Question #1: What was your role(s) here at CIDER II 2012 (i.e. lecturer, workshop leader, workshop participant, participant at the lectures, etc.)

1. I was a workshop participant. However, I gave a short talk (15 min) the first week, and a 30-minute lecture on the 3rd week.
2. Lecturer
3. lecturer
4. Tutorial leader
5. lecturer
6. lecturer and senior participant
7. lecturer
8. senior participant
9. lecturer
10. workshop participant
11. senior participant
12. visiting faculty
13. lecturer
14. workshop participant
15. lecturer
16. lecturer
17. lecturer

Question 2: Which weeks of the program did you attend?

1. Weeks 1, 2 and 3 (of 5)
2. Weeks 1,2
3. July 15 to July 28
4. Tutorial weeks (July 16-27)
5. July 15-28
6. weeks 2-5 (4 weeks total)
7. Weeks 1,2
8. Jul 22 - Aug 4
9. the last two
10. weeks 3 and 4
11. July 16-28
12. Week 3
13. July 16 - Aug 3
14. Week 1
15. July 13 to July 30
16. the first week
17. July 15-28

Question #3: What factors influenced your decision to participate in the CIDER II 2012 summer Institute? (Page 1)

1. It's a great program that brings together a lot of different facets of the studies of the deep Earth in a small group setting where real multi-disciplinary collaboration can really work. It's a really successful program, and I enjoy being involved.

2. Very interested in the topic. Wanted the opportunity for in-depth discussions with other senior people in the field. Wanted the opportunity to teach a group of motivated students.

3. The multidisciplinary program
   Lectures and tutorials from world-class experts in a broad range of scientific areas
   Pleanty of time for discussion - both formal (i.e. during the lectures) and informal
   Fantastic location!

4. I have participated before.

5. I had participated in two previous CIDER summer programs and gained intellectually from these events. Going to CIDER is like feasting brain-food at a wonderful banquet.
   The interactions with students, post-docs and faculty across a broad spectrum of disciplines is most rewarding. I learn much about areas of geosciences that are not my specialty; so it is like a refresher course for senior scientists. The side conversations with scientists of diverse research backgrounds help me to understand better various cutting edge issues in the field. AS I have done at a previous CIDER, this time year I began a collaboration (with Sujoy) on understanding Noble gas story of the Earth.

6. Theme of CIDER, advertised line-up of faculty attending, participation in previous CIDERS, location, desire to strengthen ties to "deep earth" community

7. 7. 1) felt responsible to teach to wider, interdisciplinary audience
   2) heard of program and was curious how it is run

8. previous attendance as a graduate student

9. NASA travel money was tight this year, and Santa Barbara is a relatively easy drive and this trip could have been done very inexpensively and under the radar if necessary.
   And Marc asked me.
   I expected to interact with some of the other lecturers who I knew would be at CIDER, but this didn't happen because the other lecturers had already left.

10. I am in charge of the wiki page development for the 2012 summer program.

11. Opportunity for comprehensive review of geosciences by expert lecturers.

Question #3: What factors influenced your decision to participate in the CIDER II 2012 summer Institute? (Page 2)

12. 1. enjoy CIDER & learn a lot
    2. spend time with students & collleagues
    3. fit into my busy summer schedule

13. I had heard very good reports about CIDER from colleagues that had participated in it previously. The subject this year was right on my current research focus so it was a great opportunity to both learn from the other instructors and provide the students with what I find interesting about the early Earth.

14. topic, programme

15. I have participated in 2008 and 2010 and really enjoyed and benefited from the program

16. To help with the tutorials, to listen to some of the talks, and also to develop potential collaboration.

17. Area interests me; education interests me

Question #4: Comments: General organization and logistics (Page 1)

1. All top-notch. The program ran very smoothly, and has clearly benefited from the knowledge imparted from the experience of running several programs over the years.

2. Good group; good topic list.
   The tutorial format is challenging -- hard to get far enough along in one session to learn something.

3. The organization and logistics were perfect.

4. Excellent program. Well organized.

5. This program is very well organized, particularly at KITP. I have experienced two KITP and one Berkeley based summer programs. The KITP-hosted programs have been fantastically organized and smoothly run programs. The Berkeley-hosted program was pale in comparison. The setting at the latter is not as good. There is too much separation between students and faculty and you feel like your in the middle of a city, not like the small community of UCSB during the summer. Also, the organization of the academic program and the setting of the Berkeley lectures and post hall was inferior.

6. this was overall superb. when i arrived to CIDER, everything was taken care of. I was sent all necessary information prior to arrival.

7. pretty good; travel a bit cumbersome but worked out at the end;

8. well organized

9. once you get here, things work very well

10. The program was organized and attended well. So was the logistics.

11. In general, very, very good. There was a tendency for lecturers to run overtime, limiting discussion.

12. smoothly run.

13. Organization was very well done. Some improvement in communication long prior to the meeting would be nice as this first-timer was a bit unclear on certain aspects of how the program was supposed to work along with questions about the housing and office arrangements. All worked out well on arrival, so all details had in fact been taken care of, but a bit more detail in the pre-conference information availability would be welcome. The workshop itself was very well run with a nice balance of formality and schedule with the flexibility to change as the need arose, particularly in the week following the tutorial.

