





# Apple Technology @ Pierre & Marie Curie

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LI2C - UMR 7612  
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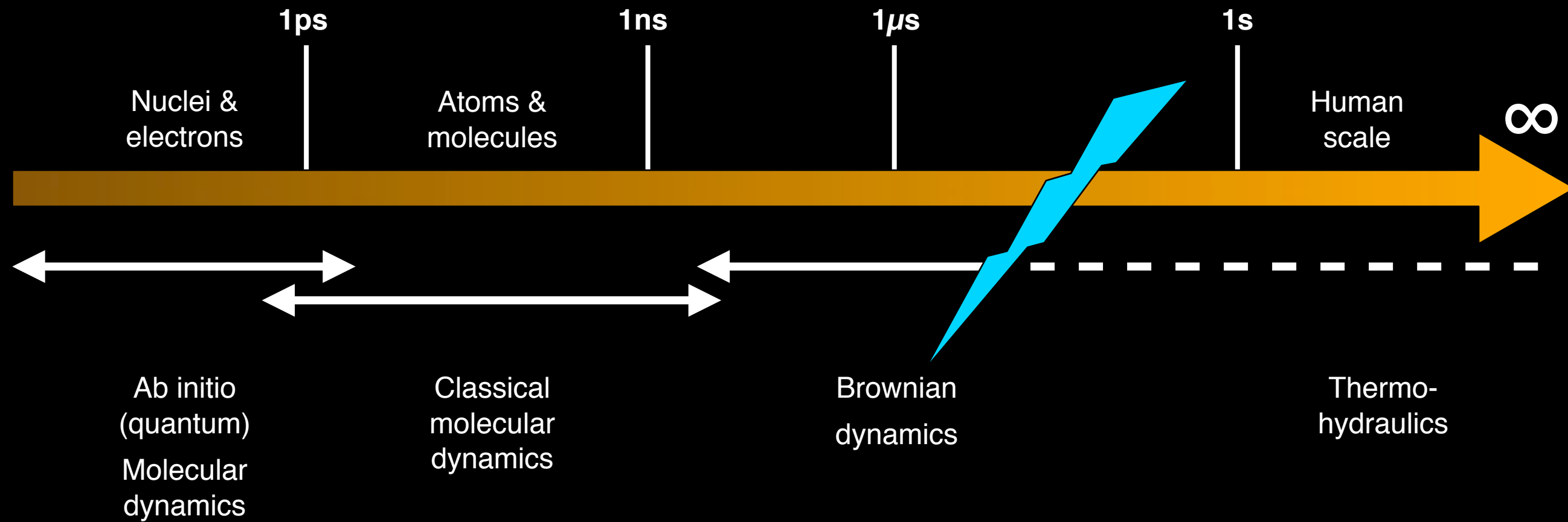


