

ANNUAL GTP MEETING, JANUARY 18, 2011

EXECUTIVE SUMMARY

The annual meeting of GTP was held on the Mesa, with 15 people attending and 6 explicitly excused. After welcoming 3 new members from CGD, an overview of some of the salient positive points in GTP F'10-F'11 was given:

- (i) Stimulus package 2-year post-doc for peta-scale computing in turbulence, attributed to Zbigniew Piotrowski (GTP/MMM), to collaborate with Piotr Smolarkiewicz;
- (ii) Quasi-decadal retreat where a working group on boundary layers and modeling was created;
- (iii) ASP faculty fellowship for Jim Brasseur (Penn. State) for multi-scale atmospheric chemistry in the boundary layer;
- (iv) Plausible funding for the Theme of the Year (TOY) on rotating stratified turbulence; and
- (v) Preliminary thoughts on the creation of a Turbulence Research Institute for Geophysical flows (TRIG).

The F'10 budget crisis was evoked again, with its solutions (drastic cuts), and then we went on to examine the propositions for F'11. Were retained 7 extra seminars (in addition to the 5 already held), 6 long-term visitors, a workshop proposed by Jielun Sun (MMM) on gravity waves in boundary layers, and two micro-meetings, one for the constitution of TRIG and one on Stochastic Schramm-L\owner Evolution (SLE, see below) as observed in 2D turbulence. A meeting on particle-laden turbulent flows and atmosphere-ocean exchange at high winds is already planned for 2012 (hosts: Grabowski & Sullivan in MMM and Lian-Ping at U. Delaware).

In attendance:

John Clyne, Wojciech Grabowski, Tom Horst, Branko Kosovic, Don Lenschow, Mark Miesch, Pablo Mininni, Chin-Ho Moeng, Ned Patton, Duane Rosenberg, Rich Rotunno, Piotr Smolarkiewicz, Peter Sullivan, Jielun Sun and Annick Pouquet.

* First, let us welcome our new GTP members, all from CGD:

Frank Bryan, Markus Jochum and Sungsu Park.

* GTP was the lucky recipient of a two-year stimulus package post-doctoral fellowship with travel funds, attributed to Zbigniew Piotrowski (from Warsaw U.) to work on peta-scale projects in geophysical turbulence with Piotr Smolarkiewicz (MMM).

* The main conclusions of the retreat held on July 31st were about the importance of the creation of a working group on boundary layers and modeling (BL-wg). The group held its first meeting under the leadership of Peter Sullivan (MMM) in December, with 21 staff in attendance from CISL, NESL principally CGD & MMM), RAL & CU. Six small talks were given to initiate the discussions. The next meeting is targeted at selecting a "low-hanging fruit" of common interest.

The retreat also strongly supported an expansion of GTP core funds targeted for

- (i) early career scientists, and
- (ii) The BL working group. The memo is available, just ask me.

* An ASP FELLOWSHIP has been attributed to Jim Brasseur (Penn State) to come to NCAR on sabbatical; this is to work on chemistry and turbulence (hosts: Sasha Madronich, ACD, with Ned Patton & Peter Sullivan, MMM, and Annick Pouquet, IMAGE), more specifically focusing on nonlinear chemistry by atmospheric boundary layer turbulence and aerosols in the highly polluted environment. This is excellent news for GTP, congratulations to Jim! For the exact dates, please ask Sasha or me.

* Doug Nychka informed us (by mail) that the prospect of

"The TOY [Theme Of the Year, in IMAGE] proposal with Julien and Kemper-Fox looks quite good. ?

? TOY will be supported at some level with the hope of meeting the full 50K [request]."

Funds would be allocated for Keith and Baylor for partial sabbatical support from CU to work at NCAR on rotating stratified turbulence (RTS), with NCAR-related applications (please ask me for the one-pager on this if interested). Again excellent news for GTP, congratulations to all!

* Finally, a reminder that there is a project for a Turbulence Research Institute for Geophysical flows (TRIG), by Fazle Hussain (U. Texas) and myself. All people to whom I talked were very receptive:

There is a need for the resurgence of research in turbulence. It could have a strong experimental (observational) component, e.g. in the spirit of "Kansas '68" (see e.g. Kaimal & Wyngaard, Boundary Layer Met. 50, 31, 1990 or ask Peter Sullivan and colleagues), but with new improved metrology and instrumentation in general. Again, there is a one-pager on TRIG which is available, just ask.

OK, LET'S GO NOW TO BUDGET MATTERS.

* First, how did we resolve the budget crisis of F'10, created by my double-counting funds (carry-over and new)?

With the cooperation of everyone involved, we suppressed all long-term visitors and all seminars that could be cut, we saved funds allocated to speakers at the workshop who did not show up at the last moment, we held a retreat without non-Boulder guests (but Jim McWilliams could attend) and we received substantial help from CISL from its visitor program.

* The available funds in F'10 were 61k, spent with 6 seminars (5k), 9 visitors (34k) and a workshop (22k). The workshop on rotating stratified turbulence was well attended; it was organized by Vladimir Zeitlin (Institut Laplace), Jean-Marc Chomaz (Ecole Polytechnique) with Chris Snyder (MMM) and myself (IMAGE). A table can be found, in the ppt presentation, with names of all GTP visitors and corresponding spending, again just ask.

* We discussed the necessity or not to carry-over the earmarked-then-slashed funds of F'10 for visitors and decided to start from scratch but retaining some of the propositions (not all), specifically Chorin for a seminar (CGD, host: Joe Tribbia), Liang (HAO, host: Mark Miesch) and Jonker (MMM, host: Peter Sullivan) for longer visits (see below).

