

Einstein Telescope

/ NL / BE / DE /

Albert van Dorssen

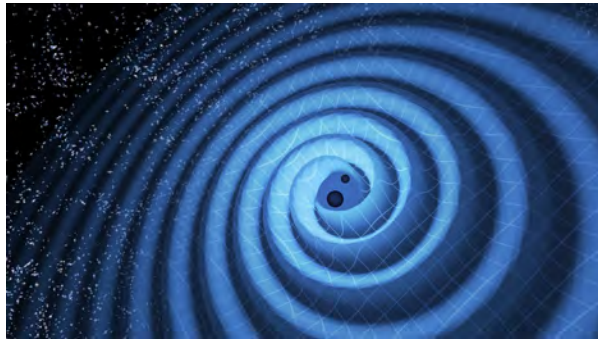
Vibration-isolation
Doorkijk-session
24-01-2024
Welcome!

Goals of today

1. Learn & discuss about Vibration Isolation challenges in the Einstein Telescope
2. Getting to know each other as national partners in the Netherlands.
3. Explore consortium options
4. Learn about 'R&D-regeling'



Agenda



*Break-out rooms
Ridderoord en
Amelisweerd are on 1
etage near room
Vollenhoven

14:30 Walk-in

14:45 Welcome & presentation

15:15 **Discussion-round 1*** (2 groups)

15:55 **Break** (*Moderators change room!*)

16:00 **Discussion-round 2***

16:40 Plenary: **R&D regeling** (Subsidy support), follow-up & Q&A

17:10 Start drinks & aftertalk (fin 18:00 hour)

Note! Fill in **form** with your subjects of interest !



Intention of Call?

Elaborate?

Develop new technology?

Valorize?

Establish an ecosystem?



Selection criteria in relation to applications

- a) Fit with the technology domain?
- b) Economic perspective?
- c) Quality of the applicant or consortium?
- d) Quality of the activity plan and budget?



Call Budget for Vibration Isolation



*Total Budget
2.75M*



Partitioning ?

Our goals:

- 1. Give room to all ideas*
- 2. Qualitative projects (high score on 4 criteria)*

Insights of this session & follow up in February

Provide clarity beginning of March



Follow up _ February/March

Consortium forming

Support Valorisation team:

- Q&A, please conduct via valorisation team
- Meetings tbd

Confirmation Call construct_beginning of March



Vibration Isolation ET

dr. Conor Mow-Lowry

Associate Professor, VU Faculty of Science,
(Astro)-Particles Physics



Table discussions (2 tables, 2 groups)

<u>Table discussions</u>		
	Subject 1 (20 minutes)	Subject 2 (20 minutes)
Table 1 (Moderators Conor & Robin)	Seismic attenuators with nanometer RMS residual motion: hybrid active/passive vibration isolation concepts (Challenge 5,6)	<u>Sensors and actuators</u> (Challenge 7,8)
Table 2 (Moderators Alessandro, Kenny & Mathijs)	<u>Highly compliant thermo-mechanical interfaces for ET-LF cryogenic mirrors</u> (Challenge 3)	Active and passive vibration isolation in UHV cryogenic environment (Challenge 3)



Nationaal Groeifonds (NGF)

Decision in June 2022

- € 42M preparation
 - € 870M reservation
- € 19M – Valorisation
 € 18M – Geology
 € 5M – Project office