# Our team

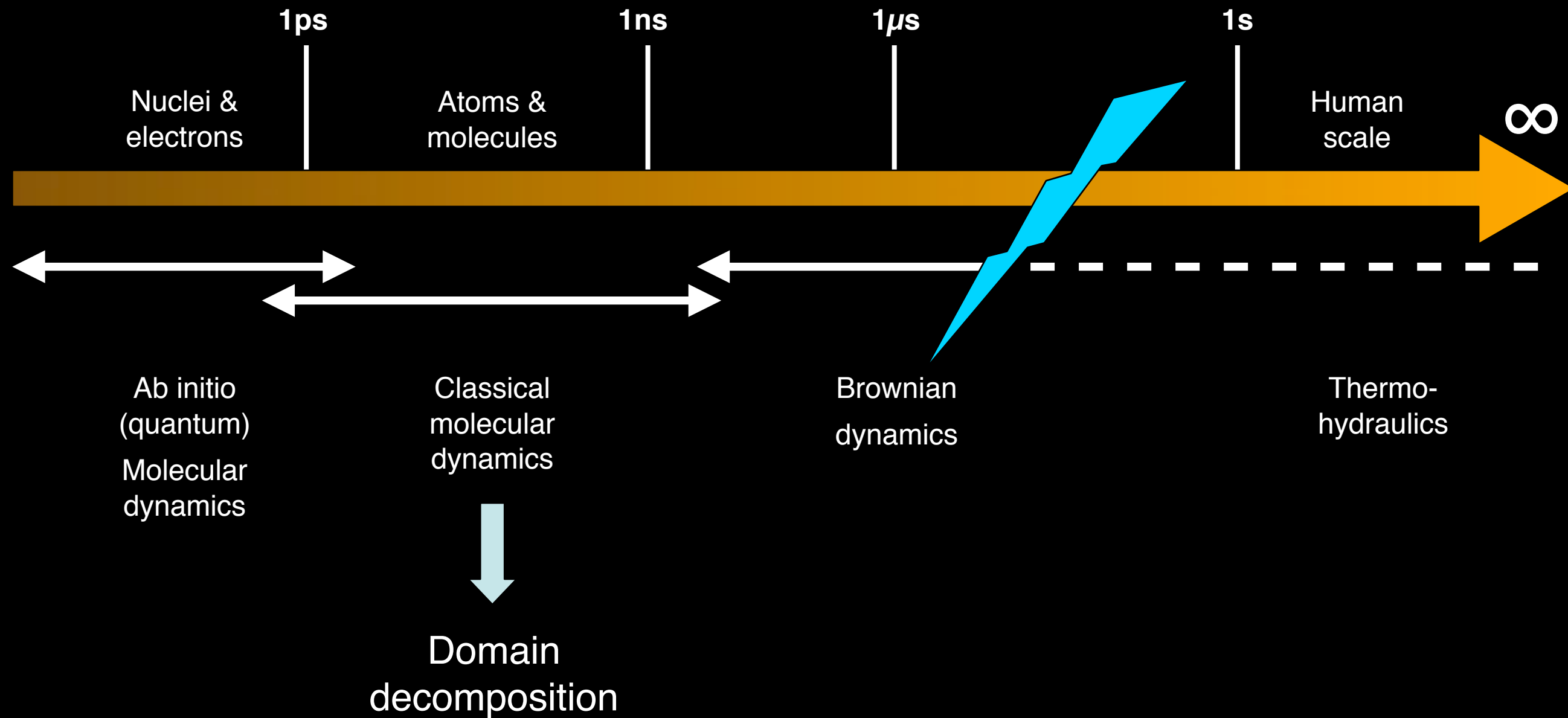
- Leader: Prof. P. Turq
  - Legacy codes (70's, 80's)
  - Various techniques
- Middle sized team
  - No system administrator (left in 1999)



