**Appendix 4: 14th International Conference on Thermochronology**

**(Chamonix, September 8-12)**

Harrison - Introduction/explanation of NSF committee/Summary of workshop at Goldschmidt/Group was critical of NSF approach to funding "transformative" research/What we learned slide

Baldwin - International cooperation possible/Centralized national facility (CF) was not of much interest to community/Virtual facility was of much more interest/Clear NSF given opportunity - need to think big

Harrison - Geochronology is a victim of its own success/Geochronology came out of basement geochemistry/Other disciplines value geochron but don’t have a tradition of supporting it directly

Shuster - Most topics at this meeting were funded initially by petrology and geochemistry/pet&geochem has recently changed solicitation to excluder low temp geo/thermochron!

Harrison - Target audience of report is GEO, but EAR (with some Oceans/Polar support) is driverl

Steve Bergman – Is industry collaboration valued?

Baldwin - Yes a lot of discussion at Goldshmidt on this (“we train scientists for industry”)

Harrison - Barriers to innovation. Early days funding was cold war + moon shots + block grant/today those mechanisms are gone/consolidation is bad

John Garber - Is message that no matter what the solution part of solution must be national labs (e.g., laserchron)?

Harrison - In order for us to attract new resources a major facility might be attractive/some folks think big flagship model could be counterproductive (At this point, there are 86 people in the room). There appears little interest from producer side in CF

Baldwin - Answer involves more funding/support

Unknown – What about international CFs?

Harrison – We had a good presentation from Dan Condon – it’s clear clear NIGL is highly functioning/US character might resist such a solution

Andy Gleadow - Wondering if you could expand on international partnering

Baldwin - No in depth discussion/something we need to propose/integrate

Stockli - International cooperation was about decay constants/one calibration from US and one from Europe for example

Anne Blythe – Do we need a separate geochron funding agency?

Baldwin - Separate program did come up

Jan Wijbrans – has personal experience international collaboration/ChronusEU + Chronus/EU funded networks people are very interested in international collaborations/NSF has a scheme for funding such programs/Opportunities in 2020 for training networks

Harrison - Chronus and Earthtime came up as classic examples of the benefits of cooperation/NSF said when we get our act together it's generally supportive

Anja Fayan UMinnesota - CF would increase access for the "have nots"

Harrison - NSF was quick to point out 6 national facilities exist/this is idea where networked labs came from/Becky Flowers asked to speak on NSF Earthtime/Kip also asked to speak about his email on distributed facilities

Becky Flowers - Discussion on geochronology contract approach/Earthscope/entirely new efforts obtained funds for earthscope graduate student training program in geochron/identify participating labs/students propose projects/foster new relationships between labs and students/2 years and 15 awards

Kip Hodges - Conversation at Goldschmidt brought up virtual facilities (VF)/broad support/comes from NASA astrobiology virtual institute/limited time membership/have to re-propose every few years/would provide support that the communities/all eggs are not in one basket

Rich Ketcham - Hoping for a little more explanation on dissatisfied user community/is it between community and PIs?

Harrison -We're a little perplexed ourselves/Town hall meeting at Vancouver GSA for user community might bring out this point of view

Baldwin - One size doesn't fit all in terms of research/our first priority was our own funded grants/then if time other people/everyone is overbooked/need more funding

Mark Brandon - Issue about mature dating technology-mass produced-economy of scale versus boutique shops/seismology has community funding

Jim Metcalf - At a place like this have huge group of people who built labs/what helped those people set up their labs and keep them running/How can we make conditions more favorable

Harrison - Technical support funding-salary issue seen as crucial

Shuster - Changed for the worse quite dramatically recently

Devon Norm - From students perspective/need for support/no funding for training

Ken Farley - Was on original NRC committee - Mark Brandon hit it right if we should be like IRIS pool/Seismologists think we are quaint and need to grow up/we have PR problem/need to make clear we are not like seismometers/Vocal minority is frustrated by lack of access

Harrison - I couldn't agree more/We are successful but terrible advocates for own needs/bad at getting support for future innovative work/narrow sponsorship/other programs need to buy in

Willis Hames - Discussion about time available/mechanism for booking lab time beyond personal contacts

Baldwin - this is what we want to achieve with VF and we need funding to do that from the NSF

Minor Draum?NC/Switzerland - Issue of quality/people complaining of service/What were these complaints/is user base trained well enough?/is putting data on web going to solve need/we need more good data/if we think big we might want our own funding program/doing benchmarking programs/what are the limits of methods we have now

Harrison – We need to create a narrative that all big discoveries in earth sciences come from geochronology/need geochronology/have great history

Jon Garver - one of the most annoying things is mineral separation/same people who complain access have neglected mineral separation/

Harrison - Thanks for attending