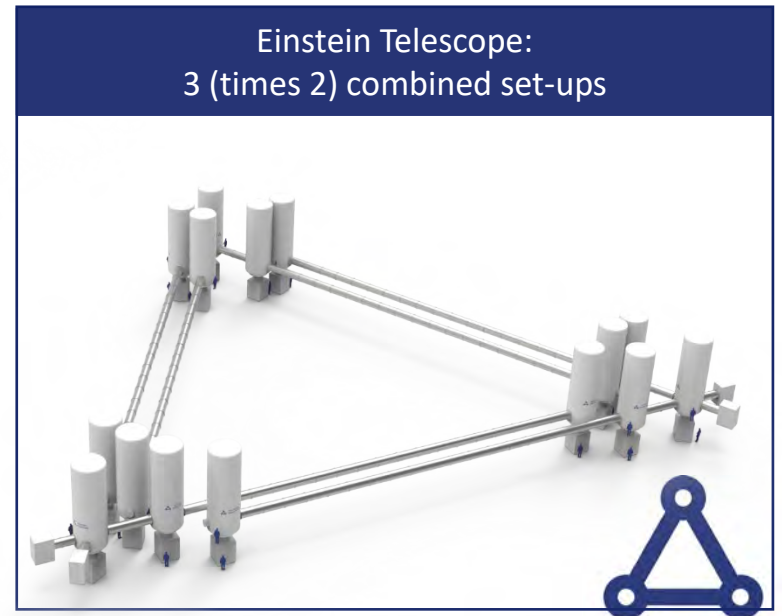
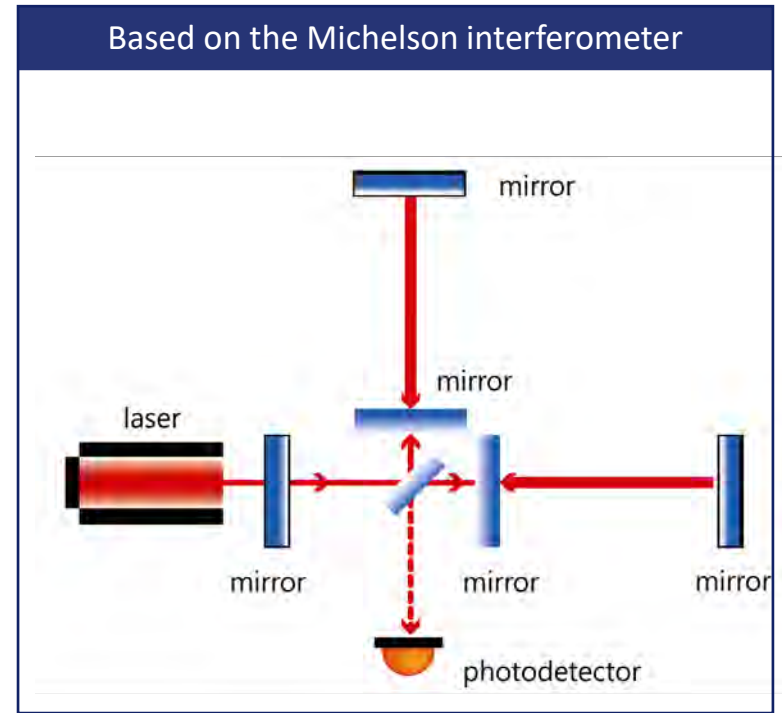
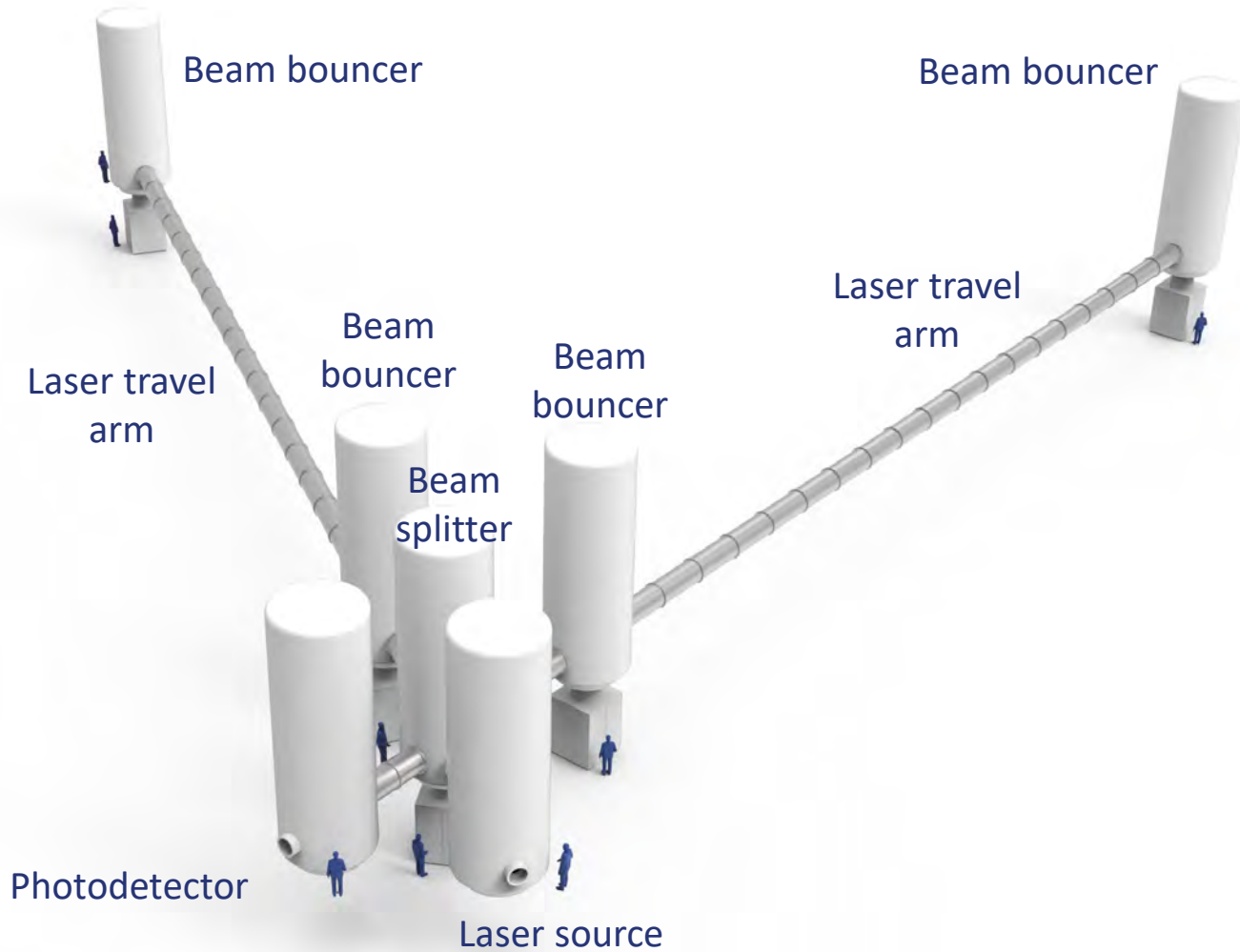
Partners NGF-project



