Agenda for ISSI meeting: (version January 15th, 2017, 10:30UT)

Participants:

1. **Patrick Antolin** (Deputy leader), University of St Andrews (UK)
2. **Frédéric Auchère**, Institut d'Astrophysique Spatiale (France)
3. **Clara Froment** (Team leader), ITA – University of Oslo (Norway)
4. **Craig Johnston** (Young Scientist), University of St Andrews (UK)
5. **James Klimchuk**, NASA – GSFC (USA)
6. **Zoran Mikić**, Predictive Science Inc. (USA)
7. **Ramón Oliver**, IAC3 – Universitat de les Illes Balears (Spain)
8. **Susanna Parenti**, Institut d'Astrophysique Spatiale (France)
9. **Gabriel Pelouze** (Young Scientist), Institut d'Astrophysique Spatiale (France)
10. **Nicholeen Viall**, NASA – GSFC (USA)
11. **Amy Winebarger**, NASA – MSFC (USA)
12. **Chun Xia**, KU Leuven (Belgium)

Invited members:

13. **Cooper Downs**, Predictive Science Inc. (USA)
14. **Lucia Kleint**, FHNW (Switzerland)
15. **Manuel Luna**, Instituto de Astrofísica de Canarias (Spain)
16. **Jeffrey Reep**, U.S. Naval Research Lab., (USA)

Joining by Skype/Zoom:

17. **Wei Liu**, Stanford – LMSA (USA)
18. **Shinsuke Imada**, ISEE – Nagoya University (Japan)

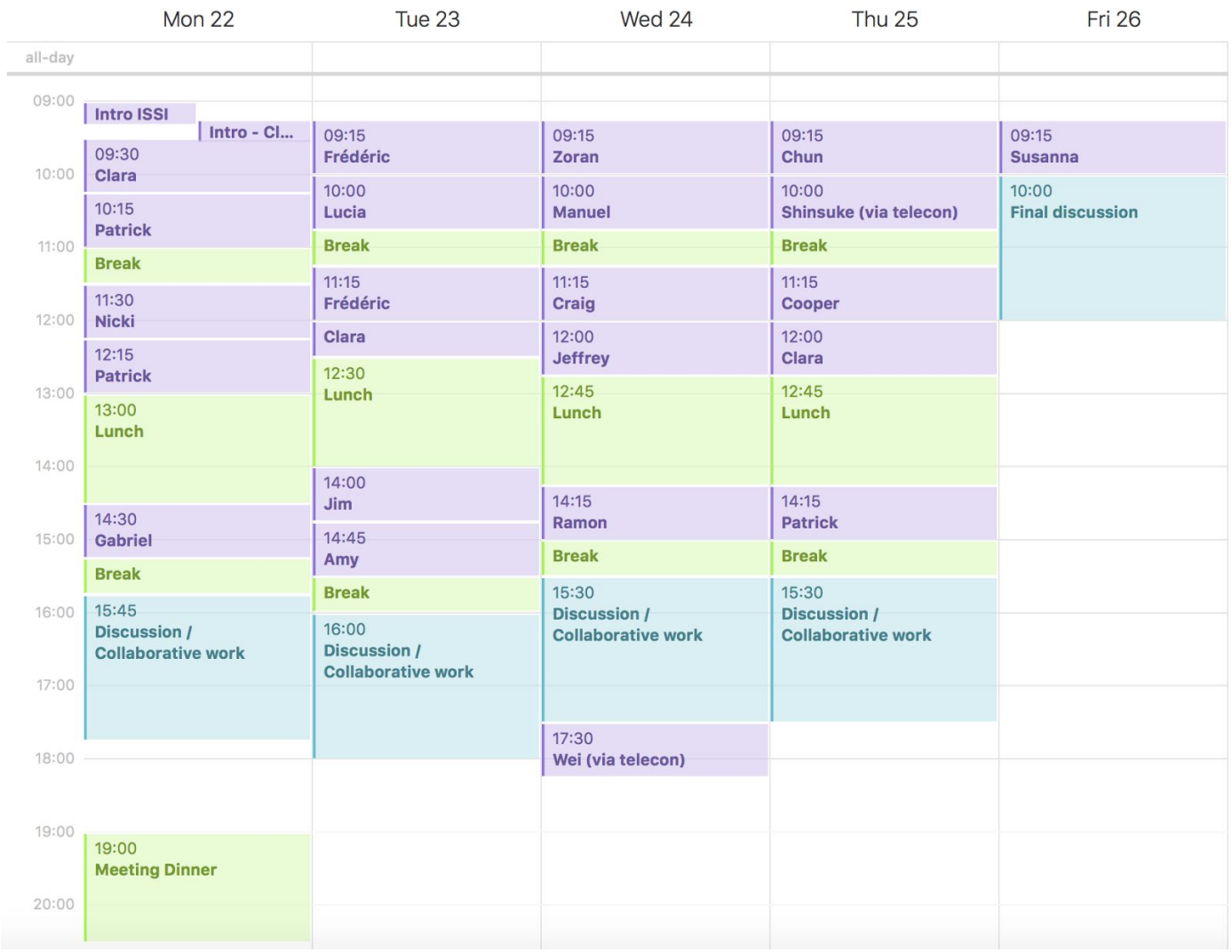
Meeting agenda:

I - Observations of evaporation-condensations in the solar atmosphere

Main topics for the presentation and discussions:
- Thermal non-equilibrium events (cycles) and coronal rain
- Study of flows associated with pulsations in loops
- Prominence connection
- Detection of EUV pulsations and coronal rain, what fraction of the coronal volume experiences these events?