14. excellent

Question #4: Comments: General organization and logistics (Page 2)

15. Excellent.

16. The organization was excellent. Everything went smoothly. I appreciate the effort that the organizers have put into the summer school.

17. Very good

Question #5: Comments: Location, venue, housing and food (Page 1)

1. A better location/venue (Santa Barbara in the summer!) would be hard to find! The housing situation is terrific (quite generous). Providing implements for cooking was a nice touch.

2. Great.

3. Location, venue and food were all great. The housing for lecturers seemed rather isolated and was a long way from the student housing. There was no possibility of purchasing food or drinks at the housing location and for this a rental car would have been beneficial.

4. Outstanding location, KITP is really great. Housing charming. Food excellent.

5. This program is very well organized, particularly at KITP. I have experienced two KITP and one Berkeley based summer programs. The KITP-hosted programs have been fantastically organized and smoothly run programs. The Berkeley-hosted program was pale in comparison. The setting at the latter is not as good. There is too much separation between students and faculty and you feel like your in the middle of a city, not like the small community of UCSB during the summer. Also, the organization of the academic program and the setting of the Berkeley lectures and post hall was inferior.

6. the group functions were spaced appropriately at 2x/week. the clustering of faculty at the apartments allowed for some nice get togethers, impromptu bbqs, dinners, and social mixers. the grad students did an excellent job on the group bbqs. the catered dinners were very good. my only complaint is that there was not enough coffee during the morning breaks, and i missed out several times.

7. housing of academics a bit far for people without car but ok for 2 weeks though not ok for a whole month;
   food sources only available of one has a car;
   not sure if separation of academics and students/postdoc is optimal; ideally everybody should probably live at the same place; the good thing about UCSB is that the campus is isolated and there were few distractions; I heard people bitch about Point Reyes venue but maybe that is still a good alternative

8. all ok; I have a hard time believing that KITP is the only place where this can be organized

9. location: excellent. easy bicycle commute between housing and KITP.
   venue: very good - good offices, and the catch-as-catch-can facilities for group meetings works very well to encourage group interactions.
   housing: santa ynez apartments. good: functional kitchen, water boiler, some cooking facilities, plates and dining utensils, lots of space, clean enough, hot and cold running water, towels and bedding, easy access to laundry. less good: no microwave oven. bad: no coffee maker.
   food: cafeteria lunches generally healthy food.

Question #5: Comments: Location, venue, housing and food (Page 2)

10. The location is quite and very nice for a six-week program. One suggestion for the research program weeks (last two weeks): students find it incontinent to carry their bags from KITP to lunch. It would be nice if they can leave their bags in a secure place in KITP.

11. All excellent.

12. Love KITP & UCSB. Housing fine. Would like students & faculty together in apts.

13. Location is beautiful. KITP facilities served the workshop well from abundant lecture halls containing all the necessary AV equipment, to AV support, to good office accommodations, and pleasant places for communal gatherings, which are critical in a workshop of this nature. Apartment accommodations were convenient and comfortable, if a bit spartan. Cafeteria food was plentiful, though no epicurean delight, and the hoards of loud young (pre-college) people were occasionally annoying. The mix of beach bbqs, formal dinners, and open nights was very enjoyable. Without a car, restaurant options in the evening are a bit limited, but this was a very small negative in an otherwise very positive experience. One important advantage of this location is that it keeps the CIDER crowd together rather than providing many nearby temptations to visit in off hours. Some of the best conversations I had were in the evenings and weekends when subsets of the CIDER attendees gathered for informal occasions.

14. area=great, ideal for researchers and their family (not that I brought my family, something I regret)

15. Excellent except that the Santa Ynez apartment could be improved by more comfortable (less scratchy) blankets, a bed-side lamp for each bedroom and a small trash can for each bathroom. In addition, laundry card and detergent can be organized to make it convenient for all.

16. Excellent.

17. Excellent

Question 6: Comments: Schedule (Page 1)

1. Probably best to avoid scheduling over the 4th-of-July? I'm no huge Patriot, but it is one of the few times I get to see family (this probably goes for a number of participants).

2. The schedule was excellent - lectures in the morning with afternoons being more flexible.

3. Schedule is intense but that seems necessary to cover the scope of the topic.

4. schedule is great. I just wished that I had the opportunity to spend 3-4 weeks this last summer instead of 2 weeks. The 4 week program portion with lots of people is super.

5. lecture and tutorial program was very intense, and exhausting. 9 am start times were fine, there was adequate opportunity during meals to meet with everyone there. one comment here for where a lot of improvement could be made is the distribution of senior participants all being clustered in the first 2-3 (out of 5) weeks. several research groups really suffered for not having a senior participant around during the final week. I think the tutorial program should be spread over the entire time, with mornings dedicated to lectures and tutorials/group working in the afternoon and evenings. more tutorials during the first week before the research groups have formed. and i think evening poster sessions would be better than afternoon poster sessions, to allow for more work time. i think overall people got fatigued with too much content delivered in one day, repeatedly for days. lectures are somewhat passive listening, and a better balance would have something active in the afternoon, like meeting with research groups or doing tutorials.