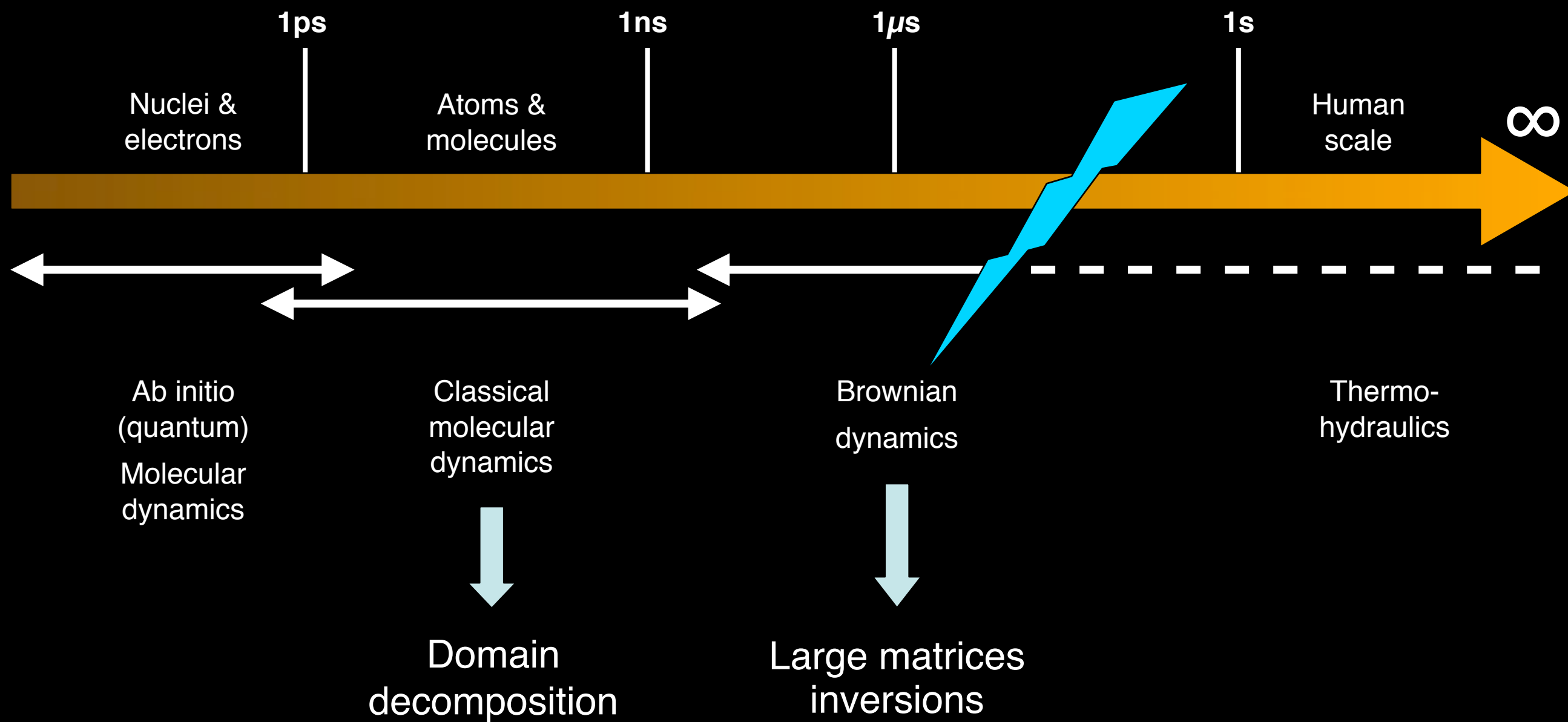
# Our field



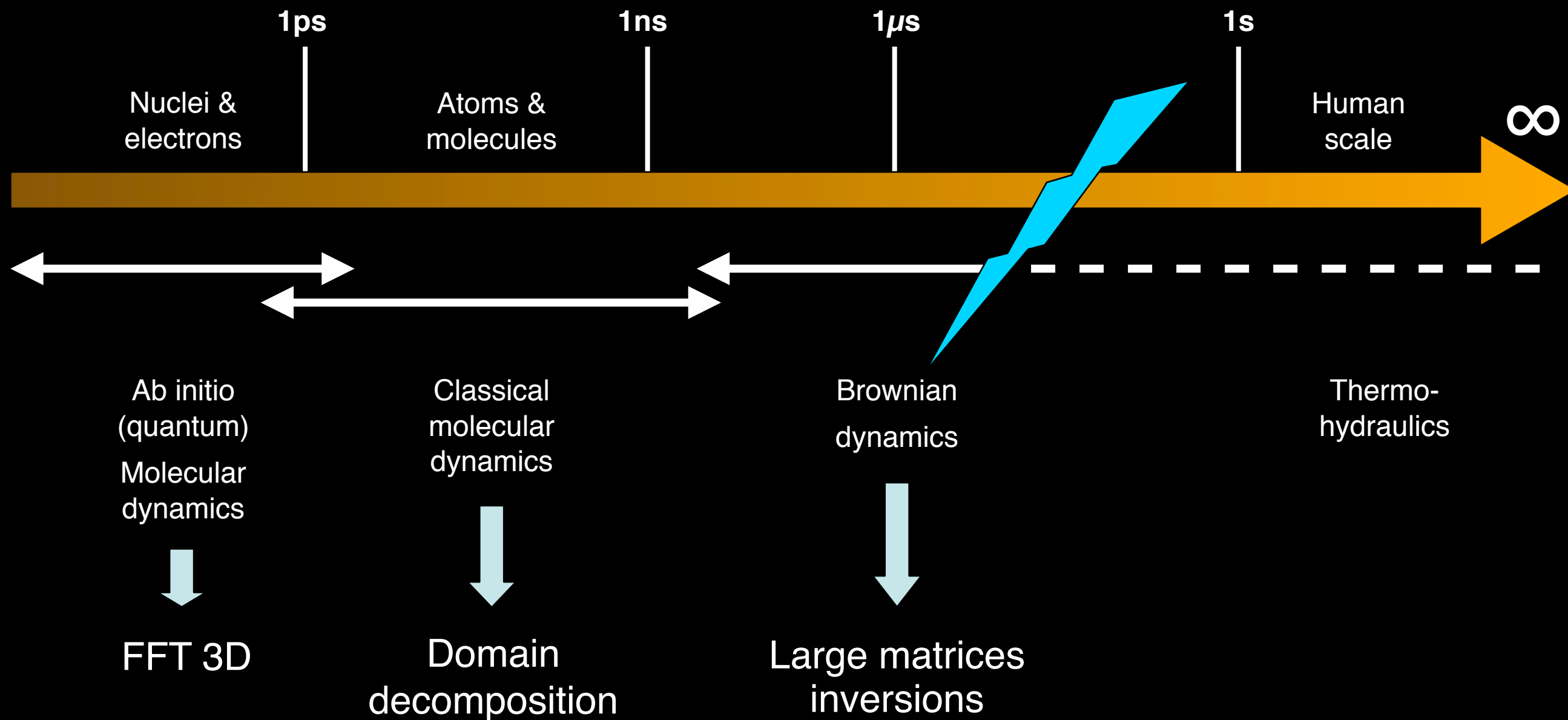
