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## **It's just a phase: high-contrast imaging with patterned liquid-crystal phase plates to facilitate characterization of exoplanets**

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# It's just a phase

High-contrast imaging with patterned liquid-crystal phase plates to facilitate characterization of exoplanets

David Sebastiaan Doelman



# It's just a phase

High-contrast imaging with patterned liquid-crystal phase plates to facilitate characterization of exoplanets

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*Dedicated to my grandfather,  
Corstiaan Arie Drogendijk*

**Front cover:**

Artist impression of the detection of a gas giant using the vector-Apodizing Phase Plate coronagraph at installed in the Subaru/SCEXAO instrument. The phase pattern is encoded in the orientation of white lines.

Image of the gas giant by Danielle Futselaar and Franck Marchis.

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