6. not sure; anything more that 2 weeks is really cutting into research time that is not tied to CIDER; I can't really afford to spend so much time on it

7. seemed appropriate.

8. I'd think it better to have lectures more consistently throughout the event rather than squashed into a shorter time. squashing all the lectures into two weeks encourages the senior people to synchronize, which leaves the final two weeks without much adult supervision. A similar thing I went to when I was a grad student had most of the senior people circulate through in 2 week visits that started at all times through the first 4 or 5 of 6 weeks. The mornings were lectures for four or five weeks. Each of the student research groups had a senior faculty leader that stayed through the whole 6 weeks. This schedule worked very well, it seemed to the students. CIDER works a bit less

9. The program is scheduled well, and the talks are excellent.

10. Perhaps, hold lecturers to allotted time to allow for more discussion.

Question 6: Comments: Schedule (Page 2)

11. The mix of formal presentations, tutorials, informal presentations and times for separate group meetings was excellent. The "many weeks" format is great in terms of breaking through the typical "I'm here, but thinking about something else" mentality that often occurs at shorter meetings. The length, however, is difficult to reconcile with the research schedule for those of us tied to laboratories and/or summer field work.

12. good, but the programme wasn't entirely clear to me when I signed up. I wasn't aware of the programme before the actual tutorial weeks.

13. Staying for additional weeks to participate in the post-tutorial research is challenging, given all the responsibilities I have at the home institute. The two-week tutorial is intense but excellent and perfect in duration: I don't want to miss any part of it or continue for longer time.

14. just about right.

15. Very good

Question #7: Comments: Lecture organization and content, level of interactive discussions, balance between disciplines (Page 1)

1. Great lectures with a nice/thoughtful discussion. I thought there was a nice balance among the different disciplines.

2. Overall the lectures were very informative and the online content is very useful as a reference. It is clear the topic is in great flux right now which made for very engaging discussions.

3. In general lecture organization and content were good. In some cases too much material was being present - this was in particular a problem when two lecturers were sharing the same 1.5 hour slot because the second lecturer would then be left with inadequate time. There was a good balance between disciplines. One or two lecturers were too technical for people outside the field to really understand. There was lots of discussion, with many contributions from students.

4. Lectures generally excellent. Discussions good, very deep.

5. Without commenting on my lecture and its organization, I felt that the rest of the program was wonderfully organized, presenting lots of interesting and accessible science that covered the main issues of the field. The level of interactive discussion was great, although it would be nice to hear more from students. I also felt that there is a good balance between disciplines.

6. i think the lecture organization into subcategories and each with a curriculum was a good idea and was basically effective - also having it rotating between the disciplines.
   it would be good to organize the overall curriculum into a summer school, with lectures every morning. this would help provide a flat distribution of lecturers/sr participants over the 4 weeks.

7. a bit disappointing; lectures were supposed to be general and introductory but many were rather specialized and focused too much on geochem; there was good interactive discussion but this can
   also be done in a one-week gordon conference; I suppose the unique aspect of CIDER is the workshop
   after the two-week lecture series

8. Senior participants using laptops during talks is one thing, but the majority of the grad students for which the lectures are meant distracted by their own laptops seems counter-productive. It was clear many were not using their laptops for taking notes, but using it for other work/play. Maybe a recommendation for people to actually pay attention would be appropriate

Question #7: Comments: Lecture organization and content, level of interactive discussions, balance between disciplines (Page 2)

9. I'd think it better to have lectures more consistently throughout the event rather than squashed into a shorter time. squashing all the lectures into two weeks encourages the senior people to synchronize, which leaves the final two weeks without much adult supervision. A similar thing I went to when I was a grad student had most of the senior people circulate through in 2 week visits that started at all times through the first 4 or 5 of 6 weeks. The mornings were lectures for four or five weeks. Each of the student research groups had a senior faculty leader that stayed through the whole 6 weeks. This schedule worked very well, it seemed to the students. CIDER works a bit less.
   I saw very few lectures. I can comment on my own, which were disorganized, imbalanced etc. Very good audience participation, that is true.

10. The four components of the summer program are very well balanced. Each has equal amount of talks and tutorials.

11. Lectures were excellent. More interactive discussions would be great!

12. Did not participate in lecture portion this year.

13. I found the lectures a bit scattered in terms of the level of their content. Some were very technique specific and not obviously well oriented towards the CIDER subject - they could have been introductory lectures from some geophysics course. I enjoyed these, but had a hard time seeing their relevance to the main CIDER theme. Finding the right mix of background and cutting edge information is difficult given the wide mix of topical expertise of the attendees. The abundant time available to talk individually with interested people after the formal presentations helps tremendously in broadening the presentation level to fill in the detail for the experts and the basics for those less familiar with the subject.

14. great atmosphere, very well organized

15. It's perfect.

16. Some of the lectures may be too much for graduate students who are outside of the fields. The discussions seem to be dominated by senior people.

17. Better than I expected (i.e. lectures were generally very well prepared). A few of the lectures were pitched at too high a level. Student participation (asking questions) started low but improved durirng the school.

Question #8: Comments: Lecture styles that worked well/ lecture styles that did not work well (Page 1)

1. The “normal modes” lecture was a bit difficult for me. Unfortunately, the same lecture given by a different lecturer was equally difficult at the 2006 CIDER.