Regionale ontwikkelingsmaatschappijen NL

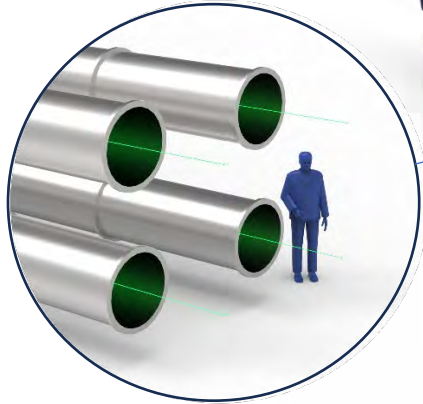


Instrumentation



Technology domains, 1^e focus NGF

2
Vacuüm



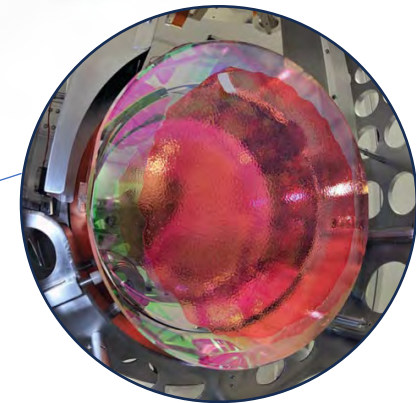
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Vibration damping



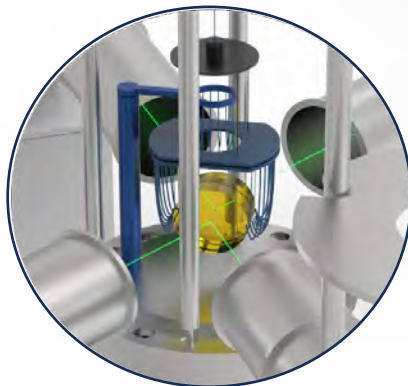
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Optica



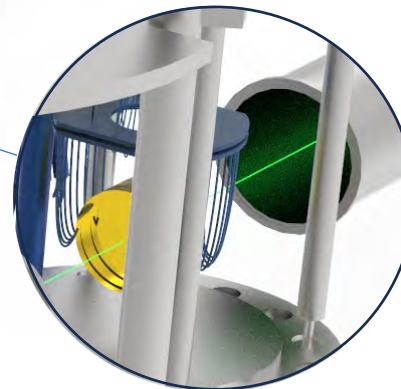
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Vibration-free
cooling

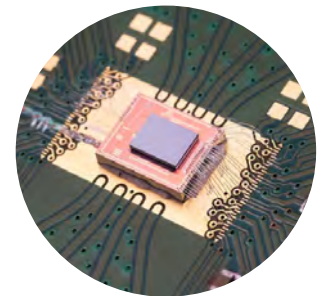
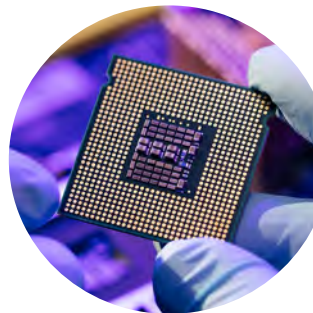
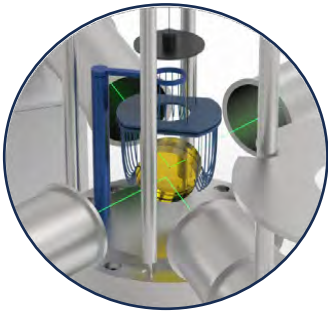
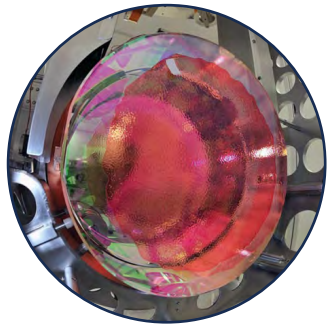
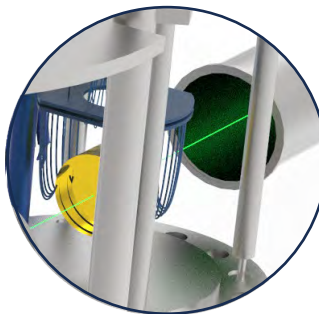
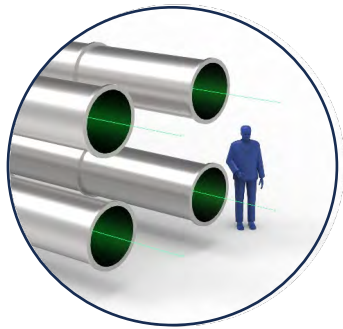


