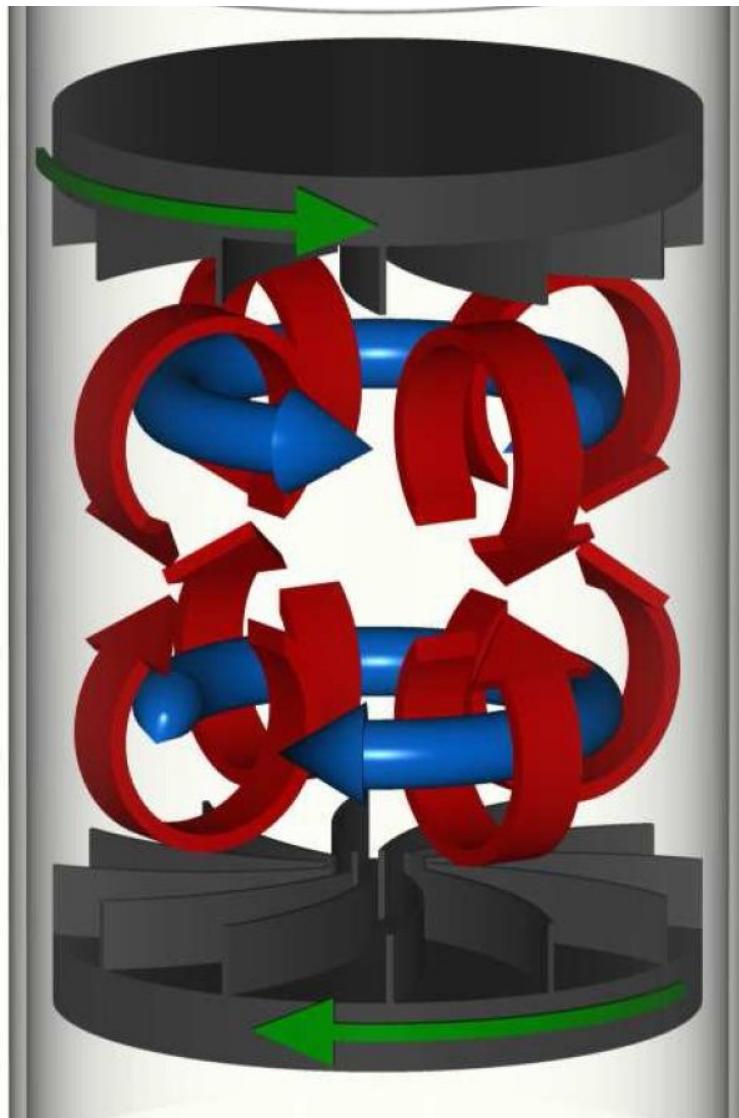




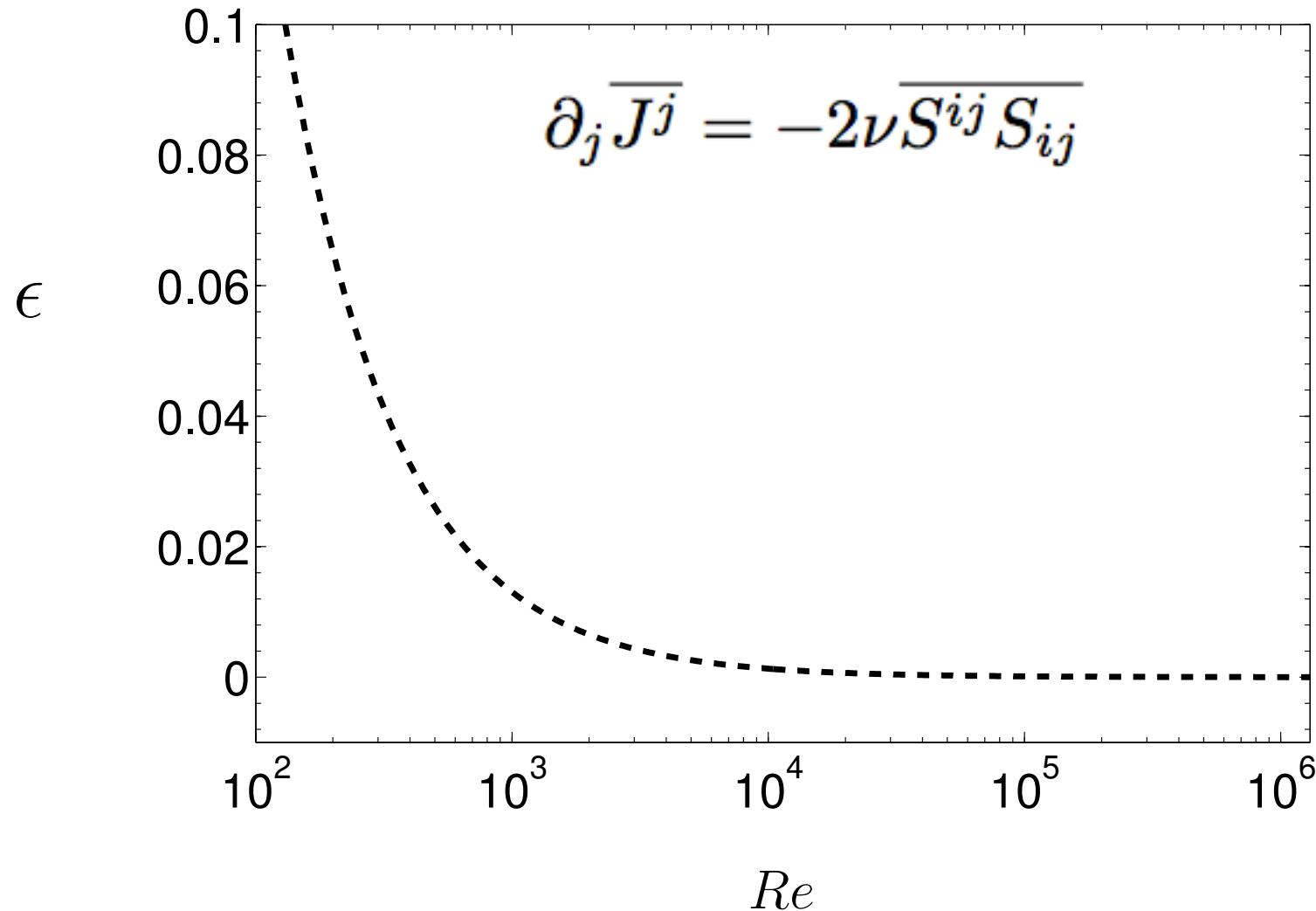
Global and local energy dissipation in a turbulent Von Kármán flow

