

# Quantum states of matter: fundamental physics and applications

KW34

20.08. -- 25.08.23

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday			
08:00	Arrival	Registration							
09:00									
09:00									
09:15									
09:15					Atom interferometry: theory/BEC/space	Trapped ions: trapping & cooling	Optical clocks	Non-classical matter waves	
10:00					Coffee break	Coffee break	Coffee break	Coffee break	
10:00									
10:30									
10:30				Welcome	Testing fundamental physics using matter	Trapped ion quantum computation	Scattering/molecules	Interferometry with non-classical matter waves	
11:15									
11:15				"the cold world" - BEC basics	Bragg/Bloch theory	Clocks & time keeping	Many-body: Dipolar quantum gases		
12:00									
12:00				Lunch break	Lunch break	Lunch break	Lunch break	Departure	
13:45				"the cold world" - BEC experiments	Free afternoon/lab tours	Excursion to PTB	Free afternoon		
14:30				Inertial sensing using atom interferometry					
15:15									
15:15				Coffee break	Coffee break				Coffee break
15:45									
15:45									
16:30									
16:30		Lab tours	Lab tours						
17:15									
17:15									
18:00									
18:00									
18:45			Social event		Social event				
18:45									
19:30									