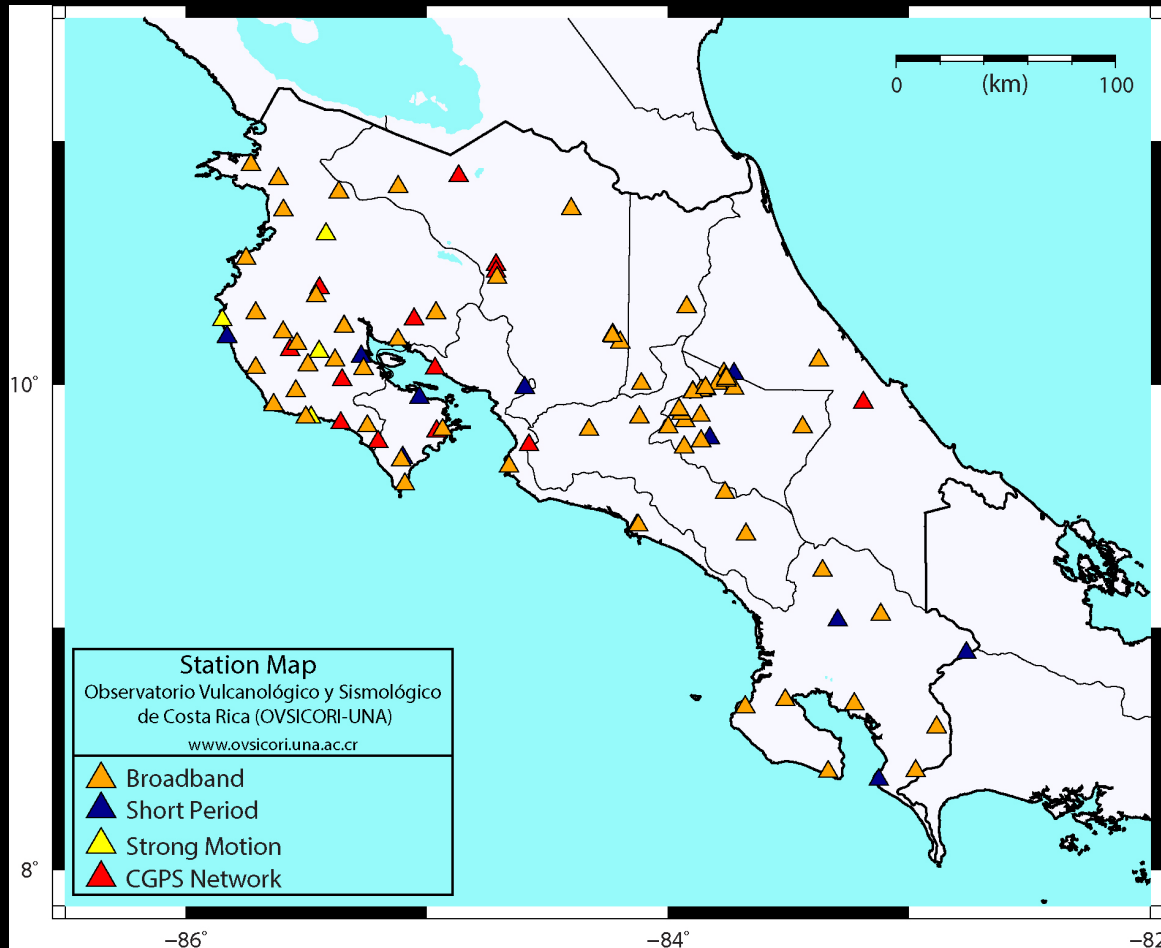
- 10 Energy Projects
- 61 Short Period and 2 broad bands
- 18 Strong motion



OVSICORI-UNA

www.ovsicori.una.ac.cr

- It's a Research Institute of the National University of Costa Rica (UNA).
- Established in 1986: http://www.ovsicori.una.ac.cr/index.php?option=com_content&view=article&id=5&Itemid=5



- 73 Broadbands
 - 12 Short-periods
 - 25 Strong motion
 - 39 CGPS Network
-
- Info from M. Protti. See also file upaloded at:
https://www.dropbox.com/sh/e23py7w8ytyrmov/AAB32vc_vnSF8r_aFPX6XzLa/Costa%20Rica?dl=0

