

HIRES

Welcome and Introductory Meeting
12.-13.01.2022

Calibration Unit

Jennifer Zimara



Overview

- Team
- WPs
- WPs communication
- why calibration?
- functional overview
- previous work – phase A



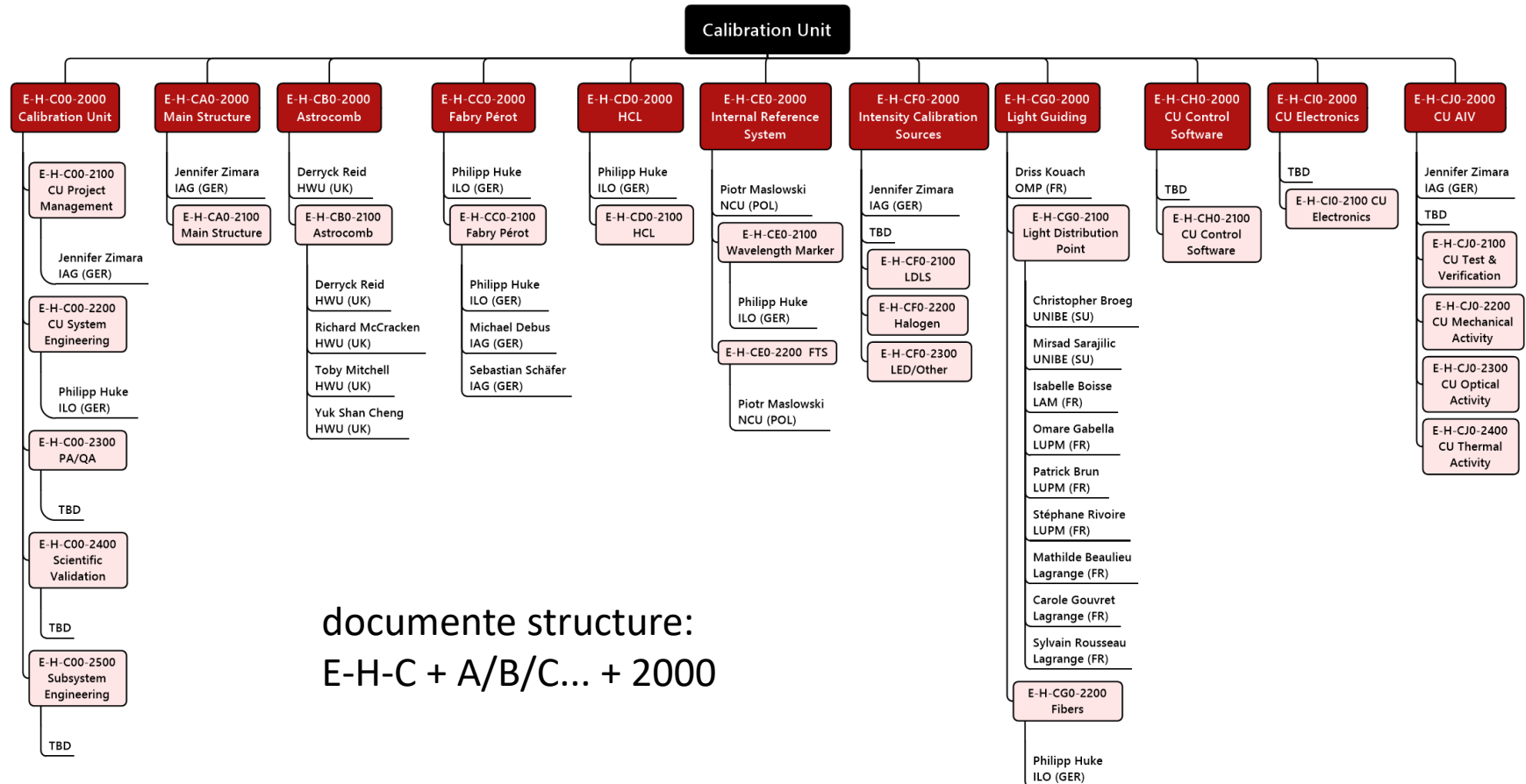
Calibration Unit – team

institution	country	name	role
IAG	Germany	Ansgar Reiners Jennifer Zimara Sebastian Schäfer Michael Debus	project coordinator CU manager, ICS project manager, CU AIV Fabry-Pérot Fabry-Pérot support
ILO	Germany	Philipp Huke Julia Kittel	CU system engineer, HCL, FP, Fibers, WLM project manager support
HWU	UK	Derryck Reid Richard McCracken Toby Mitchell Yuk Shan Cheng	astrocomb project manager astrocomb astrocomb astrocomb
IRAP/OMP	France	Driss Kouach	light guiding project manager