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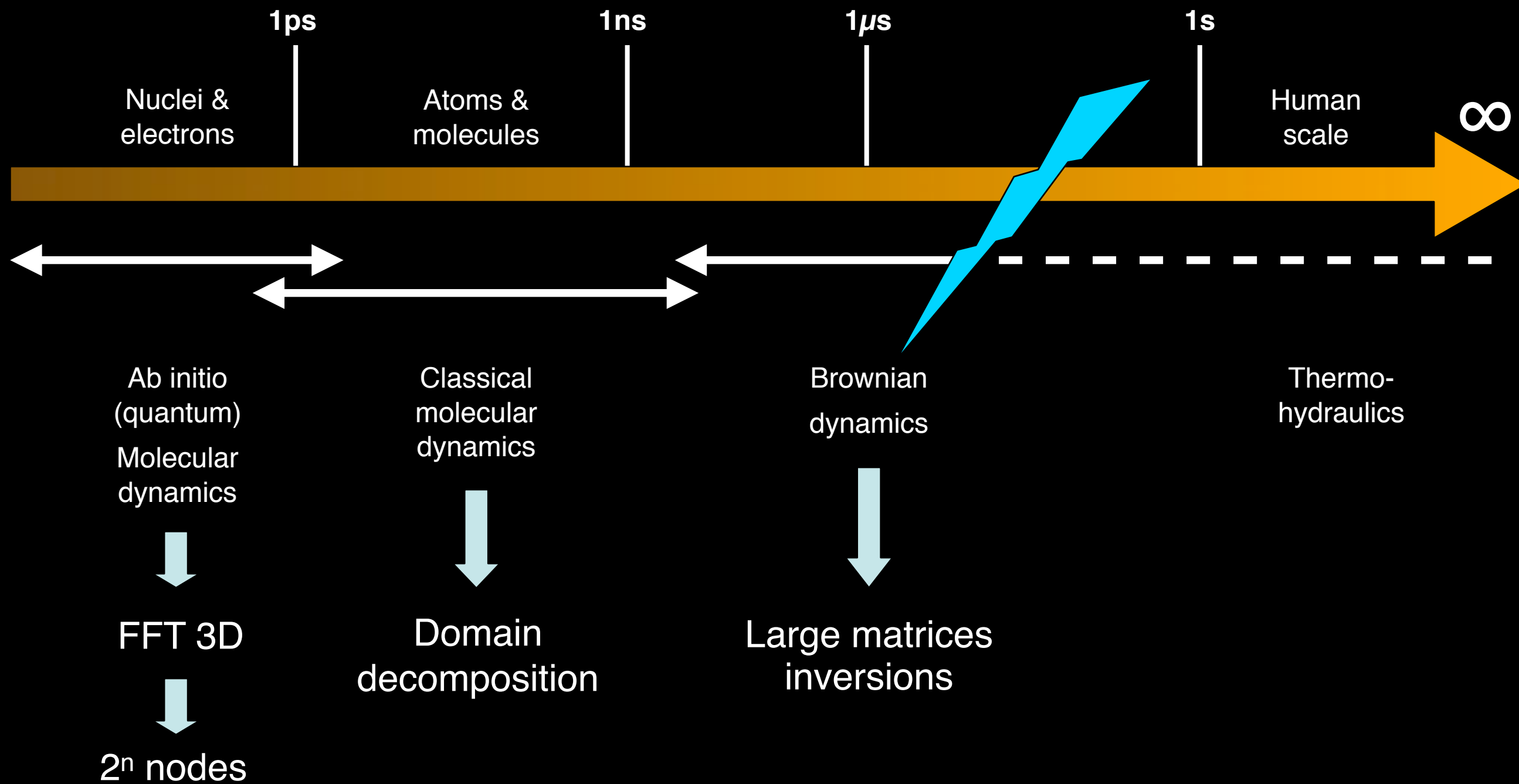
