Issue 1: July 1, 2010

GTEQ
Georgia Tech Earthquake

Georgia Institute of Technology

Supported by NSF, #0847382

Introduction

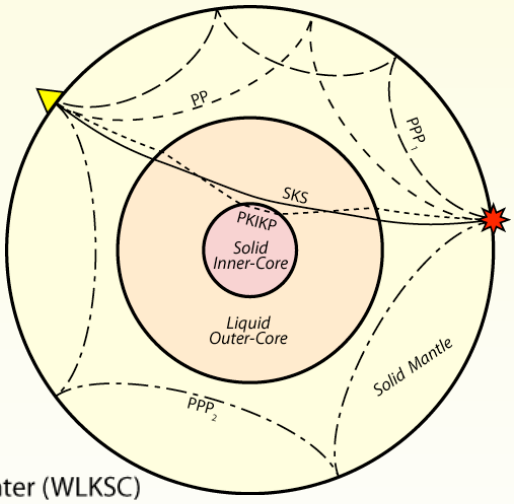
Hello participants in the Georgia Tech Earthquake (GTEQ) network. This writing will serve as the first of many quarterly newsletters aimed at keeping the participants of the educational seismic network informed of interesting recent and upcoming events. First some introductions:

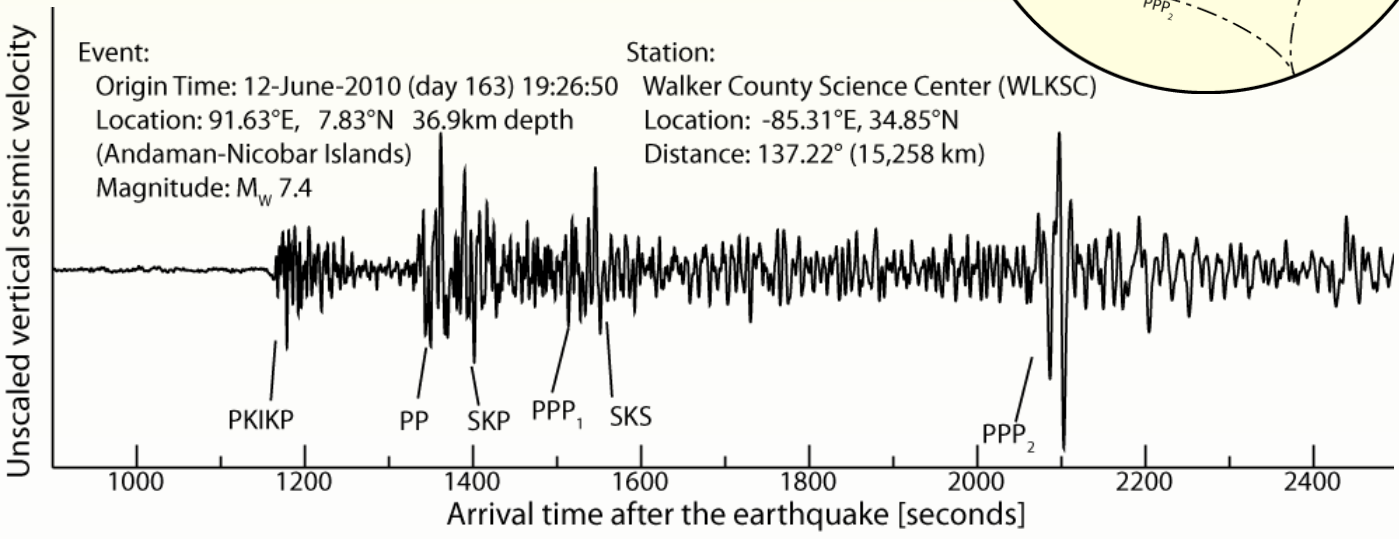
I am Andrew (Andy) Newman, an Assistant Professor of Geophysics here at Georgia Tech, and the new head of the Georgia Educational Seismic Network that was originally established by now Emeritus Professor, Tim Long. I study earthquake and volcanic processes utilizing observations of seismic signals and ground deformation. Though I have projects all around the world, earthquake activity in my backyard is an old friend. I started working on Eastern US seismicity, and particularly the New Madrid Seismic Zone for my PhD which I completed back in 2000. Now, I am working to reevaluate all tectonic activity within the eastern US to better understand driving forces, and the regions long-term seismic hazard.

I am Christine Gammans, a forth-year undergraduate in the Earth and Atmospheric Sciences department with an interest in geophysics and seismology. I am working with Dr. Newman on building and maintaining the seismic network as well as studying seismicity in Georgia and the Southeast United States.