Lagrange	France	Mathilde Beauileu Carole Gouvret Sylvain Rousseau	LDP, system, optical design LDP, optical design SW, control command
LAM	France	Isabelle Boisse	LDP, optical design
LUPM	France	Omar Gabella Patrick Brun Stéphane Rivoire	LDP (low level control) LDP (electronics) LDP (electronics)

Calibration Unit – team

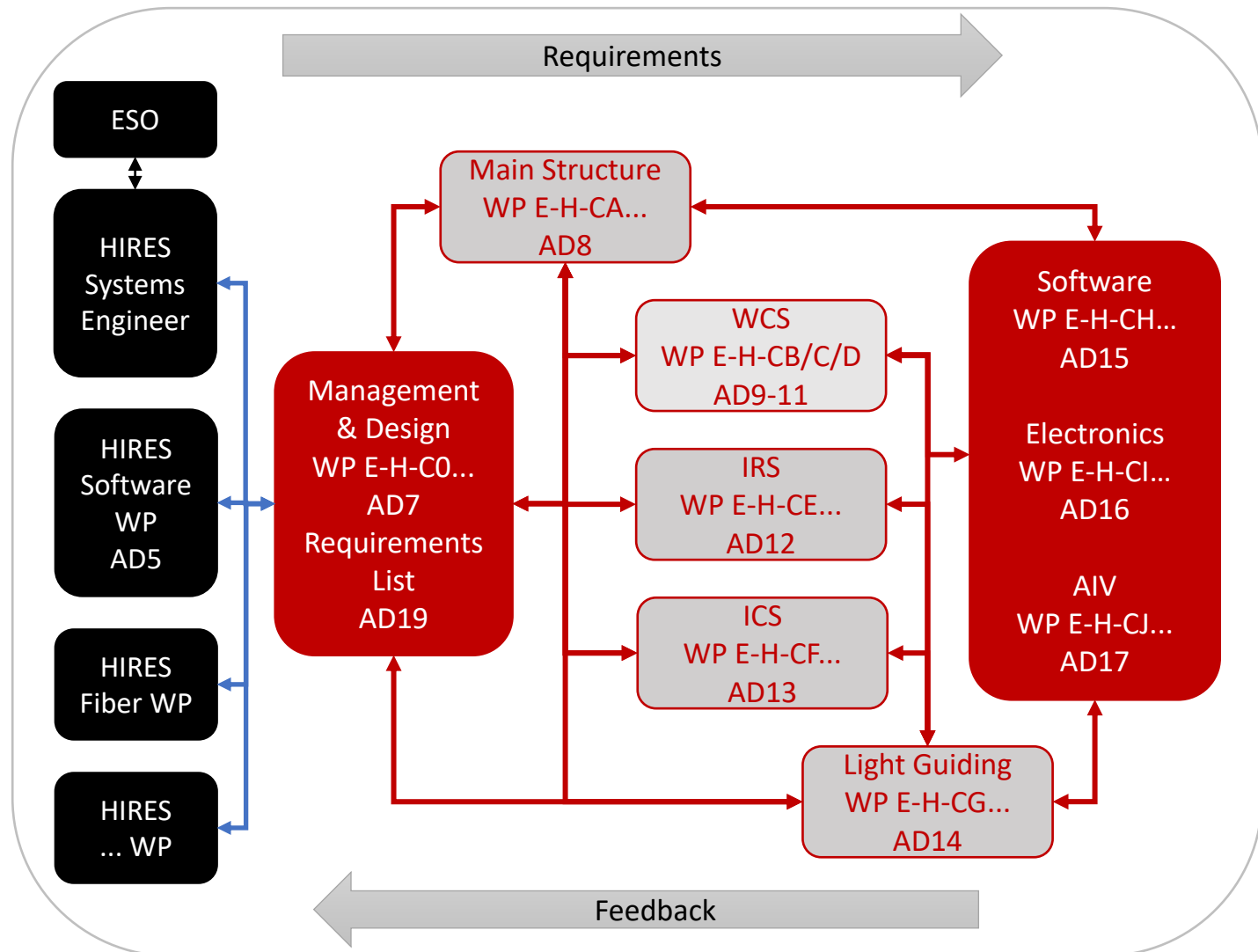
institution	country	name	role
NCU	Poland	Piotr Maslowski	IRS project manager
UNIBE	Switzerland	Christopher Broeg Mirsad Sarajlic Christoph Mordasini Daniele Piazza Timothy Bandy	opto mechanics / interfaces, LDP project manager opto mechanics / interfaces, LDP system engineer project coordinator line manager engineering support support
HS	Germany	Jochen Liske	software (TBD)
MPIA	Germany	Laura Kreidberg	electronics & software electronics (TBD)