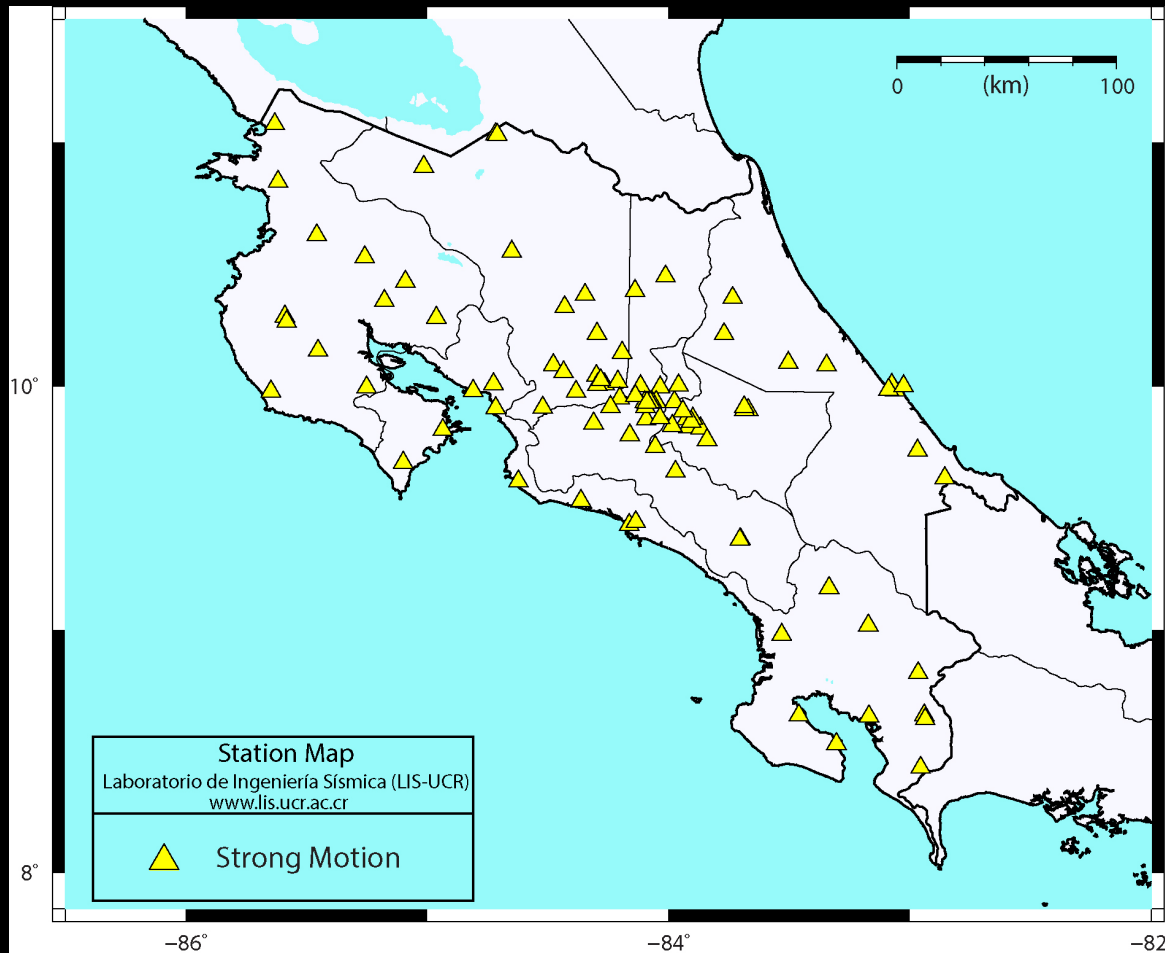
Laboratorio de Ingeniería Sísmica
del Instituto de Investigaciones en Ingeniería (INII)
Teléfono: 2253-7331 - Fax: 2224-2619
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LIS-UCR

www.lis.ucr.ac.cr

- Founded in 1984.
- Laboratory of a Research Institute of Engineering at the University of Costa Rica.