2. In general lecture organization and content were good. In some cases too much material was being present - this was in particular a problem when two lecturers were sharing the same 1.5 hour slot because the second lecturer would then be left with inadequate time. There was a good balance between disciplines. One or two lecturers were too technical for people outside the field to really understand. There was lots of discussion, with many contributions from students.

3. The best lectures made a real attempt to be a true tutorial, review, or overview of a topic: they started with the basics, defined terms, explained the basic physics or chemistry or geoscience observations behind the topic, then they built up to current research. The best lectures also made an effort to include the work of many scientists, not just their own.
   Lecture styles that did not work were those modeled after a traditional research talk, in which the lecturer gives a very brief introduction and then launches into his or her own research for the rest of the talk. That was okay for the research lectures, but not for the tutorial lectures.

4. The four of us geochemists (Harrison, Carlson, Sujoy and me) discussed at the end of the two weeks of lectures how we might have spent more time on some of the background science and perhaps less on some of the details of some ongoing debates.
   I liked Jackie Li's lecture, as it was much more about here is the topic with lots of basics.

5. most lectures were ppt presentations. the level of background expected for each lecture varied somewhat, but most began at an introductory level that was accessible by grad students. in general, things that stayed at a more introductory level were better received and things that dove off into the research of the presenter lost more of the audience.

6. not; I felt that I did not get too much out of this even though I tried to participate in some of the tutorials; not sure just how useful the tutorials really were; all that I attended seemed to have run out of time before things got exciting; there wasn't a whole lot of feedback from the students either so it was hard to figure out how much they got out of it

7. the lectures I attended all had about the same style.

8. Did not participate is best answer here

9. Lecture styles work very well. Not need to change anything.

10. Each lecturer had their own style. It was nice to have the variation. They were all very good.

11. I did not participate in the lectures this year.

Question #8: Comments: Lecture styles that worked well/ lecture styles that did not work well (Page 2)

12. The ones that worked for me were those focused more on the CIDER topic and less on techniques. The students, however, may have been overwhelmed by some of the "data" talks if they didn't have the background to appreciate the significance of the results being presented. As one of the lecturers, I'll be curious to see the students' opinion on this question.

13. only attended limited nr of lectures, but all worked well for me.

14. More pedagogical and less research-oriented lectures work better for such a mixed audience, both in terms of disciplines and research experience.

15. All the lectures were given effectively.

16. Better than I expected (i.e. lectures were generally very well prepared). A few of the lectures were pitched at too high a level. Student participation (asking questions) started low but improved durirng the school.

Question #9: Comments: Research Group Workshop format and organization (Page 1)

1. It's not clear what the "Research Group Workshop" format is? I was not at CIDER the final 2 weeks? I was involved in putting together a research group (deep magma ocean). I will assume that "Research Group Workshop" is simply the "Research Group" I am involved with.

2. Did not participate.

3. I only participated for the first couple of days in a research group.

4. Did Not Participate

5. did not participate this year.
   However, my previous experience has given me some insights. I found that as a faculty member it is useful to be a behind the scene guide; let the graduate students and post-docs drive the program. This had the benefit of bringing out leadership skills in the young and emerging scientists and it was most rewarding to watch.

6. we had 5 members total but 1 sr participant left after 2 weeks, just before the research team solidified. this left 4 members (1 post-doc, 2 PhD students, and a sr participant) but all members stayed for the duration and this really helped create a better unity. it allowed for enough time for group dynamics to emerge, as would be expected after spending 2 weeks together working intensely with new people. everyone had enough time to adjust and become calibrated to everyone else's style and personality. also, the social events really helped progress this aspect as group members developed more knowledge of the individuals in their group, this had a positive influence on the working relationship - for example, the more dominant members of the group became BETTER listeners and the more quiet members of the group began to speak up more and ask more questions.

7. not sure; current format is "lectures in first two weeks; workshop after that". By the time the workshop starts, many lecturers are already gone/cut out of the workshops. It seemed that it was difficult to commit
   senior people for the workshop. It may be worth thinking about having a different format with lectures in the morning and workshops in the afternoon.

8. This is more freeform after the lectures section, and this probably is the best way to do things. It would probably have worked better to make people pick 1 topic of the suggested list (with an option to change later) to see which topics look best. With several picks per person, you don't get clarity

9. lack of senior leadership over full course was a problem I think.

10. General guidelines are provided in the beginning and then research groups are formed accordingly.
    It would be nice to summarize previous research programs and then groups continue working on the same (or similar) topics.

Question #9: Comments: Research Group Workshop format and organization (Page 2)

11. Did not participate

12. Lots of great discussions this week--good combination of formal & informal. I liked the breakup of the group into different project-based groups. Perhaps have 3 or 4 people (or 1 person from each subfield: min phys/geochem/seismology/geodynamics) as "floaters" whose job it is to circulate among all of the groups and elucidate connections among the different groups. This might help provide a mechanism to increase inter-group exchange.