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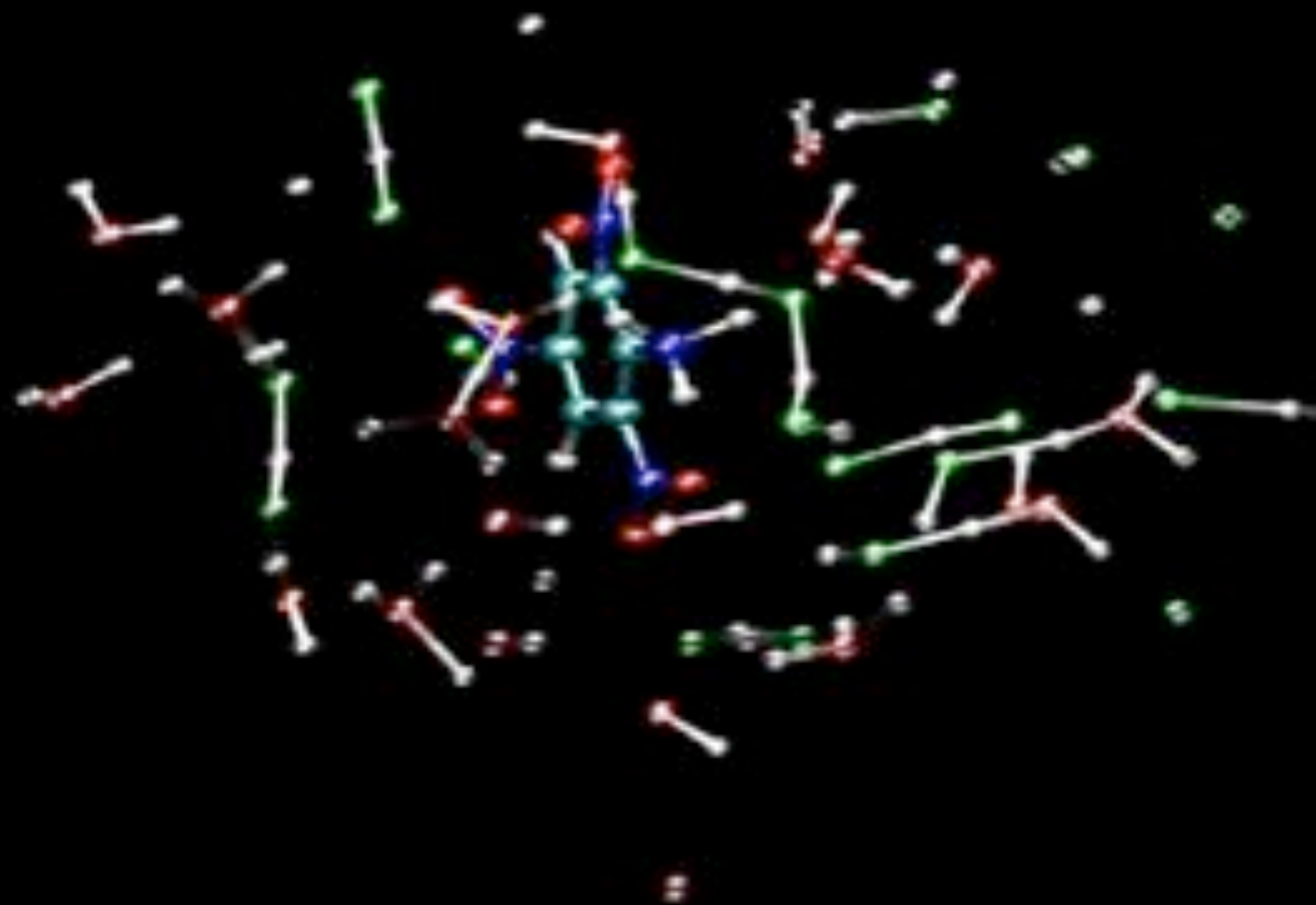


