

# 2024 EFTS Week Schedule

Time	Mon, July 1	Tue, July 2	Wed, July 3	Thu, July 4	Fri, July 5	Colors
8:15	<b>7:30–8:30 Registration</b>	<b>Coffee</b>	<b>Coffee</b>	<b>Coffee</b>	<b>Coffee</b>	<b>Logistics &amp; events</b>
8:30 – 9:20	<b>8:30</b> Introduction to TF Y. Le Coq SYRTE & FIRST-TF	Relativity Frédéric Meynadier BIPM, Int'l	Navigation & GNSS Carsten Rieck, RISE, SE	Synchronization over Digital Networks K. Teichel, PTB, DE	8:30–11:30 Laboratory	<b>Lectures</b> <b>Labs / computer</b> <b>Welcome &amp; Closing</b>
9:20 – 10:10	Introduction to Oscillators E. Rubiola, FEMTO, FR	Intro Atomic Clocks G. Mileti, LTF, CH	FS Combs J. Kronjäger, PTB, DE	Cold Atoms C. Lacroûte, FEMTO, FR	3. SDR, GPS & PRN (9:30-11:30)	<b>Contents</b> By color
10:10 – 10:40	<b>Coffee &amp; cookies</b>	<b>Coffee &amp; cookies</b>	<b>Coffee &amp; cookies</b>	<b>Coffee &amp; cookies</b>	4. GPS RX & RINEX	
10:40 – 11:30	Phase Noise Craig W. Nelson NIST, USA	Stabilized Lasers C. Lacroûte, FEMTO	Satellite Synch Carsten Rieck, RISE, SE	Optical Clocks Rachel Godun, NPL, UK	5. Atomic clock	<b>Chapter 1</b> General & Applications Enrico Rubiola
11:30 – 12:20	Variances F. Vernotte, FEMTO, FR	Free-space links Sascha Schediwy Univ. W. Australia	Small Clocks C. Affolderbach, LTF, CH	Attosecond pulses Romain Geneaux CEA, FR	<b>11:30 Quick coffee</b>	<b>Chapter 2</b> Meas & Oscillators Enrico Rubiola
					<b>11:45-12:30</b> Historical Perspective F. Vernotte, FEMTO	
12:20 – 13:50	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	<b>12:30–12:45 Closing</b>	<b>Chapter 3</b> Atomic Clocks Gaetano Mileti
13:50 – 14:40	Digital Controls C.E.Calosso, INRiM	Atomic Clock Physics G. Mileti, LTF, CH	Optical fiber links J. Kronjäger, PTB, DE	Clock Synchronization Security K. Teichel, PTB, DE	<b>12:45–14:15 Lunch</b>	<b>Chapter 4</b> Timing & Transfer Francois Vernotte
					<b>14:15–16:15</b> Visit, Observatory or FEMTO-ST	
14:40 – 15:30	Quartz Oscillators Bernd Neubig Axtal Consulting, DE	Atomic Time Scales Frédéric Meynadier BIPM, Int'l	<b>Coffee</b>	<b>Coffee</b>	15:00–18:00 Laboratory 3. SDR, GPS & PRN 5. Atomic clock 6. Resonators	<b>Laboratories</b> Y.Gruson, J.M.Friedt, E.Rubiola
15:30 – 16:00	<b>Coffee</b>	<b>Coffee</b>	15:10–17:10 Laboratory 1, 3 & 4 (Noise, SDR, RINEX)			
16:00 – 18:00	Laboratory 1. PM/AM noise, 2. Data Analysis	Laboratory 1. PM/AM noise, 2. Data Analysis				
18:00 – 19	<b>Posters, beer and chips</b> at the TF Department (ethanol-free drinks too)	(free time)	<b>Visit at the</b> <b>Museum of Time,</b> <b>and Drink</b>	<b>Go to the pier</b>	Lecture auditorium Jules Haag	Updated May 28, 2024
19 – 20						
20 – 21:30	<b>Dinner on your own</b>	<b>Dinner on your own</b>	<b>Dinner on your own</b>	<b>Social Dinner</b>		
21:20 – 24	Backup for the Astronomy session, depending on weather	<b>Astronomy</b> depending on weather	Last chance for the Astronomy session, depending on weather	<b>Boat on the river 19:30</b> (boat leaves at 19:45)		

## 2024 EFTS Laboratories

Group	Mon 1 16:00–18:00		Tue 2 16:00–18:00		Wed 3 15:10 – 17:10		Thu 4 15:00 – 18:00			Fri 5 8:30 – 11:30		
	16–17	17–18	16–17	17–18	15:10–16:10	16:10–17:10	15–16	16–17	17–18	8:30–9:30	9:30-10:30	10:30–11:30
Ar	<b>Lab.1: PM/AM noise</b> M. Abdel Hafiz J. Gillot, J. Millo, E.Rubiola  <i>Tesla H-I (-102/-103)</i>		<b>Lab.2: Data Analysis</b> F. Vernotte  <i>Computers 1.32.32</i>		<b>Lab.3: SDR, GPS &amp; PRN</b> JM. Friedt  <i>Computers 1.32.32</i>		<b>Lab.5. Atomic Clock</b> C. Lacroûte, M. Abdel Hafiz  <i>2.22.34</i>  12 people in 4 groups of 3			<b>6:Resonat.</b> D.Teyssieux <i>2.26.34</i>	<b>Lab 4. GPS RX, RINEX</b> F. Meyer, E. Meyer N. Gautherot <i>Tesla J (-101)</i>	
Be										<b>6:Resonat.</b> V.Giordano <i>2.28.34</i>		
Cs	<b>Lab.2: Data Analysis</b> F. Vernotte  <i>Computers 1.32.32 (1.15.31)</i>		<b>Lab.1: PM/AM noise</b> M. Abdel Hafiz J. Gillot, J. Millo, E.Rubiola  <i>Tesla H-I (-102/-103)</i>		<b>Lab.4 : GPS RX, RINEX</b> F. Meyer, E. Meyer N. Gautherot  <i>Tesla J (-101)</i>		<b>6:Resonat.</b> V.Giordano <i>2.26.34</i>	<b>Lab 3: SDR, GPS &amp; PRN</b> JM. Friedt  <i>Computers 1.32.32</i>		<b>Lab.5. Atomic Clock</b> C. Lacroûte, M. Abdel Hafiz <i>2.22.34</i>  12 people in 4 groups of 3		
Dy							<b>6:Resonat.</b> D.Teyssieux <i>2.28.34</i>					
Er	<b>Lab.2: Data Analysis</b> F. Vernotte <i>Computers 1.32.32 (1.15.31)</i>		free		<b>Lab.1: PM/AM noise</b> M. Abdel Hafiz J. Gillot, J. Millo, E.Rubiola  <i>Tesla H-I (-102/-103)</i>		free			free	<b>Lab.3: SDR, GPS &amp; PRN</b> JM. Friedt  <i>Computers 1.32.32</i>	
F	free		<b>Lab.2: Data Analysis</b> F. Vernotte <i>Computers 1.32.32</i>				free			free		
Ga	free											

	Regular groups				Additional groups (fewer labs)		Guests
	Argon	Beryllium	Cesium	Dysprosium	Erbium	Fluorine	Gallium
1							
2							
3							
4							
5							
6							