13. I was extremely impressed by how the research groups worked. As a first-timer, I had no idea of the level of "management" needed by the senior members of the group. At least in the group I was in, the students were such self-starters that the discussions instantly became more like those between research colleagues rather than a senior scientist telling the students what they should be doing followed by them reluctantly doing what they were told. The level of interest in the research group topic was very high, and all seemed to be intent on drawing in the most important information available in order to learn more about the topic with the goal of finding avenues to provide tighter constraints beyond those provided by existing research. There also was a very energizing competitiveness between the different topical groups that seemed to spur each on to find ways that they could help one another while at the same time advancing their own subject.

14. did not participate

15. Writing down ideas on stick-it worked really well.

16. did not participate

17. Only saw the beginning of this. Seems ok but there is the danger of being too ambitious and/or asking questions that are too broad to be answerable in thsi format.

Question #10: Research Group Workshop – Please describe your groups work style or dynamics. What worked well and what did not work well? (Page 1)

1. IN my experience, successful CIDER project needs a lot of input and energy from a prof to get the project moving forward, at least to an outline stage with a bit of text. Grad students take it from there.

2. Did not Participate.

3. The group I was in was dominated for the first two sessions by two faculty members. However, I have the impression(from e-mails) that student participation improved greatly later. One student took over the leading role and organized the preparation of an AGU abstract - which was excellent progress.

4. Did Not Participate

5. did not participate this year.
   However, my previous experience has given me some insights. I found that as a faculty member it is useful to be a behind the scene guide; let the graduate students and post-docs drive the program. This had the benefit of bringing out leadership skills in the young and emerging scientists and it was most rewarding to watch.

6. this style encapsulated the many aspects of starting a new research project, from surveying out literature, breaking apart a large/complex problem into smaller components to see where the most progress was needed (and be definition this would lead to original and useful research), workshoping ideas that cut across the common interests of the group members (to ensure members did not become disillusioned or feel left out), scoping out a feasible project, and finally focusing the overall project into something that could be accomplished in a reasonable timeframe. the flow was interjected with many impromptu primers about various subjects that inevitably came up during discussion. We tried to balance being thorough and comprehensive with focus on a task that was amenable to reasonable progress.

7. participated only at the beginning but the left before the group really started work

8. after setting up a set of goals and workplan, we disbanded and only met on 1-2 times daily basis. I'm not sure whether I liked that better than my previous experience where everyone just worked in the same room: less distractions and more focus = more progress.

9. We spent quite some time to define the "big picture" and had to change the main questions we set earlier. Problem here is too many papers are put out there but maybe only few are needed. two-week period is a bit short to do some real computation. For literature review/compiling earlier results it is okay.

10. Did not Participate

Question #10: Research Group Workshop – Please describe your groups work style or dynamics. What worked well and what did not work well? (Page 2)

11. Student-led groups worked best. A few students are returning students from previous CIDERS. These students were especially effective & worked great in the groups.

12. I was extremely impressed by how the research groups worked. As a first-timer, I had no idea of the level of "management" needed by the senior members of the group. At least in the group I was in, the students were such self-starters that the discussions instantly became more like those between research colleagues rather than a senior scientist telling the students what they should be doing followed by them reluctantly doing what they were told. The level of interest in the research group topic was very high, and all seemed to be intent on drawing in the most important information available in order to learn more about the topic with the goal of finding avenues to provide tighter constraints beyond those provided by existing research. There also was a very energizing competitiveness between the different topical groups that seemed to spur each on to find ways that they could help one another while at the same time advancing their own subject.

13. did not participate

14. Clearly describing possible outcomes (definition of problem, powerpoint presentation, abstracts, papers) without requiring them seem to work well.
    Assigning leading senior participants is important to ensure progress
    Need better ways to upload references and post comments within and across research teams.

15. did not participate

16. Not there

Question #11: Were you able to make significant progress on your project while at CIDER II? What do you think would help make this process smoother or faster?

Yes - 41.2%
No - 17.6%
Did not Participate in the Research Workshops - 41.2%

1. It would be better if the research groups were given time to start working earlier. The groups formed at the end of the 3rd week and worked in weeks 4 and 5. However, more work could be done more efficiently if the groups could start forming a week earlier (end of week 2). Perhaps weeks 3 and 4 could be split between research (50%) and lectures (50%). And week 5 could be given 100% to research? The same proportion of time is still given to research/lectures, but folks can start interacting earlier at a high level.

2. My negative response results from my participation being confined to the very stage. For making progress, I would have needed to stay fpr the remaining 2 weeks, which would have been very difficult do to other constraints.

3. it is quite good as it is and nothing jumps to mind.

4. forming research groups earlier, have the entire group stay for the full 4 weeks, and i think PhD students should be more senior, at least 4th year with some exceptional 3rd years.

5. not sure; there was no connection to/interest in my most recent projects; I also felt somewhat crowded out by others

6. We made good progress outlining a problem and a work plan, followed by data gathering for modeling. The modeling component is the part that still needs to be carried out.

7. Perhaps research topics can be put out a bit earlier? Say at week 2 or 3 some participants would have more time to think about it. Final research groups can still form in week 4 or 5.

8. I mostly cycled between a few of the groups. I feel like I contributed some things to a few groups. Shared a toy model. Exchanged ideas.