THE AVAILABLE BUDGET FOR GTP IN F'11

IS: 72.5 k

** PROPOSAL FOR A RESERVE: 7.2 k (i.e., 10% of this year's budget)

** PROPOSALS FOR WORKSHOPS, for a total of 40k this year and 45 k next year (possibly overflowing to F'13):

We have many propositions, some of them not ready for F'11, some of them for micro-meetings:

- 1) Jielun Sun (MMM) on gravity waves and boundary layers, for 30 k; possibly held in late Spring 2012.
- 2) Wojciech Grabowski with Peter Sullivan and Lian-Ping (U. Del.), on particle-laden turbulent flows (a topic receiving a lot of attention/funding in Europe) and atmosphere-ocean exchange at high winds, for 30 k, in F'12.
- 3) Ned Patton (MMM) on turbulence and chemistry (see minutes of last year) for 15k (but see below).
- 4) Annick (IMAGE) on a constitutive high-end organizational meeting for TRIG, request for 5k.
- 5) Annick (IMAGE) on a 1.5 day tutorial on SLE (stochastic Schramm Loewner Evolution); this is all the rage in some corners because of the bridge between conformal field theory, critical phenomena and turbulence (see Bernard et al. Nature Physics 2, 12, 2006, on how this applies to two-dimensional Navier-Stokes turbulence in the presence of friction). A tutorial may be needed indeed? The request is also for 5k.

** PROPOSALS FOR VISITORS for a total of 30.8 k:

Brachet (Host: Duane Rosenberg, IMAGE), request 5 k

Jonker (host: Peter Sullivan, MMM), request 5 k

Lohou (host: Ned Patton, MMM), request 5 k

Liang (host: Miesch, HAO), request 1.3 k

Politano (host: Annick Pouquet, IMAGE), request 5 k

Want (host: Wojciech Grabowski, MMM), request 5 k

XX for VAPOR outreach (John Clyne, CISL), request 2.5 k

ZZ for 2 separate weeks, lodging only (host: Piotr Smolarkiewicz,

MMM), request 2 k

** PROPOSALS FOR SEMINARS, at 1k each, for a total of 8 k:

Beresnyak (host: Mininni, IMAGE)

Bhattacharjee (host: Miesch, HAO)

Borovsky (host: Pouquet, IMAGE)

Chorin (host: Tribbia, CGD, request from last year)

Kimura (host: Herring, MMM emeritus, request from last year for partial support)

Salmon (host: Herring, MMM emeritus, request from last year)

Sreenivasan (host: Fournier, MMM, request from last year)

Yokoi (host: Miesch, HAO)

TOTAL REQUESTS: 85.8 k, close to 20% above budget.

DECISIONS

Seminars & workshops do not have overhead; visitors do; so 4.6 k is roughly 3 k for spending + overhead.

- Shift Brachet's visit to RSVP/CISL (under the assumption that his application will be successful).

- Shift Yokoi's seminar to F'12 (he might come in October).

- Reduce all others by roughly 10% (more for the reserve), with two exceptions.

-- 30 k for workshop on gravity waves and boundary layers

- 4.6 k for SLE tutorial
- 4.6 k for TRIG constitutive meeting
- X- 4.6 k for Harm Jonker (732401, MMM)
- X- 4.6 k for Fabienne Lohou (732401, MMM)
- 4.6 k for H\`ene Politano
- 4.6 k for Lian-Ping Want
- 2.2 k for VAPOR outreach
- 1.8 k for Piotr's visitor
- 1.2 k for Chunlei Liang
- 6.3 k for 7 seminars at 0.9 k each
- 3.4 k for reserve for small unexpected expenses and/or for a few extra seminars (TBD)

FOR A TOTAL OF: 72.5 k

Given the agreement about workshops reached at the meeting and the fact that the organization of a workshop has to be made quite ahead of time, it is decided that the workshop on particle-laden turbulent flows and atmosphere-ocean exchange at high winds (such as hurricane spray) will be held in 2012 (Lian-Ping (U. Del.), Grabowski and Sullivan organizers). We could also have a mini workshop on chemistry and turbulence in 2012 or 2013. Also note that some funds may probably be requested in F'12 to support the boundary layer working group.

MISCELLANEOUS

- We decided to make do without cookies and coffee for the seminars, with exceptions, because of the rather high cost when going through the cafeteria. MMM offers help when we have a joint seminar, so does HAO in fact. I volunteer to buy cookies and fruits in the other cases, but I don't promise I'll remember!

- We decided to weed out a bit the GTP mailing list, I'll be checking out with you for some names.

- One day, we'll find time to put together a fully functional web-page for GTP, which would be helpful; and I also have to write a revised mission statement?:

- I also think it might be best in fact to return to an earlier date for the annual meeting, like the end of October, so that there is time for the workshop to be organized for the next summer. We see a trend to already pre-think about coming years for GTP workshops. Let me know if you disagree.

As a last point, let us congratulate Don Lenschow on his emeritus status and Peter Sullivan for accepting to be at the helm of the Boundary Layer and Turbulence Section in MMM!

Thank you for your time, and Happy New Year again to all of you.

Annick, January 24

AVAILABLE DOCUMENTS, just ask me (pouquet@ucar.edu)

- * Presentation for the GTP annual meeting (9+2 slides)
- * Post-retreat memo (1 page)
- * TOY proposal on rotating stratified turbulence (1.5 pages)
- * TRIG proposal (1 page)