



Universiteit  
Leiden  
The Netherlands

## Spectroscopy of two-field Inflation

Welling, Y.M.

### Citation

Welling, Y. M. (2018, November 27). *Spectroscopy of two-field Inflation*. *Casimir PhD Series*. Retrieved from <https://hdl.handle.net/1887/67091>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/67091>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/67091> holds various files of this Leiden University dissertation.

**Author:** Welling, Y.M.

**Title:** Spectroscopy of two-field Inflation

**Issue Date:** 2018-11-27

## *Curriculum Vitae*

---

I was born on March 3th, 1989 in Almelo, the Netherlands. In 2007 I graduated from high school at the "OSG Erasmus". In the same year I won the Dutch Physics Olympiad, which allowed me to represent the Netherlands at the International Physics Olympiad in Isfahan, Iran.

In 2010 I completed the TWIN physics and mathematics bachelor studies at Utrecht University. Besides that I also participated in a honors program on experimental physics and I wrote my thesis on the mechanical properties of vimentin under the supervision of Prof. Gijsje Koenderink at Amolf in Amsterdam. From 2011 to 2014 I studied theoretical physics at Utrecht University, and for my final research project I specialized in cosmology by writing a master thesis on multi-field inflation under the supervision of Prof. Ana Achúcarro and Dr. Tomislav Prokopec.

In 2014 I was awarded the doctoral de Sitter fellowship at Leiden University. During my PhD I was supervised by Prof. Ana Achúcarro and Dr. Enrico Pajer. The work I did with Prof. Ana Achúcarro and her group resulted in three scientific publications and three in preparation, forming the first part of this thesis. The collaboration with Dr. Enrico Pajer has led to two scientific publications, that constitute the second part of this thesis.

From Oktober 2018 I will be a postdoctoral researcher at DESY in Hamburg in the group of Dr. Alexander Westphal.



## *Acknowledgements*

---

Ana, I am extremely lucky with you as my advisor, in particular because of the endless time you dedicated to our discussions. Without doubt these discussions led to the ideas that seeded the main part of this thesis. It was very exciting to work with you and to learn from your great physical insights and strong values. Also, you are the best coach I could have wished for to guide me through all the highs and lows of scientific puberty. I am grateful that you ‘put your finger on the wound’ (and poke it inside) when I was lost and frustrated. Thank you for your open-mindedness and letting me develop into the scientist I want to be.

Enrico, thanks for embedding me in your group during your time in Utrecht. The discussions and journal clubs we had were a steep learning curve for me and made me feel very excited. You always expressed your thoughts, opinions and vision very clearly. Moreover, you showed me time after time your very structured way of approaching any problem. I am grateful to both you and Ana for getting in touch with many great physicists around the world and for all the opportunities to speak at workshops and conferences.

I am indebted to Eric Eliel, Koenraad Schalm, Daniel Baumann, Gonzalo Palma and Alexander Westphal for carefully reading the manuscript of my thesis. Moreover, I would like to thank Martijn, Marian, Marleen and Valentijn for their valuable feedback on the Dutch summary.

I am grateful to my collaborators Andrei, Daniel, Drian, Ed, Evangelos, Gang, Gonzalo, Irene, Miguel, Oksana, Renata, Thomas, Valentin, Valeri, Vicente and Yusuke for the valuable insights you gave me and for sharing your enthusiasm with me. Further, I am happy to thank all my cosmoleagues in Leiden and Utrecht for creating a very pleasant working atmosphere. Thanks to Anita, Barry, Els, Evelijn, Erik, Fran, Marianne, Marjan, Monica and Wanda for taking care of everything so smoothly that I didn’t even notice.

Ik wil mijn vrienden en sportmaatjes bedanken voor het bieden van zoveel plezier en de nodige afleiding van mijn werk. Aafke, Tessa, Valentijn en Wilke bedankt voor de lol en avonturen die we samen beleefd hebben, en jullie luisterend oor en de diepe gesprekken die we gevoerd hebben. Jullie staan altijd voor me klaar.

Mama, bedankt voor je onbegrensde liefde en de steun voor het najagen van mijn dromen. Jouw wijsheid en gekkigheid hebben me gevormd tot wie ik ben. Jasper, mijn lieve broer, bedankt voor het delen van de mooiste momenten van het leven en je geruststellende onbezorgdheid. Reinier, grote dank voor het aanwakkeren en motiveren van mijn interesse in natuurkunde. Piet, Lieke, Marco, Margreet, Angelo, Marleen, Wietske, Henk, Leon, Marcel, Roos, Sanne, Tijmen, Simon, Richelle en Wendy, jullie zijn de meest fantastische familie die ik me kan wensen. Papa, mijn mooiste jeugdherinnering is dat we samen raadsels en wiskunde problemen oplossen. Jij bent altijd bij me. Dit proefschrift is voor jou.

Martijn, je hebt me laten opbloeien met jouw liefde en steun, en met de lol die we elke dag samen beleven. Dankje voor je incasseringsvermogen en begrip op de onmogelijke tijden dat ik met mijn werk bezig was. Wat heb ik een geluk met jou, en dat je alles achterlaat om samen ons volgende avontuur in Hamburg aan te gaan.