Denis Kuzzay, Davide Faranda, Bérengère Dubrulle

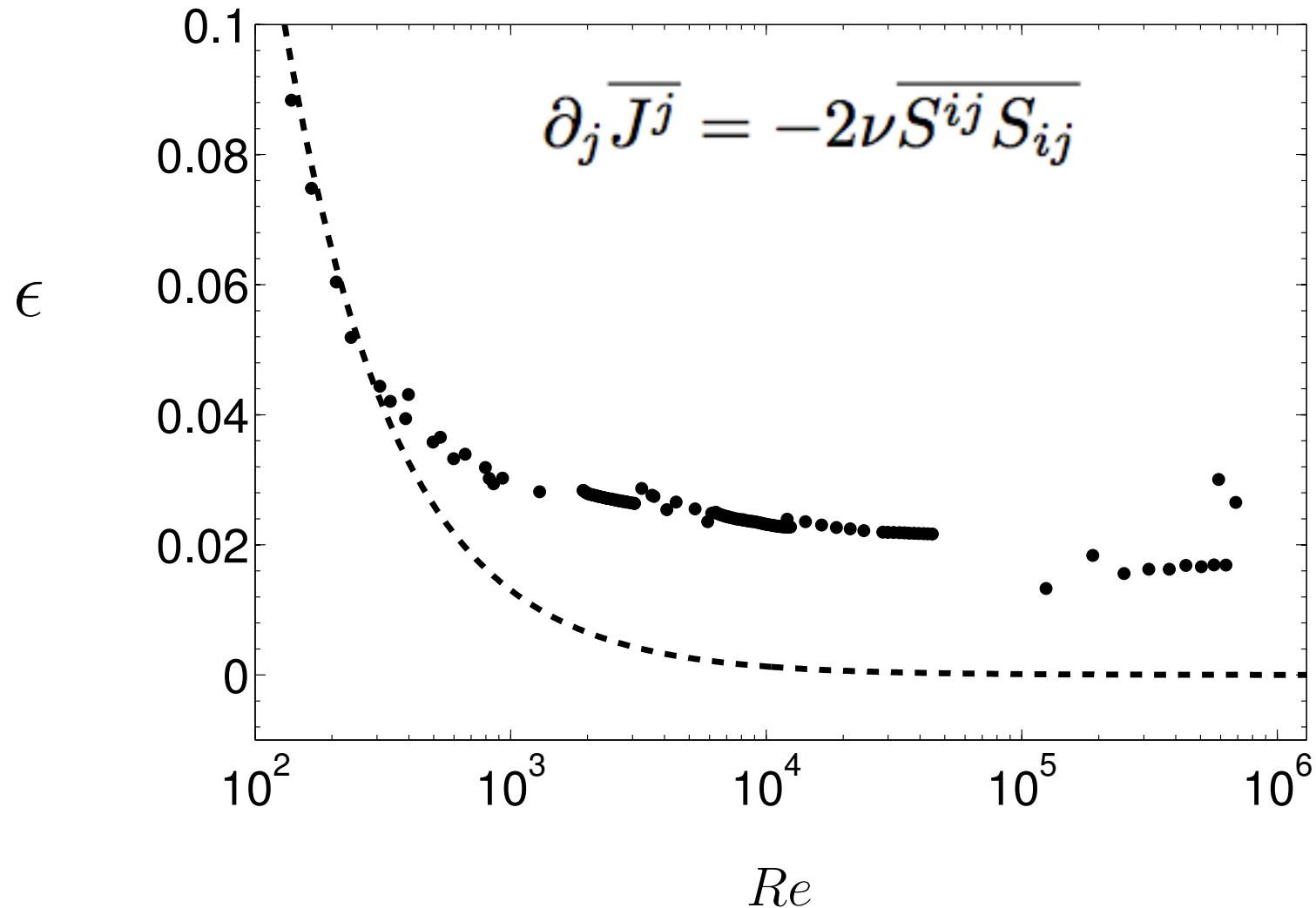
The Von Kármán flow



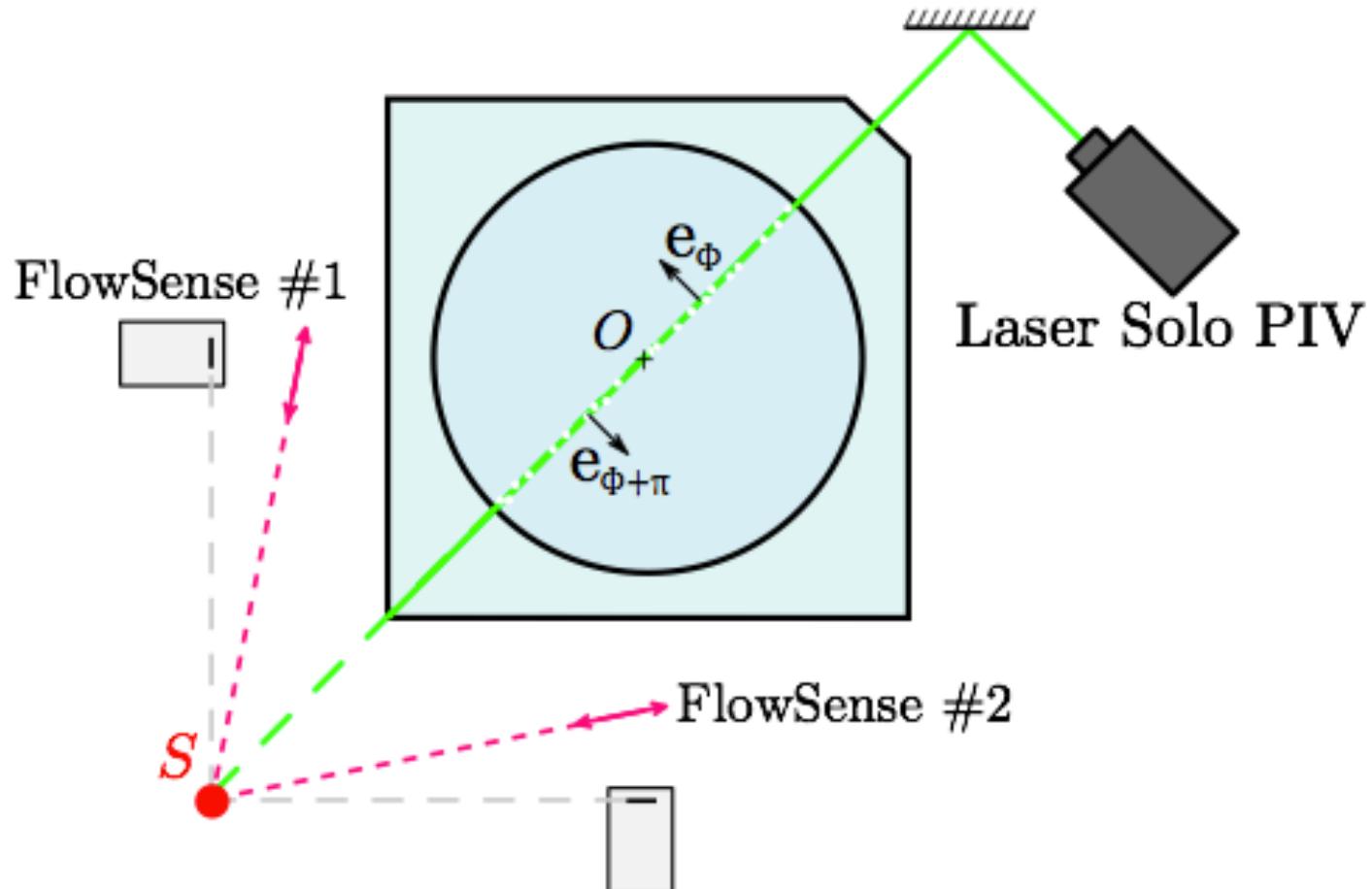
