

Summer School on Particle Physics

Three Generations of Matter (Fermions)

	I	II	III	
mass	2.4 MeV	1.27 GeV	171.2 GeV	0
charge	$\frac{2}{3}$	$\frac{2}{3}$	$\frac{2}{3}$	0
spin	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1
name	u up	c charm	t top	γ photon
Quarks	4.8 MeV	104 MeV	4.2 GeV	0
	$-\frac{1}{3}$	$-\frac{1}{3}$	$-\frac{1}{3}$	0
	d down	s strange	b bottom	g gluon
<2.2 eV	<0.17 MeV	<15.5 MeV	91.2 GeV	0
0	0	0	0	1
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	0
ν_e electron neutrino	ν_μ muon neutrino	ν_τ tau neutrino	Z weak force	
Leptons	0.511 MeV	105.7 MeV	1.777 GeV	80.4 GeV
	-1	-1	-1	± 1
	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1
e electron	μ muon	τ tau	W^\pm weak force	

Bosons (Forces)

Report of Contributions

Contribution ID: 0

Type: **not specified**

Welcome in Udine

Monday, July 16, 2018 9:00 AM (30 minutes)

Contribution ID: 1

Type: **not specified**

Quantum mechanics I

Monday, July 16, 2018 9:30 AM (1h 30m)

Primary author: PANIZZO, Giancarlo (TS)

Presenter: PANIZZO, Giancarlo (TS)

Contribution ID: 2

Type: **not specified**

Relativity I

Monday, July 16, 2018 11:00 AM (1 hour)

Presenter: Prof. GIANNOZZI, Paolo

Contribution ID: 3

Type: **not specified**

Relativity I

Presenter: Prof. GIANNOZZI, Paolo

Contribution ID: 4

Type: **not specified**

Relativity II

Monday, July 16, 2018 2:00 PM (2 hours)

Presenter: Prof. GIANNOZZI, Paolo

Contribution ID: 5

Type: **not specified**

Quantum Mechanics II

Monday, July 16, 2018 4:00 PM (1 hour)

Presenter: Dr PANIZZO, Giancarlo

Contribution ID: 6

Type: **not specified**

Guided tour of Udine

Monday, July 16, 2018 5:00 PM (2 hours)

Contribution ID: 7

Type: **not specified**

Standard Model intro I

Tuesday, July 17, 2018 9:00 AM (2 hours)

Presenter: Prof. PANIZZO, Giancarlo

Contribution ID: 8

Type: **not specified**

Standard Model Intro II

Tuesday, July 17, 2018 11:00 AM (1 hour)

Presenter: Prof. COBAL, Marina

Contribution ID: 9

Type: **not specified**

Radiation-Matter Interaction I

Tuesday, July 17, 2018 2:00 PM (1 hour)

Presenter: Prof. COBAL, Marina

Contribution ID: **10**

Type: **not specified**

Symmetries

Tuesday, July 17, 2018 3:00 PM (2 hours)

Presenter: Dr PANIZZO, Giancarlo

Contribution ID: 11

Type: **not specified**

Free time with a tutor - on demand

Contribution ID: 12

Type: **not specified**

Masterclass I

Monday, July 23, 2018 9:00 AM (1 hour)

Presenters: Dr PANIZZO, Giancarlo; Prof. COBAL, Marina; Dr PINAMONTI, Michele

Contribution ID: 13

Type: **not specified**

Masterclass II

Monday, July 23, 2018 10:00 AM (2 hours)

Presenters: Dr PANIZZO, Giancarlo; Prof. COBAL, Marina; Dr PINAMONTI, michele

Contribution ID: 14

Type: **not specified**

Exercises and discussion

Monday, July 23, 2018 2:00 PM (3 hours)

Presenters: Dr PANIZZO, Giancarlo; Prof. COBAL, Marina; Dr PINAMONTI, Michele

Contribution ID: 15

Type: **not specified**

Bus to Trieste

Friday, July 27, 2018 8:00 AM (1 hour)

Contribution ID: **16**

Type: **not specified**

Visit to the Synchrotron

Friday, July 27, 2018 9:00 AM (3 hours)

Contribution ID: 17

Type: **not specified**

Rturn to Udine

Friday, July 27, 2018 7:00 PM (1 hour)