5

Thermal
deformations



Valorisation: technology to market



'R&D-regeling technologiedomeinen ET'

Part of the valorisation program ET (NGF)

- Total budget: €12,085M, divided over 5 tech domains
- Target groups: SMEs & startups, large companies and/or knowledge institutes, whether or not in consortium

Domains and calls 2024

1. Vibration-free cooling: closed 24 nov '23
 2. Vibration damping: April 8, 2024
 3. Optica: June 24, 2024
 4. Thermal deformations: August 19, 2024
- Vacuüm: TBD



Website 'R&D-regeling': www.einsteintelelescopeforbusiness.nl



Vibration damping

Characteristics

- Call opens April 8 – closes May 31
- Budget: € 2.750.000
- Maximum duration: 3 years (no extension possible)
- Grant rates (GBER/AGVV)
 - Fundamental research 100%
 - Industrial development 50%
 - Experimental development 25%
 - Extra % possible



Vibration damping

Application

- Mandatory formats: activity plan (Word), budget (Excel)
- In case of consortium: cooperation agreement

- Apply via link



Vibration damping

Criteria

- Fit with the technology domain
- Economic perspective
- Quality of the applicant or consortium
- Quality of the activity plan and budget



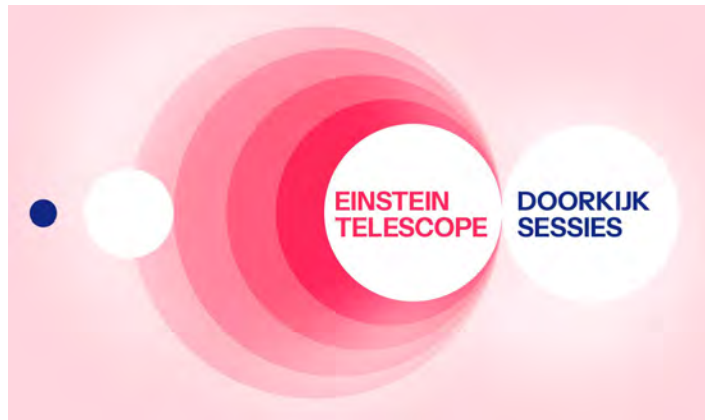
Vibration damping

Timeline

- 15/3: Specific call text mid march
- 8/4: Call opens
- 31/5: Call closes
- 13/6: Meeting 'begeleidingsgroep'
- Week of June 17: final decision



‘Doorkijk sessies’



Domain	Doorkijk sessie	Call
2: Vacuüm	TBD	TBD
3: Trillingsdemping	January 24	April 8 – May 31
4: Optics	February 28	June 24– September 13
5: Thermal deformations	March 27	August 19– October 20



Support needed?



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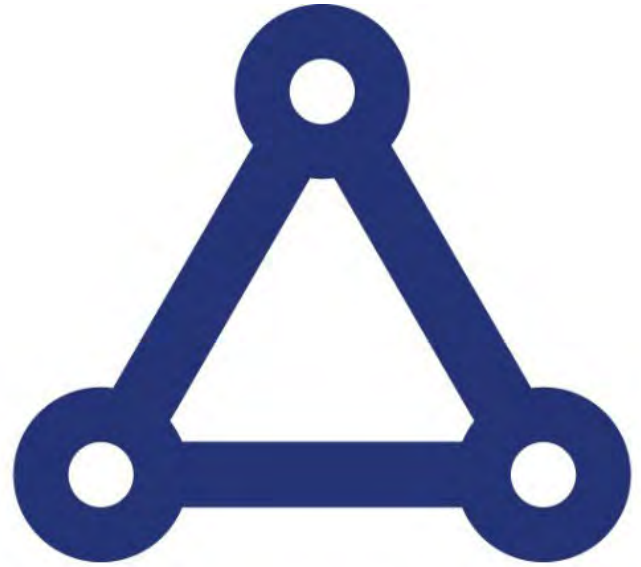
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Einstein
Telescope