9. In our group, we were asking students to make significant progress on a topic that has stymied the best research group for decades. In one week, through their combined efforts, the group was able to bring all the individual members, from diverse backgrounds, up to at least a basic understanding of the constraints that various disciplines could, and could not, bring to the subject. This to me is a major achievement. I doubt if in two weeks the group will solve major aspects of this long-standing problem, but I have no doubt that they all will have gained substantial background understanding of the problem that will allow them to productively pick away at the problem, creating greater understanding in the process.

10. Better file sharing and exchange through wiki or other internet portal
    Stronger support from senior participants (work out codes etc. in advance)

Question #12: Given your other research commitments at your home institution would you be able to continue working on this project?

Yes - 47.1%
No - 17.6%
Did not Participate in the Research Workshops - 35.3%

1. The research “dove tails” with my current interests, and so I will continue working on the project.

2. I would be able to contribute to a limited extent in spite of other commitments.

3. I did continue two years ago when I got quite involved in the research group in which I participated.

4. I aim to ensure all my efforts towards research will result in original, timely, and useful results that will be published and have impact. 4 weeks of my time if a significant investment to not continue pursuit of completing a research project. it is a very different experience between being there for just tutorials or for the research portion. i would really require the students/post-docs to stay the full 4 weeks to ensure they invest enough into the program to take some ownership of the collaborative research project. i don't think we are harnessing enough of the talent that is participating in cider, because that 4th week is very critical to building the momentum.

5. I am teaching during the academic year and summers seem the best time to make progress on my own research; supporting CIDER takes away time for my projects; even though we had offices at the venue and were allowed to work in our offices, I got nothing done and things that I was supposed to do for my job at home kept piling up

6. I committed to cider understanding that this would be part of it, based on prior experience. It will depend on group dynamic whether it goes to completion.

7. Too many papers to read. They are from different fields and take time to digest. Many participants have to leave earlier.

8. Still working on my project from CIDER 2010 :-)

9. The efficiency of participation will have to go down as my other duties interfere, but I find the topic very interesting, and the group discussions sufficiently promising, that continued participation with the research group will move well up in my priority list of jobs to do. I am optimistic that the research group can provide new insights and constraints on the problem that the broader geoscience community will find valuable.

Question #13: Comments: Connections and network opportunities with graduate students/postdocs/faculty. Please discuss the connections that you made at CIDER-II and those that you plan to follow-up with in the future (Page 1)

1. My first CIDER experience was in 2006. The connections I made there resulted directly in a faculty job at Boston University (via Colleen Dalton). The current CIDER program allowed me to develop connections and discuss future collaborations with Bill McDonough and formulate proposals/collaborations with Sujoy. The daily interaction was an academic schmorgesborg, facilitated by interactions with Sarah Stewart, Michael Manga, Louise Kellogg, Mark Harrison, etc etc. It is really very hard to quantify how these interactions will yield fruitful collaborations and/or new ideas down the road, but both CIDER experiences (2006 as a student and 2012 as faculty) have been pinnacles of my academic experience.

2. In particular I made contact with a student who was very interested in visiting and working at my institution.

3. I am actively involved in a collaborative research program with Sujoy Mukhopadhyay and Ondrej Sramek that is directly as a result of this last CIDER. We have begun a detail calculation and expect the research to turn into a publication, if not a larger experiment.
   I have also several email exchanges with one of the UCLA grad students, who we might hire in a post-doc position. As a result of the first CIDER I participated in I also wrote letters of recommendations for a geophysics post-doc, who has now accepted a position at Princeton. Also, I helped my post-doc Ondrej Sramek, who participated in CIDER II this year, to begin exploring a collaboration between Ondrej and Ed Garnero. I hope it blossoms.

4. I made several connections, most importantly with new collaborators that identified themselves at CIDER with common research interests

5. I made connections with colleagues though they remain somewhat vague; I left with the impression that the responsibility to continue collaboration and try to get funding is up to me rather than being a true collective effort; makes me feel uneasy

6. This type of workshop offers an opportunity to interact with a group of people of different academic levels and interests. The great thing is that the way to program is set up, everyone is around for multiple days/weeks giving you plenty of opportunity to talk to people (compared to a typical scientific meeting).

7. bad scheduling led to little overlap, for my part

8. Students from different fields participate in the same group and work on the same research topic. The challenge is to put observations from different fields together to synthesize the big picture.

9. It was terrific to be able to connect and interact with lecturers and participants.

Question #13: Comments: Connections and network opportunities with graduate students/postdocs/faculty. Please discuss the connections that you made at CIDER-II and those that you plan to follow-up with in the future (Page 2)

10. I enjoy the connections at all levels. CIDER is a great place for keeping eyes open for future faculty recruits.

11. As mentioned, the multi-week nature of CIDER, at least for me, broke through my typical "I'm too busy on my own stuff to spend more than 5 minutes talking with you about your stuff" behavior. The first week was the typical stand-offish relationship between a bunch of shy scientists. By the second week, enough individual conversations had occurred, both during the day and particularly at the informal gatherings in the evenings, that the level of communication had improved considerably. The students with whom I interacted definitely left positive impressions, so there is no question that should they apply for a postdoc, or seek further research collaborations as they begin their careers, I definitely will be inclined to pay attention.