Laminar Energy Dissipation



Measured Energy Dissipation

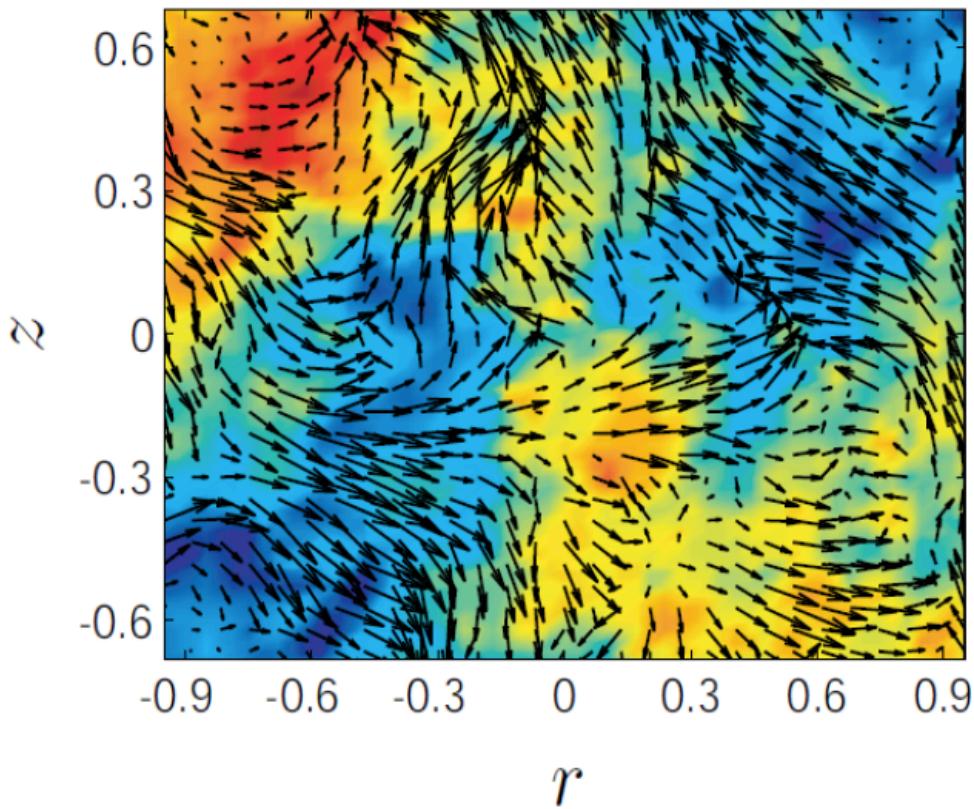


PIV Set-up

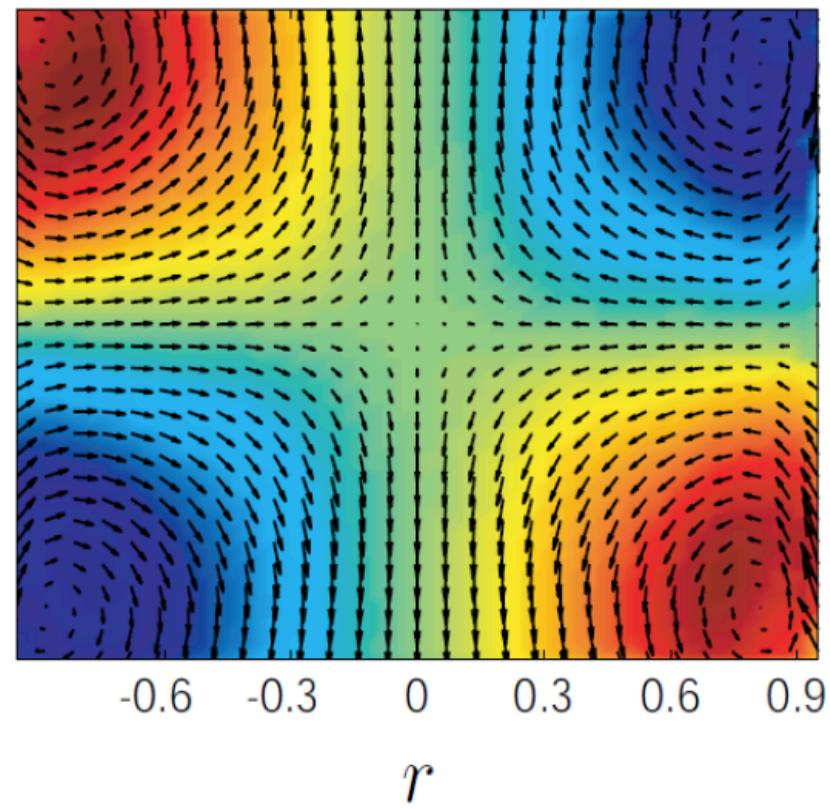