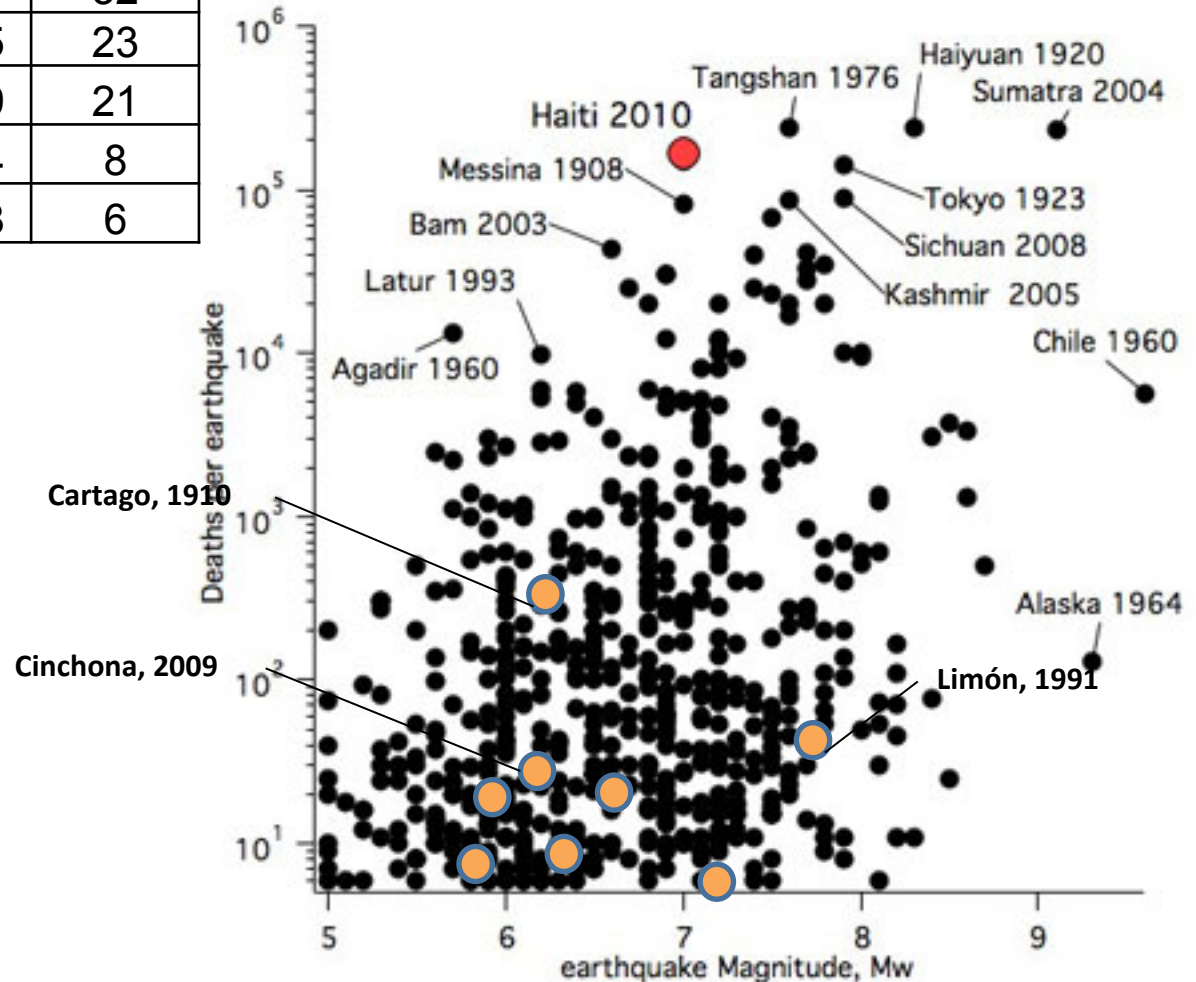


- 94 Strong Motion

Deadliest earthquakes in Costa Rica

Date	Name	Mw	Deaths
May 4, 1910	Cartago	6.4	~400
April 22, 1991	Limón	7.7	48
Jan 8, 2009	Cinchona	6.1	32
April 13, 1973	Tilarán	6.5	23
Dic 30, 1952	Patillos	5.9	21
Nov 20, 2004	Damas	6.4	8
Dec 30, 1888	Fraijanes	5.8	6

Deaths vs. the magnitude



Modified from Roger Bilhama, Univ. Of Colorado.