Contribution ID: **18**

Type: **not specified**

Cosmic rays and antimatter

Wednesday, July 18, 2018 9:00 AM (2 hours)

Presenter: VACCHI, Andrea (TS)

Contribution ID: **19**

Type: **not specified**

Leptons I

Wednesday, July 18, 2018 11:00 AM (1 hour)

Presenter: Prof. CAUZ, Diego

Contribution ID: **20**

Type: **not specified**

Lepton II

Wednesday, July 18, 2018 2:00 PM (2 hours)

Presenter: Prof. CAUZ, Diego

Contribution ID: 21

Type: **not specified**

Quarks

Wednesday, July 18, 2018 4:00 PM (1 hour)

Presenter: Prof. COBAL, Marina

Contribution ID: 22

Type: **not specified**

Gauge bosons I

Thursday, July 19, 2018 9:00 AM (1 hour)

Presenter: Dr PANIZZO, Giancarlo

Contribution ID: 23

Type: **not specified**

Detectors I

Thursday, July 19, 2018 10:00 AM (2 hours)

Presenter: Prof. PALESTRI, Pierpaolo

Contribution ID: 24

Type: **not specified**

Detectors II

Thursday, July 19, 2018 2:00 PM (2 hours)

Presenter: Prof. VACCHI, Andrea

Contribution ID: 25

Type: **not specified**

Gauge Bosons II

Thursday, July 19, 2018 4:00 PM (1 hour)

Presenter: Prof. COBAL, Marina

Contribution ID: 26

Type: **not specified**

Detectors III

Friday, July 20, 2018 9:00 AM (2 hours)

Presenter: Prof. COBAL, Marina

Contribution ID: 27

Type: **not specified**

CERN and LHC

Friday, July 20, 2018 11:00 AM (1 hour)

Presenter: Dr PANIZZO, Giancarlo

Contribution ID: 28

Type: **not specified**

Lab: detection of cosmic rays

Friday, July 20, 2018 2:00 PM (3 hours)

Presenters: Prof. SANTI, Lorenzo; Dr SOLDANI, Mattia

Contribution ID: 29

Type: **not specified**

Higgs - Theory

Tuesday, July 24, 2018 9:00 AM (1 hour)

Presenters: Dr PANIZZO, Giancarlo; Dr PINAMONTI, Michele

Contribution ID: **30**

Type: **not specified**

Higgs - Experimental results

Tuesday, July 24, 2018 10:00 AM (2 hours)

Presenters: Dr PANIZZO, Giancarlo; Prof. COBAL, Marina; Dr PINAMONTI, Michele

Contribution ID: 31

Type: **not specified**

Computing lab: Higgs

Tuesday, July 24, 2018 2:00 PM (3 hours)

Presenters: Dr PANIZZO, Giancarlo; Prof. COBAL, Marina; Dr PINAMONTI, Michele

Contribution ID: 32

Type: **not specified**

Computing lab: Higgs

Wednesday, July 25, 2018 9:00 AM (3 hours)

Presenters: Dr PANIZZO, Giancarlo; Prof. COBAL, Marina; Dr PINAMONTI, Michele

Contribution ID: 33

Type: **not specified**

BSM & Dark Matter

Wednesday, July 25, 2018 2:00 PM (3 hours)

Presenters: Dr PANIZZO, Giancarlo; Prof. COBAL, Marina

Contribution ID: **34**

Type: **not specified**

Accelerators I

Thursday, July 26, 2018 9:00 AM (1 hour)

Presenter: COBAL, Marina (UD)

Contribution ID: 35

Type: **not specified**

Accelerators I

Thursday, July 26, 2018 10:00 AM (1h 30m)

Presenter: Dr PANIZZO, Giancarlo

Contribution ID: **36**

Type: **not specified**

Accelerators II

Thursday, July 26, 2018 2:00 PM (2 hours)

Presenter: Prof. COBAL, Marina

Contribution ID: 37

Type: **not specified**

Accelerators II

Thursday, July 26, 2018 4:00 PM (1 hour)

Presenter: PANIZZO, Giancarlo

Contribution ID: **38**

Type: **not specified**

Particle Physics Test

Thursday, July 26, 2018 11:30 AM (30 minutes)

Presenters: PANIZZO, Giancarlo (TS); COBAL, Marina (UD)