# Our field





# An example



# Resulting constraints

- No admin: no time for maintenance (hard and soft)
  - AIX, IRIX, Linux, Windows → MacOS X, Linux
- Legacy codes: IBM XLFortran needed, at least during a transition
- For parallel codes: strong synchronization

# MacOS X trial as workstation

- Excellent raw performance with XLFortran on G5
- No need for subtle tuning
- No hardware problems (now during 5 years)
- Easy maintenance (always up-to-date)
- Easy use of Fink

# Our installation (1)

- 1 dual G5 Xserve as NFS and LDAP
- 8 dual Xeon Linux (Fedora)
- 8 dual G5 PowerMac (MacOS X)
- 2 dual Xeon MacPro (MacOS X)



# Our installation (2)

16 nodes Xserve G5  
(Myrinet interconnect)



16 nodes Xserve Intel  
(Ge interconnect)



# From workstation to cluster

- Availability of all tools (compilers, MPI)
- Availability of low latency interconnects (Myricom)
- One dealer (France Systèmes)
- One authoritative information source (Apple KB)
- One efficient deployment tool (DeployStudio)

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At that time !



# From IBM PPC to Intel Xeon

Easier than ever!

- Progresses on portability of our codes
- Intel Fortran Compiler now routinely used under Linux
  - Why no MKL cluster for MacOS X ?
- Improvements of gfortran
- Use of Shark very appreciated
- New improvements of the Xserve
- New improvements of DeployStudio



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**Q&A**