Cool Wiggles

Seismogram of a Moment Magnitude (M_W) 7.4 earthquake just south of Bangladesh. The seismogram was recorded on station WLKSC at the Walker County Science Center in Northwest Georgia. Because the event occurred near the other end of the earth, direct P and S wave arrivals were shadowed and the first visible arrivals were those that traveled *through* the inner core of the earth (PKIKP). The later arrivals are PP (a P wave that bounces off the surface of the earth once), SKP (an S wave that gets converted to P when traveling though the outer core), PPP_1 (a P wave the bounces 2 times off the surface of the earth), SKS (a wave that travels through the mantle as an S wave, but through the outer core as a P wave); and finally PPP_2 (another double-bounced P-wave that travels more than half-way around the world.





Network Status:

Over the past year we have contacted many of you in order to establish communications, and attempt to bring your seismometers (of you have one) online at Georgia Tech. Progress has been somewhat slow, but substantial. At present, we have about 1/2 of the network up and reporting back to Georgia Tech. Though there are still problems with intermittent data at some of these sites, we are consistently recording at least a few. If you haven't already done so, please take a look at the website (http://geophysics.eas.gatech.edu/GTEQ) and particularly the 'Georgia Seismic Network' tab to see currently available online data.

Upcoming:

- We plan on having a 2 day educator workshop toward the end of this summer or in early fall. I will be emailing you all soon with details, and to try and establish good timing that would be work for most of you.
- I hope to create a useful forum for posting questions and fostering discussions of related topics. This could be anything from specific software or hardware issues with your seismic setup, to questions about specific global earthquakes, and gathering information for teachable moments following notable big events.
- In upcoming issues, we strive to continue with the lists of recent notable global and local earthquakes, along with highlighting data collected from the GTEQ network. We plan to also, include interesting tidbits of educational information that you all might find interesting....Please, I would love requests here. If there is a specific question that individuals want addressed, I will do what I can to answer it.

Recent Earthquakes in the Southeast United States

Year	Month	Day	Hour	Minute	Second	Longitude	Latitude	Depth	Magnitude
2010	04	04	09	19	14.01	-80.92	38.60	0	3.4
2010	04	12	18	55	28.62	-84.40	35.56	4	2.0
2010	04	20	09	28	20.04	-84.00	35.73	2	3.3
2010	04	22	02	14	55.61	-84.00	35.74	2	2.6
2010	04	22	08	11	0.69	-92.00	35.26	3	2.0
2010	04	22	13	03	36.49	-89.58	36.51	10	2.0
2010	04	24	09	05	33.28	-87.74	38.42	8	2.4
2010	04	27	08	42	33.49	-89.54	36.50	8	2.0
2010	04	29	01	36	22.59	-80.81	38.69	0	2.6
2010	04	29	12	38	53.43	-80.86	38.66	0	2.7
2010	05	04	06	49	34.07	-89.96	35.90	9	2.0
2010	05	06	14	04	54.49	-85.95	34.19	5	3.2
2010	05	07	10	26	3.47	-80.91	38.61	0	2.6
2010	05	08	03	03	0.62	-80.91	38.62	0	2.4
2010	05	10	10	29	52.58	-89.98	35.88	11	2.6
2010	05	12	09	03	36.76	-80.13	32.93	1	2.8
2010	05	16	10	34	34.57	-89.80	36.08	8	2.8
2010	05	21	01	54	19.41	-89.85	38.61	20	2.3
2010	05	26	18	16	6.1	-83.84	35.87	20	2.3
2010	05	27	00	17	2.07	-91.69	35.36	3	2.2
2010	05	29	06	14	57.84	-91.72	35.36	0	2.4
2010	05	30	02	34	1.98	-89.72	36.55	9	3.1
2010	05	30	02	37	49.98	-89.71	36.55	9	2.0
2010	06	01	04	06	48.5	-89.72	36.55	10	2.4
2010	06	01	19	37	53.24	-84.59	35.40	24	2.2
2010	07	09	18	40	16.02	-89.40	36.25	5	2.5
2010	08	26	17	40	23.68	-91.84	35.25	0	2.2
2010	09	26	18	47	54.68	-91.82	35.24	2	2.0
2010	10	26	19	03	1.37	-91.84	35.24	0	2.7

Recent Global Earthquakes

Year	Month	Day	Hour	Minute	Second	Longitude	Latitude	Depth	Magnitude	Location
2010	04	04	22	40	45	-115.37	32.35	12	7.2	Baja California, Mexico
2010	04	06	22	15	02	96.71	2.05	20	7.8	Northern Sumatra, Indonesia
2010	05	09	05	59	42	95.79	3.38	38	7.2	Northern Sumatra, Indonesia
2010	05	27	17	14	48	166.67	-13.78	42	7.1	Vanuatu
2010	06	12	19	26	50	91.63	7.83	37	7.4	Andaman-Nicobar Islands, India
2010	06	16	03	16	29	136.39	-1.84	12	7.0	Near Coast of Papua, Indonesia

For more information about recent global earthquakes, visit http://earthquake.usgs.gov