

## CURRICULUM VITAE

### PERSONAL INFORMATION:

Name Linda Polastri  
Date of birth 06/01/1987  
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### EDUCATION:

2006-2010: Bachelor of Science in physics and astrophysics at the University of Ferrara.  
Attended courses:

<b>First year:</b>	
<b>Descrizione esami:</b>	<b>Voto:</b>
Elementi di geometria	26/30
Algebra lineare	22/30
Meccanica del punto materiale	26/30
Meccanica dei sistemi e termodinamica	22/30
Chimica	29/30
Programmazione per le misure fisiche	25/30
Laboratorio di dinamica	26/30
Calcolo differenziale	27/30
Calcolo integrale	28/30
Lingua inglese	22/30
Sicurezza e tutela ambientale	30/30 LODE

<b>Second year:</b>	
<b>Descrizione esami:</b>	<b>Voto:</b>
Laboratorio di ottica	20/30
Equazioni differenziali ed integrali	26/30
Laboratorio di elettronica digitale	30/30
Laboratorio di elettronica analogica	26/30
Onde elettromagnetiche e ottica	23/30
Elettricità e magnetismo	24/30
Meccanica superiore e relatività	24/30
Meccanica analitica	23/30
Funzioni di interesse fisico	18/30

<b>Third year:</b>	
<b>Descrizione esami:</b>	<b>Voto:</b>
Laboratorio interazione radiazione e materia	25/30
Tecnologie dello spazio	28/30
Elementi di astrofisica	26/30
Elementi di fisica statistica	26/30
Introduzione alla fisica atomica	24/30
Meccanica quantistica	24/30
Elementi di fisica subatomica	20/30

2009-2010: Bachelor of Science in physics and astrophysics at the University of Ferrara with 98/110.

Final year project: Title: "Misura dell'indice di rifrazione di materiali solidi o liquidi col metodo della sfera dielettrica" advisor Dr. Antonio Parretta. Design and development of an instrumental apparatus adapted to determine, in an automated manner, the index of refraction of solid or liquid materials by the method of the dielectric sphere. I confirmed the values of the refractive indices of various liquids present in the literature, obtained with different methods of analysis. The method developed has proven to achieve results comparable to those of other methods facilitating the execution of the measure in particular in the case of liquids. Area of the study: optical physics and physics of materials.

2010-2014: Master degree in physics.

Attended courses:

<b>First year:</b>	
<b>Descrizione esami:</b>	<b>Voto:</b>
Elements of subnuclear physics	26/30
Method of mathematical physics	26/30
Advanced electromagnetism	25/30
Quantum mechanics	20/30
Scattering theory	26/30

<b>Second year:</b>	
<b>Descrizione esami:</b>	<b>Voto:</b>
Measurements and observation of celestial x and $\gamma$ rays	27/30
High energy astrophysics	30/30
Physical cosmology	30/30 E LODE
Astrophysics measurements	26/30
General relativity	27/30
Astronomical measurements	30/30
Nuclear and subnuclear astrophysics	27/30

2013-2014: Master degree in physics 104/110. Final year project: Title: "CMB directional anomalies as seen by Planck" advisor Dr. Paolo Natoli. In this work I tested the cosmological principle for two different models: the  $\Lambda$ CDM and the Dipolar model. I confirmed the existence of directional anomalies in the CMB and tested the cosmological principle, in particular I focused my work on the alignment between the quadrupole and the octupole. Area of the study: Theoretical/observational cosmology.

## PERSONAL SKILLS AND COMPETENCES

### LANGUAGES

Mother tongue: Italian

Other languages : English

Reading level: good

Writing level: good

Speaking level: good

### COMPUTER SKILLS

- Excellent knowledge of Windows OS and Linux.
- Excellent knowledge of MS Office.
- Good knowledge of the programming language Fortran and C.
- Good knowledge of use of IDL.
- Basic knowledge of Mathematica and Python.
- Good knowledge of HEALPix (version: f90, IDL and Python).

### RELATIONAL SKILLS

I work very well in a team and I believe that teamwork is useful in order to obtain good results.

### PUBLICATIONS:

*Publications:*

- [ 1 ] L. Polastri, A. Gruppuso and P. Natoli, “*CMB low multipole alignments in the  $\Lambda$ CDM and Dipolar models*”, JCAP **1504**, no. 04, 018 (2015) [arXiv:1503.01611 [astro-ph.CO]].

*Talks and presentations:*

- [ 1 ] L. Polastri, F. Forastieri and A. Parretta (speaker), *Rifrattometro a sfera*, Congresso SIF, Pisa, 2014

### OTHER INFORMATION:

2014:

Cabeo school in Ferrara.

2015:

- Tutor for a orientation course for high schools, 2 hours. Explanation of the basic concepts of cosmology: description of the standard cosmological model, directional anomalies, CMB angular power spectrum. Moreover some basic information about IDL language and some simple exercise.
- Member of the core team of a project of science divulgation namely: “Fisici Senza Frontiere” (FSF). It is a project, carried out by young researchers and students of physics at the University of Ferrara. The purpose of the project is to involve students of primary and secondary levels in teaching laboratories of physics, to promote science education through ludo-educational activities.

- Tutor for the "Orientation Forum" at the bio-chemical pole at Ferrara. I provide general information, concerning courses and on the curricula about Bachelor and Master degree in Physics at the University of Ferrara. (2 hours)
- Cabeo school in Ferrara (2015 edition).
- Tutor at the event "HOW I MET SCIENCE!" at the Polo degli Adelardi (via degli Adelardi, 33), Ferrara. It is an event that provides the opportunity to participate in educational workshops, math games, physics laboratories, challenges of intelligence, etc.

DATE

03/06/2015