Typical Mean and Instantaneous Flows

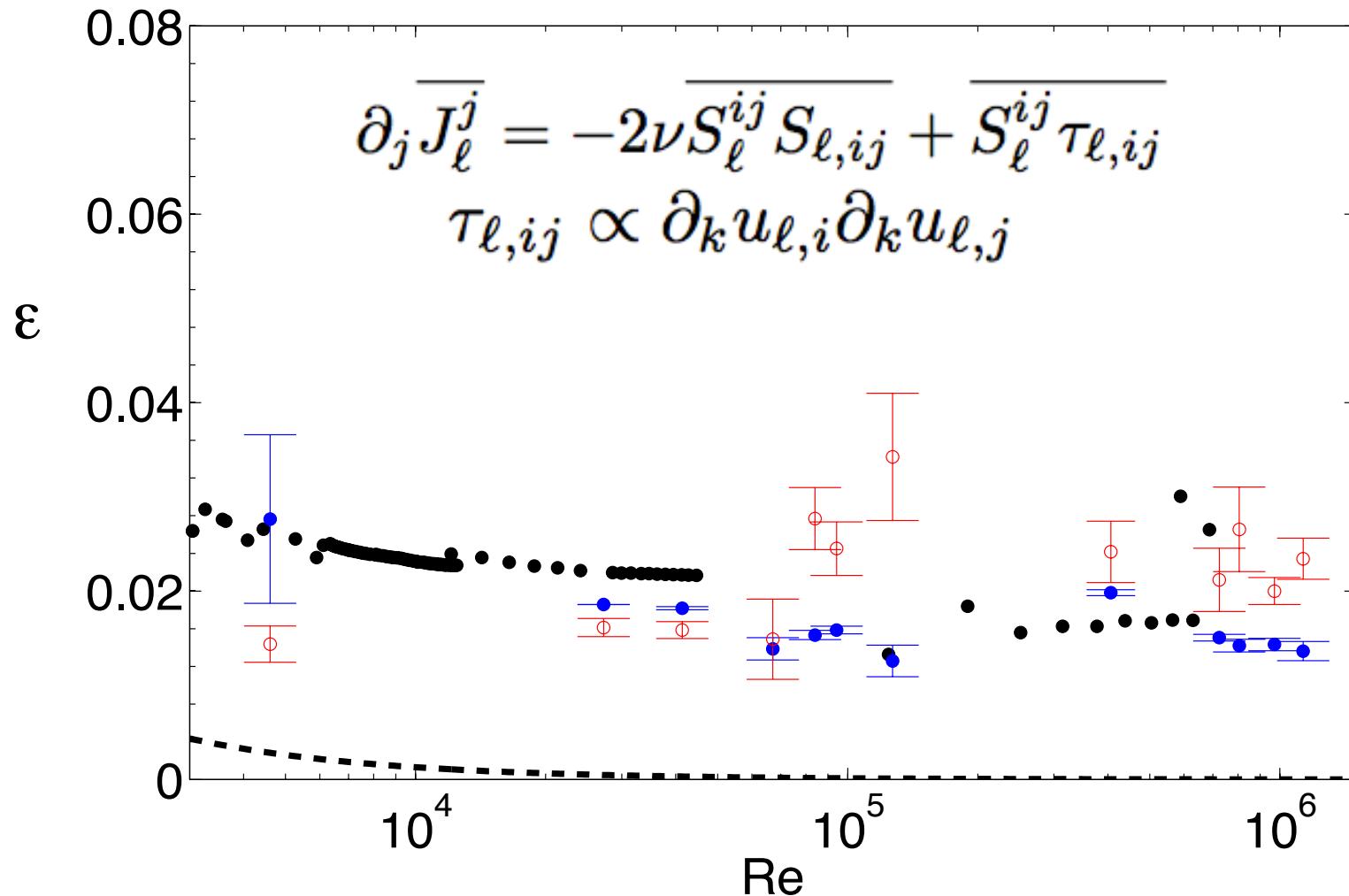
instantaneous flow



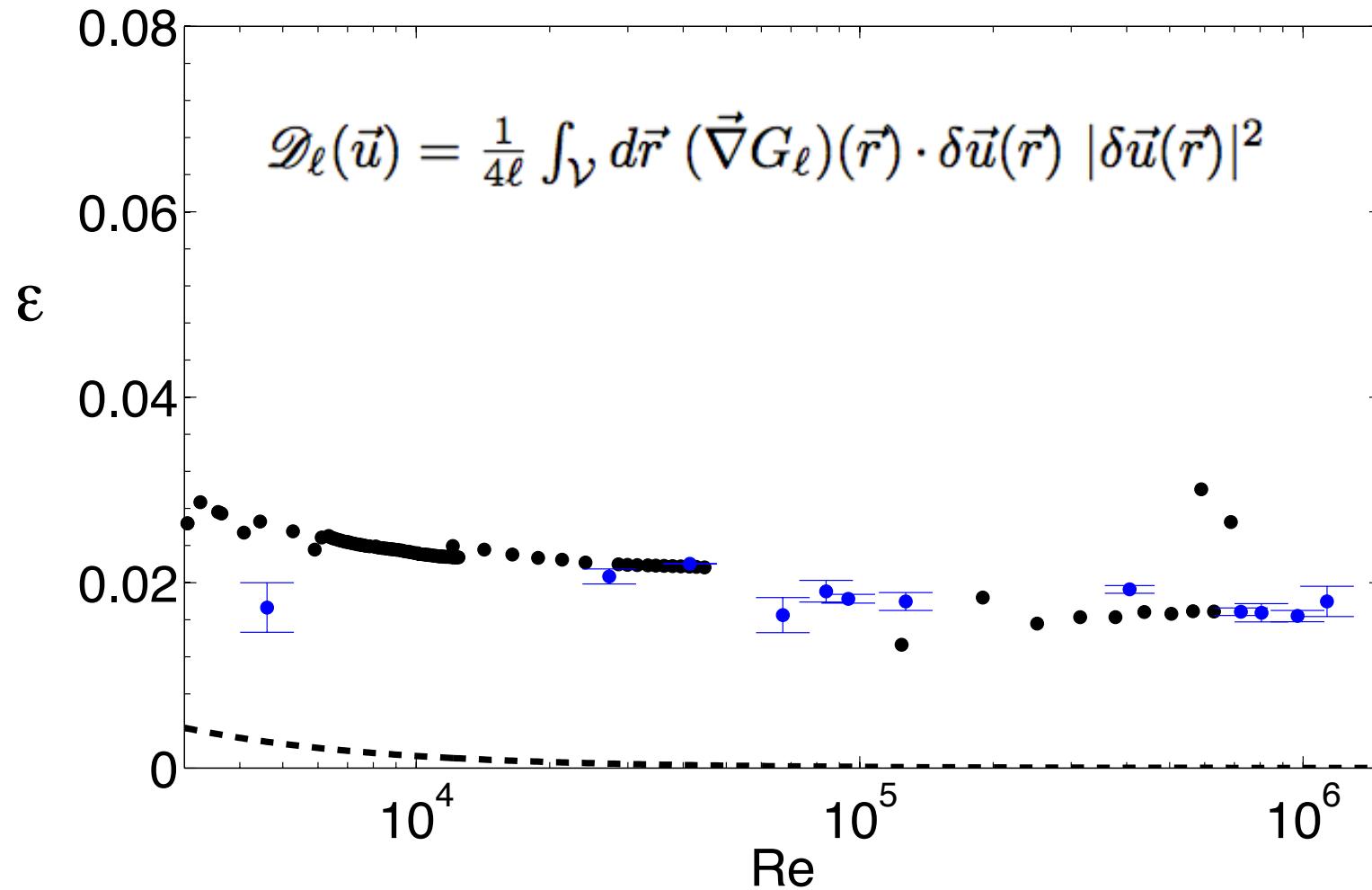
mean flow



