# swarm data

6 messages

**andy barbour** <andy.barbour@gmail.com> Wed, Aug 21, 2013 at 2:33 PM
To: Xiaowei Chen <xic002@ucsd.edu>

Hi Xiaowei,

I hope you've made it to Woods Hole safely. If you're not too busy with moving, and other things, would you mind sending me the seismicity distance/time datasets from your paper "Spatial migration of earthquakes within seismic clusters in Southern California: Evidence for fluid diffusion"?

I'm doing some poroelastic modeling and would like to experiment with some data; I'd be interested specifically in the data in Figures 1 and 6.

thanks,
Andy

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**Chen Xiaowei** <xiaowei.fengr@gmail.com> Thu, Aug 22, 2013 at 5:46 PM
To: andy barbour <andy.barbour@gmail.com>

Hi Andy,

I just getting back to work a little bit, transferred old data to new laptop, and getting to know this area.

What kind of data format would you like? Seismicity data for each burst (lat, long, depth, time), or distance along preferred migration direction versus time? The second database may only include those bursts with higher migration significance (linear migration and diffusive migration).

Xiaowei
[Quoted text hidden]

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**andy barbour** <andy.barbour@gmail.com> Sat, Aug 24, 2013 at 10:21 PM
To: Chen Xiaowei <xiaowei.fengr@gmail.com>

That's great. I've been to Falmouth once, and it was really nice. I would suggest taking the ferry to Martha's Vineyard too; it's very pretty.

Regarding the data: I suppose I'd want events that have spatiotemporal characteristics of a diffusion process... so, the second database?

Thanks very much!

-Andy
[Quoted text hidden]

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**Xiaowei Chen** <xiaowei.fengr@gmail.com> Wed, Aug 28, 2013 at 12:42 PM
To: andy barbour <andy.barbour@gmail.com>

Hi Andy,

This is the zip file.
File burstinfo is the parameters for each burst.

Files xyz_* are location files for events in each burst.
plotdiffusion.m plot the migration result for all bursts in this directory. It will compute the distance from initial event based on a simple x,y,z coordinates.
plot40.m will plot burst 40 specially, since it is separated in two parts, it will generate figure 6.

let me know if you have any questions.

Xiaowei

On Aug 24, 2013, at 10:21 PM, andy barbour <andy.barbour@gmail.com> wrote:

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>>

**forandy.zip**
91K

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**andy barbour** <andy.barbour@gmail.com> Wed, Aug 28, 2013 at 3:23 PM

To: Xiaowei Chen <xiaowei.fengr@gmail.com>

Thank you!

Can you please confirm that I have the columns correct, and tell me
what quantities the unknown columns represent?

burstinfo:
1: burst number
2-6: year,month,day,hour,min
7-8:lat,lon
9: diffusivity
10-11: (zeros)
12-19: ?

For the xyz files:
1-6: year,month,day,hour,min,sec
7-10: mw,lat,lon,depth
11-12: ?
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[Quoted text hidden]

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**Xiaowei Chen** <xiaowei.fengr@gmail.com> Wed, Aug 28, 2013 at 3:51 PM
To: andy barbour <andy.barbour@gmail.com>

Hi Andy,

Sorry forgot to include this, those ones are not used in the matlab program.
For burstinfo:
10-11: best-fitting azimuth of velocity and dip of velocity, but this files is for diffusive migration, so these values are zero.
12-19: parameters for each burst.
strike, dip, planarity, radius, distance ratio between first and second half, normalized time of the largest event, skew, duration in days.

for xyzfiles
11 is distance normalized by the diffusion coefficient,
12 is time since a certain reference time in hours… I didn't set this correctly in the output file, that's why I recalculated in the matlab files..

Xiaowei

On Aug 28, 2013, at 3:23 PM, andy barbour <andy.barbour@gmail.com> wrote:

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> For the xyz files:
> 1-6: year,month,day,hour,min,sec
> 7-10: mw,lat,lon,depth
> 11-12: time since first event ( in days), distance
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