II - Numerical models

Main topics for the presentation and discussions:
- 1D and multi-dimensional modeling
- Formation and dynamics of coronal rain
- Large scale simulations (active regions) of thermal non-equilibrium events


Mon 22
Tue 23
Wed 24
Thu 25
Fri 26
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09:00
10:00
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16:00
17:00
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19:00
20:00
Intro ISSI
Intro - Cl...
09:30 Clara
10:15 Patrick
Break
11:30 Nicki
12:15 Patrick
13:00 Lunch
14:30 Gabriel
Break
15:45 Discussion / Collaborative work
19:00 Meeting Dinner
09:15 Frédéric
10:00 Lucia
Break
11:15 Frédéric
Clara
12:30 Lunch
14:00 Jim
14:45 Amy
Break
16:00 Discussion / Collaborative work
09:15 Zoran
10:00 Manuel
Break
11:15 Craig
12:00 Jeffrey
12:45 Lunch
14:15 Ramon
Break
15:30 Discussion / Collaborative work
17:30 Wei (via telecon)
09:15 Chun
10:00 Shinsuke (via telecon)
Break
11:15 Cooper
12:00 Clara
12:45 Lunch
14:15 Patrick
Break
15:30 Discussion / Collaborative work
09:15 Susanna
10:00 Final discussion

Day 1: Monday 22

- Introduction (ISSI, Maurizio Falanga) **9:00 - 9:15**
- Goals of the meeting, key questions (Clara) **9:15 - 9:30**

Session I

- Observations of cooling in EUV lines and cooling/heating cycles in loops - review (Clara) **9:30 - 10:15**
- High resolution observations of coronal rain - review (Patrick) **10:15 - 11:00**

Break **11:00 - 11:30**

- Thermal non-equilibrium observed/modeled/measured with time lag analysis in prominences (Nicki) **11:30 - 12:15**
- Analysis of the spatio-temporal correlation in the IRIS & AIA intensity evolution for a rainy loop oscillating with transverse MHD waves (Patrick) **12:15 - 13:00**

Lunch **13:00 - 14:30**

- On the detection of velocities associated with TNE events in EIS data (Gabriel) **14:30 - 15:15**

Break **15:15 - 15:45**

- Discussion / Collaborative work sessions **15:45 - 17:45**
  - Thermal instability vs. absence of equilibrium debate (FA)
  - Incomplete condensation definition (JK)

- Meeting dinner at Altes Tramdepot **19:00**

Day 2: Tuesday 23

Session I (continues)

- Detection of periodic pulsation events (Frédéric) **9:15 - 10:00**
- Detection of supersonic events with IRIS spectra & machine learning (Lucia) **10:00 - 10:45**

Break **10:45 - 11:15**

- Detection of periodic coronal rain: The “Rain bow” (Frédéric) **11:15 - 12:00**
- Database of periodic events (Clara) **12:00- 12:30**

Lunch **12:30 - 14:00**

Session II

- When Do Asymmetries Prevent Thermal Non-Equilibrium from Occurring (Jim) **14:00 - 14:45**

- Large scale parameter space study for discriminating observations between TNE and impulsive heating (Amy) **14:45 - 15:30**

Break **15:30 - 16:00**

- Discussion / Collaborative work sessions **16:00 - 18:00**
  - Time-lag signatures of TNE (complete and incomplete condensations) (JK)
  - Interpretation of time-lags (FA, small presentation)
  - Observational signatures of thermal instability in the solar atmosphere (PA)

Day 3: Wednesday 24

Session II (continues)

- 1D modeling of thermal non-equilibrium (Zoran) **9:15 - 10:00**
- Common origin of coronal rain and solar prominences (Manuel) **10:00 - 10:45**

Break **10:45 - 11:15**

- Effect on TNE cycles of the background heating and the spatial resolution in the transition region (Craig) **11:15 - 12:00**
- Modeling of coronal rain, flare-associated coronal rain issue (Jeffrey) **12:00- 12:45**

Lunch **12:45 - 14:15**

- Dynamics of coronal rain blobs (Ramon) **14:15 - 15:00**

Break 15:00 - 15:30

- Discussion / Collaborative work sessions **15:30 - 17:30**
  - How can we use the statistics of detected pulsations (on & off disk) to constrain the spatio-temporal distribution of the heating (FA)
  - Implementation of impulsive heating in TNE simulations (GP)
  - How to discriminate between loops evolving in TNE and ones that are impulsively heated (ARW)

- Prominence - coronal rain connection, and/or flare rain in some recent events (Wei**, online from LMSAL**) **17:30- 18:15** (**Session I**)

Day 4: Thursday 25

Session II (continues)

- Multi-dimensional simulations of coronal rain and prominences (Chun) **9:15 - 10:00**
- Discussion on the origin of the continuous evaporation-condensation cycle oscillation in coronal loops (Shinsuke**, online from Nagoya**) **10:00 - 10:45**

Break **10:45 - 11:15**

- Simulation of LOS integrated 1D loops (Cooper) **11:15 - 12:00**
- The occurrence of TNE cycles in active regions (Clara) **12:00-12:45**

Lunch **12:45 - 14:15**

- Influence of stochasticity on TNE cycles (Patrick) **14:15 - 15:00**

Break **15:00 - 15:30**

- Discussion / Collaborative work sessions **15:30 - 17:30**
    - Flare-related rain and late-phase heating (JWR)
    - Differences between flare-driven rain and quiescent rain (PA)
    - Conditions for TNE: the role of heating and geometry asymmetries (JK)

Day 5: Friday 26

- Co-obs SOHO/SUMER and long-period intensity pulsations on disk (Susanna) **9:15 - 10:00** (**Session I**)
- Final discussion **10:00 - 12:00**