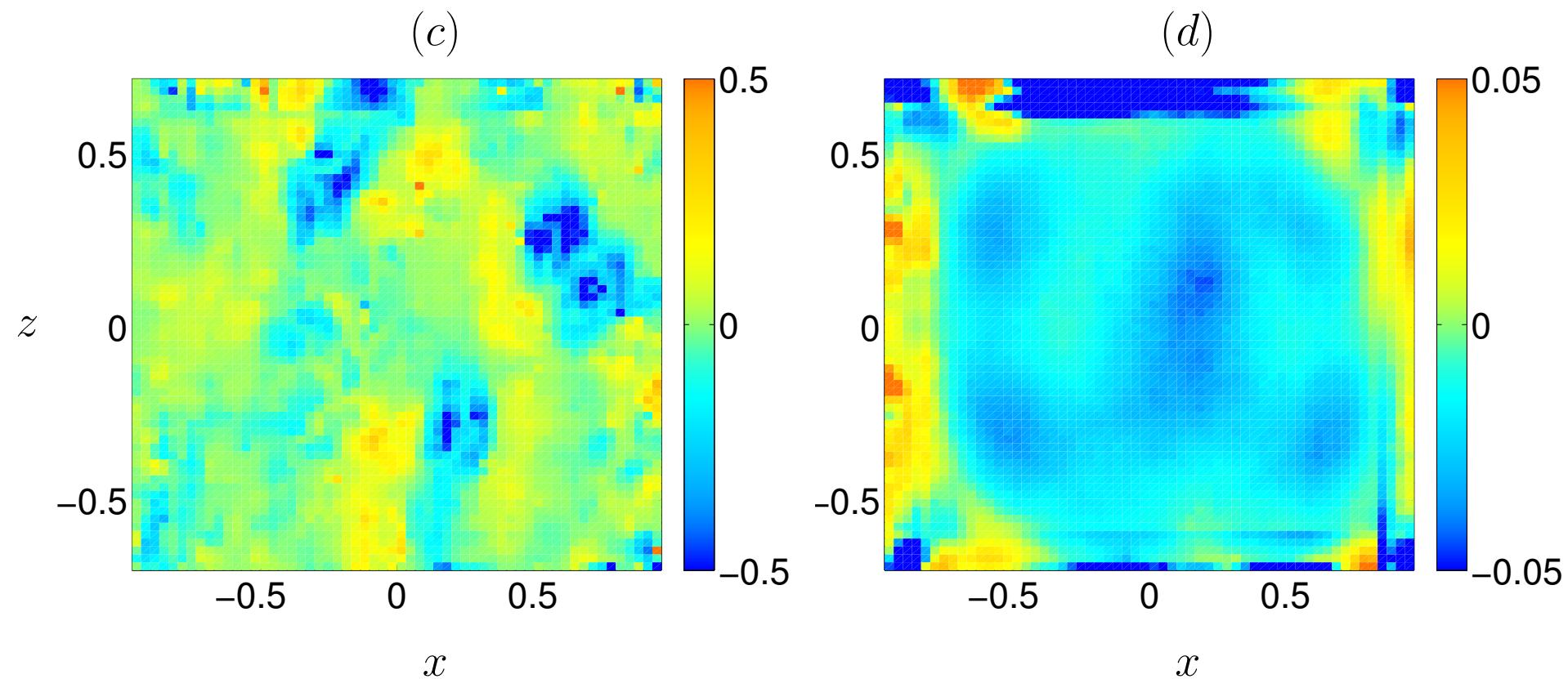
LES-PIV Estimated Energy Dissipation



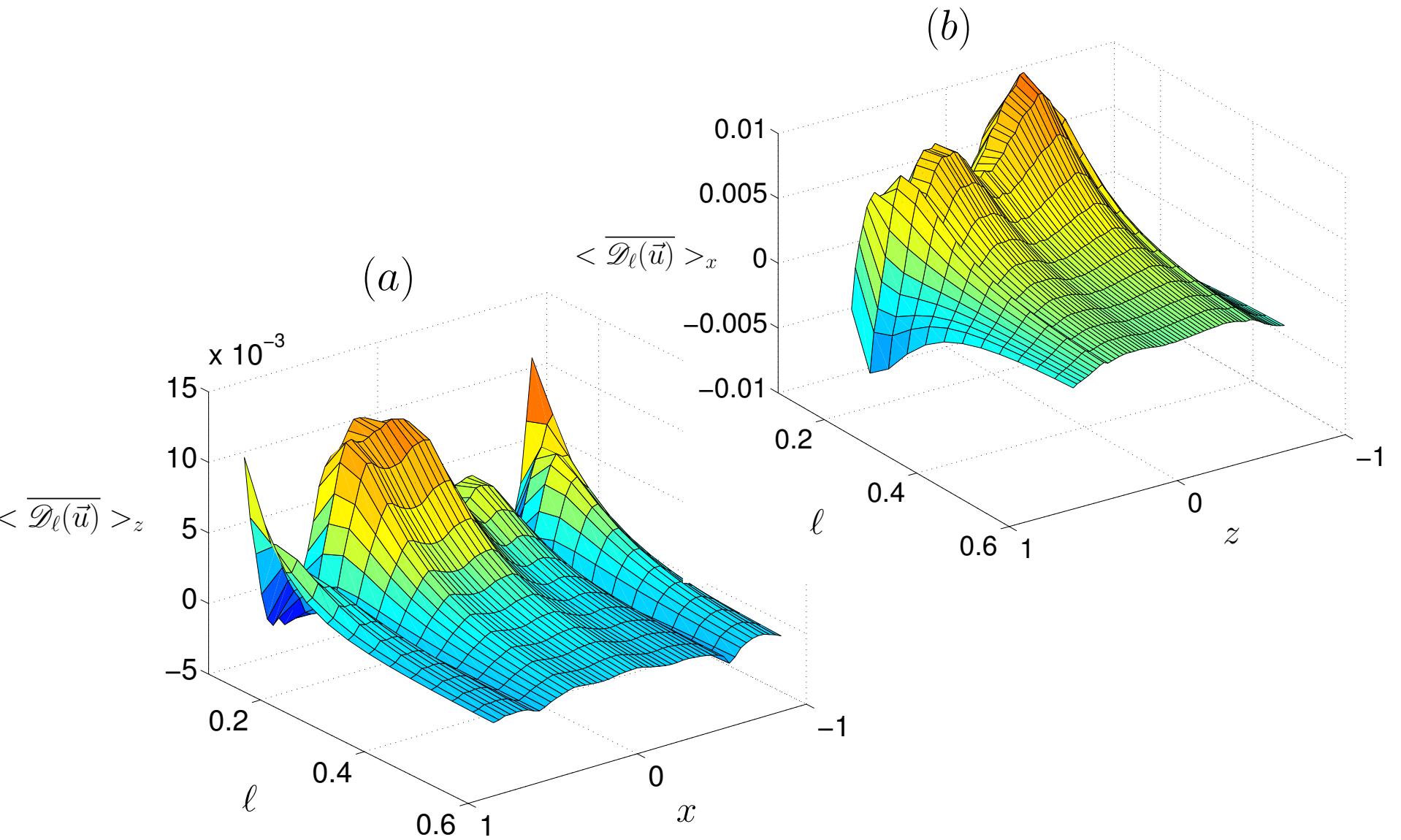
Duchon-Robert Energy Dissipation



Local Energy Dissipation Maps



Energy Dissipation in Scale Space



Conclusion

- We get very good estimates of the global dissipated power using LES techniques and the DR formula
- The DR formula is a nice alternative method to the LES technique
- The study of extreme events appearing on the local maps of the DR field constitutes our future work