12. Get to know several faculty in other disciplines and students/postdoc in my own field as well related areas, with whom future collaborations may be developed.

13. I was happy to discuss with a number of senior people on a couple of topics. We may follow up with more discussions and possibly projects.

Question #14: Please describe in a short paragraph how you view the benefits of participating in the CIDER II 2012 program (Page 1)

1. The 2012 program made me realize just how much the different sub-fields (geophysics [seismo, dynamics] and geochemistry) share the common interest of determining what's at the bottom of the mantle. Several of the break-out research groups deal with this them, directly or indirectly. This sharply focused my own research interests.

2. I benefited from the very in depth immersion into the topic over a short period of time.

3. The main benefits consist of learning much about other fields in solid earth geophysics, interacting with students and lecturers, both formally and informally and making new contacts.

4. I am actively involved in a collaborative research program with Sujoy Mukhopadhyay and Ondrej Sramek that is directly as a result of this last CIDER. We have begun a detail calculation and expect the research to turn into a publication, if not a larger experiment.
   I have also several email exchanges with one of the UCLA grad students, who we might hire in a post-doc position.
   As a result of the first CIDER I participated in I also wrote letters of recommendations for a geophysics post-doc, who has now accepted a position at Princeton.
   Also, I helped my post-doc Ondrej Sramek, who participated in CIDER II this year, to begin exploring a collaboration between Ondrej and Ed Garnero. I hope it blossoms.
   In addition, about 6 years ago my grad student (Rick Arevalo), who participated in a CIDER I program, later at AGU introduced me to Ved Lekic. A couple of years later I meet and worked with Ved at the first CIDER I attended. We spent a good amount of time talking about geoneutrino research. This year Ved and I, along with our many co-authors, have a paper in review in EPSL on the distribution of Th & U in the earth's interior and the predicted distribution of geoneutrinos at the surface of the earth given lateral variations at depth in their abundances and distribution.

5. meeting a lot of the young talent in the field, as well as many of the established people - both are great benefits. also, meeting people with similar research interests and availability/desire to work on a project of mutual interest can be very rewarding IF the work gets carried forward to publication. also, i like this type of community building activity for a diverse and interdisciplinary group of researchers

6. not sure; if the students and postdocs got anything out of it, then it should definitely be continued;

7. relative lack of distractions is the chief advantage. it puts one back into the simplified life of the scholar. This is a good thing.

8. It is a unique opportunity to expose myself to and to learn many basic concepts from other fields of earth science. Participants from different aspects working on a same topic benefit from each other, which facilitates understanding and addressing the problem.

Question #14: Please describe in a short paragraph how you view the benefits of participating in the CIDER II 2012 program (Page 2)

9. Extremely beneficial. It was my first time. Next time will be even more productive.

10. Exchange of ideas. Long conversations with colleagues. I catch up with new trends in deep Earth Geophysics, and learn a lot each time I come. Each time I come to CIDER, I get more out of it.

11. As a senior scientist, I learned more about the CIDER topic than I ever could have hoped to in any traditional meeting. The ability to sit down with other senior scientists and not just listen to their formal presentation, but dig deeper through unrushed informal discussions is a huge educational advance over the typical 15-minute AGU presentation. As I do not teach, I was unclear on how the interactions with the students would go, but I found these perhaps the most important. Their level of enthusiasm and energy was infectious. The need to provide clear and concise arguments about various subjects to people who were not already immersed in the dogmas of the field made it critical for me to examine the very basic tenets of some aspects of the subjects that both deepened my own understanding/memory of these important basics, but also showed that some long-held beliefs are not as firmly based as I thought. Besides being an enjoyable 3 weeks, I don't think I've had this large a step function increase in my own understanding and appreciation of the subject since I was a graduate student, now several decades ago.

12. The idea of collaborating with top scientists in a great environment is really good. I will definitely try to attend again.

13. After participating in three CIDER summer programs, I am now eager engage in inter-disciplinary research and make better use of my knowledge and understanding of material properties to advanced deep-Earth research.

14. Discussions with colleagues of other disciplines are certainly helpful and may lead to new research directions.

15. Brought me up to date on current state of understanding in several different areas

Question #15: Do you see yourself pursuing new areas of research or going in some different directions in your research as a result of your participation in the CIDER II 2012 program? (Page 1)

Yes - 60%
No - 40%

1. Absolutely. Collaboration with the Deep Magma Ocean group has lead me down the path of integrating partition coefficients for deep mantle phases with geodynamic modeling. Putting this together with isotope geochemistry is a totally new experience for me.

2. I am motivated to spend a greater portion of my research program on the formation and early evolution of the Earth.

3. The interdisciplinary nature of CIDER has given me a number of new ideas that may significantly affect future research directions

4. Yup, as stated above Sujoy, Ondrej and I are working on a model of noble gasses in the mantle, which will help us to describe the concentration and distribution of heat producing elements in the earth.

5. absolutely. I arrived at CIDER with some interests in a new area, but when I found others with similar interests we had a critical mass to begin research. I would not have been able to start this project without the expertise of the others involved, who were in disciplines outside of my own. this was critical for my entry into an area that I otherwise would avoid, due to lack of appropriate expertise.

6. The big advantage of this program is the easy way in which collaborations can be initiated with people from a variety of disciplines; this enables me to pursue questions that are really best addressed by a group of people.

7. I didn't have enough interaction with other senior faculty to take on anything truly new. This was mostly because they'd already left

8. Not this year. The topic still fits my main research direction.

9. Several new research directions were developed during the program. The working environment was very conducive to creative pursuits.

10. Not sure yet. No sharp turns, but corrections in steering. Always (for me) towards increased testability of ideas.

11. Three weeks of listening to a large number of smart senior, junior, and beginning scientists talking about a subject that I find interesting left me with many ideas for how my research program can expand, or shift, to address issues revealed in discussions held at CIDER

12. Probably because I was involved only shortly.

Question #15: Do you see yourself pursuing new areas of research or going in some different directions in your research as a result of your participation in the CIDER II 2012 program? (Page 2)

13. I have gained a deeper understanding of the role of mineral physics in deep Earth research and appreciation of the accomplishment and challenges in other fields. As a result, I am looking forward to engage in research projects that involves collaboration across multiple disciplines.

14. This is a secret. No. Some of the discussions (at lunches and other events) may lead to new projects for me in the future, e.g., giant impact modeling and magma ocean dynamics.

Question #16: Would you recommend the CIDER II program to other colleagues?

Yes - 100%
No - 0%

1. It's (a productive) summer camp for Earth Scientists. Great talks, productive research/collaboration…an academic schmorgesborg. Since my first involvement with CIDER in 2006, I can say enough positive things about the program.

2. Most definitely, as it is a highly stimulating scientific environment.

3. It is a very useful program for those who are able to really participate.

4. KITP is a superb facility and Santa Barbara is an excellent place to be in summer. The monastic simplicity of the environment is very good for scientific research

5. I'd encourage colleagues to take part in the program and learn many things from other fields in a very efficient way.

6. Yes. It an excellent intellectual opportunity.

7. It feels like it's hard to leave the lab for a few weeks. And so many things competing for our time. But it is worth it for the combination of science- and colleague- connections. No conference is like this.

8. My experience was great. I can only imagine that it would be as enjoyable to other members of my field.

9. I certainly would.

Question #17: Would you recommend the CIDER II program to your graduate students or postdocs?

Yes - 94.1%
No - 5.9%

1. Absolutely. My regret this year (2012) is that I did not bring a student. CIDER was a terrific program when for students (in 2006, when I was a grad student participant). The connections that I made resulted in papers (Raj Dasgupta), a job (Colleen Dalton), and long-term friendships and sources of future collaboration.

2. They will learn from the experience.

3. yes, if they had the time to commit, it would be valuable

4. definitely; I feel they get the most out of the CIDER workshops

5. I intend to have my grad students apply once they are eligible (past candidacy).

6. good social interaction between students and postdocs, foreign and domestic, makes this a valuable experience that one would want one's students to take part in

7. Students and postdocs would learn quite some things in this program.

8. Absolutely.

9. Required for my graduate students.

10. CIDER is complete immersion is the subject. For a student looking to become rapidly knowledgeable of various interdisciplinary approaches to solve interesting Earth science problems, I cannot think of a better way to absorb this much information in such a short experience.

11. They are potentially very useful for students and post-docs. The concerns are that 4 weeks of summer is a lot of time.

12. My current grad students are all in planetary science; there are other more suitable activities for them

Question #18: Other comments and suggestions for the future of CIDER

1. My only major insight (if you'll call it that) is to form groups and start the research projects earlier. Form groups by the end of the second week (instead the end of the third week). Then divide weeks 3 and 4 into lecture (50%) AND collaborative research (50%), and week 5 is pure collaborative research. This way, folks can really get serious about the research earlier in the program and get more done in Santa Barbara. Just a thought.

2. The program is about the right size in terms of number of people. I am not convinced that the Berkeley site is all that good. It might be worth considering an alternative location, one that promotes community and spirit (i.e., not in a city, a place with some amount of isolation - like the Aspen workshops that the physics community has).

3. i would reiterate 3 things: 1) lectures spaced over the entire time (mornings) and maybe some days the 4pm talks to add structure
   2) avoid clumping of faculty all into 2 weeks, and try for a more flat distribution
   3) requiring the PhD students and post-docs to stay the entire 4 weeks to generate more investment and ownership into the research projects, which will ultimately result in more progress (both during and especially after CIDER) and more publications

4. I'd think it better to have lectures more consistently throughout the event rather than squashed into a shorter time. squashing all the lectures into two weeks encourages the senior people to synchronize, which leaves the final two weeks without much adult supervision. A similar thing I went to when I was a grad student had most of the senior people circulate through in 2 week visits that started at all times through the first 4 or 5 of 6 weeks. The mornings were lectures for four or five weeks. Each of the student research groups had a senior faculty leader that stayed through the whole 6 weeks. This schedule worked very well, it seemed to the students. CIDER works a bit less

5. Poster sessions could be longer. It's a great opportunity to talk between students and instructors there.

6. March's & Barbara's co-organizing appeared very smooth to me. Great job.

7. If somehow Europe could be involved (funding from EU for travel of EU participants), that would be great. Similarly for other non US participants.

8. Please keep up with the good work.