Calibration Unit – WPs

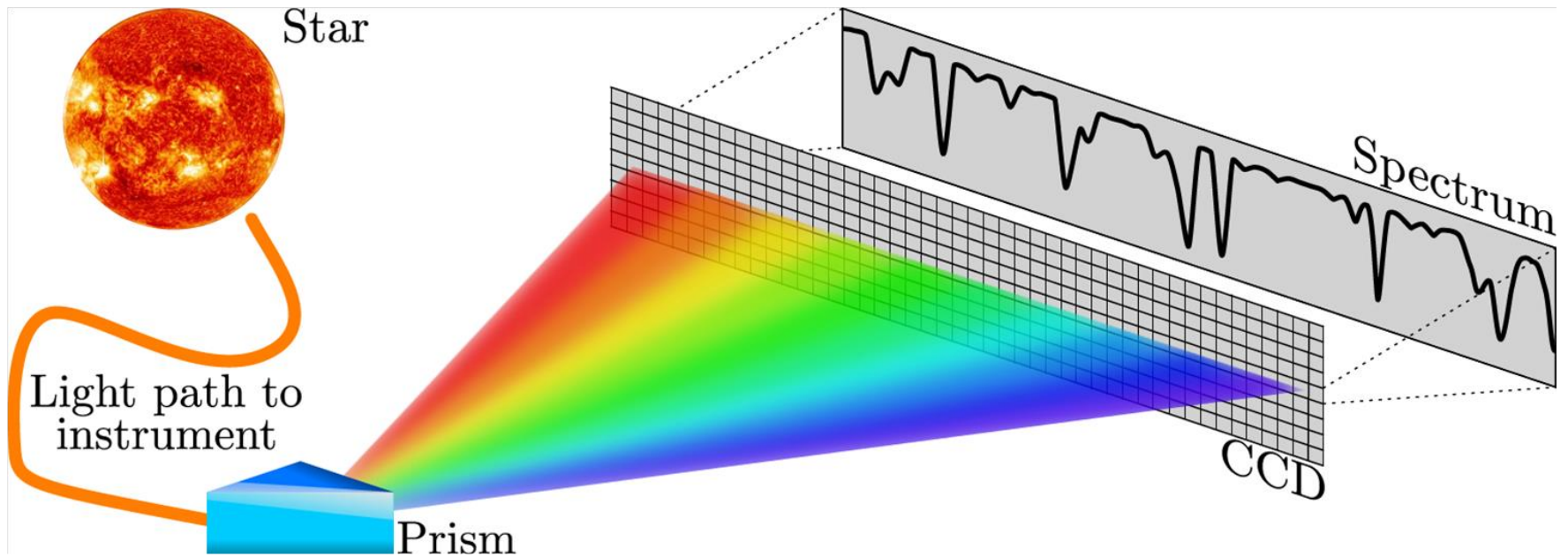


documente structure:
E-H-C + A/B/C... + 2000

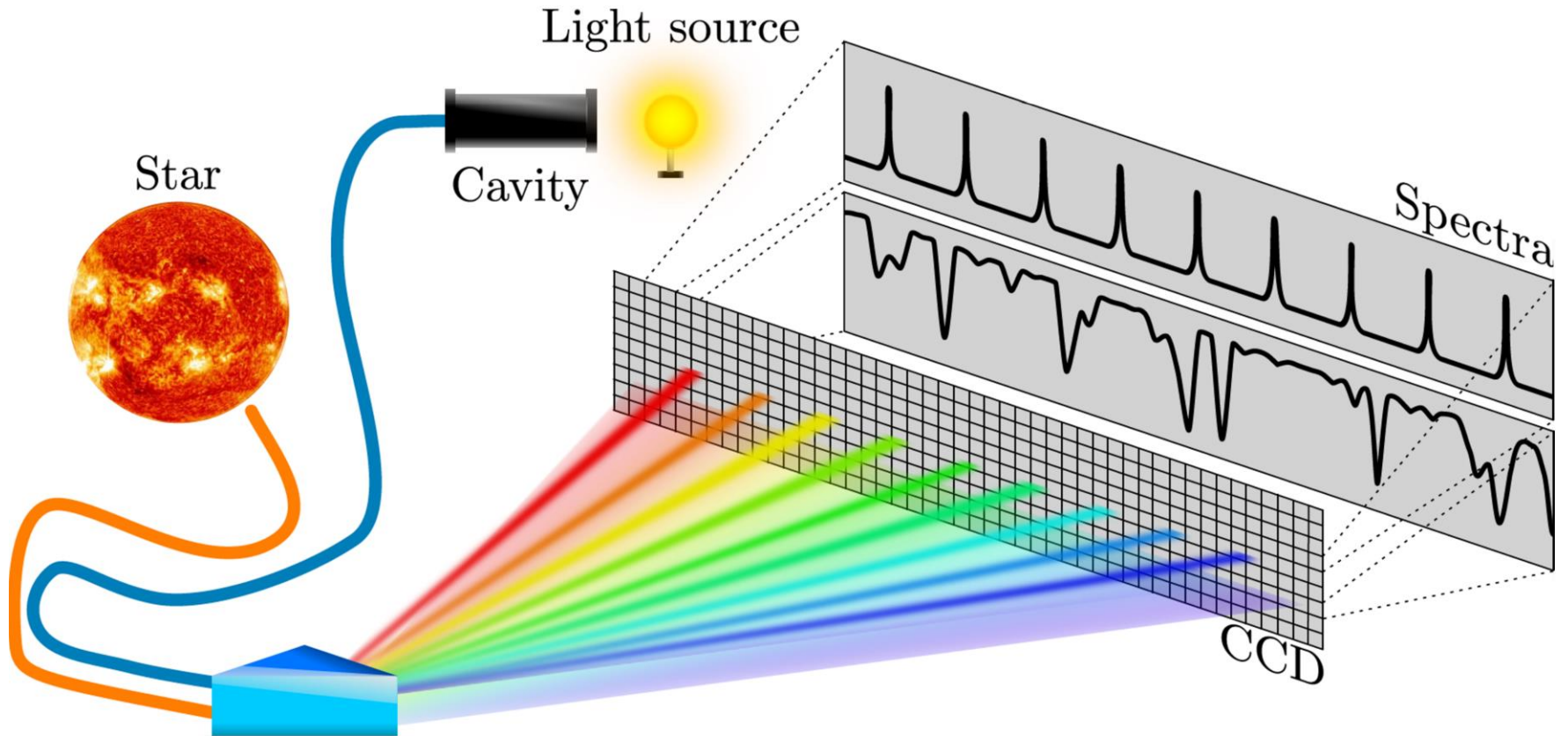
Calibration Unit – WPs communication



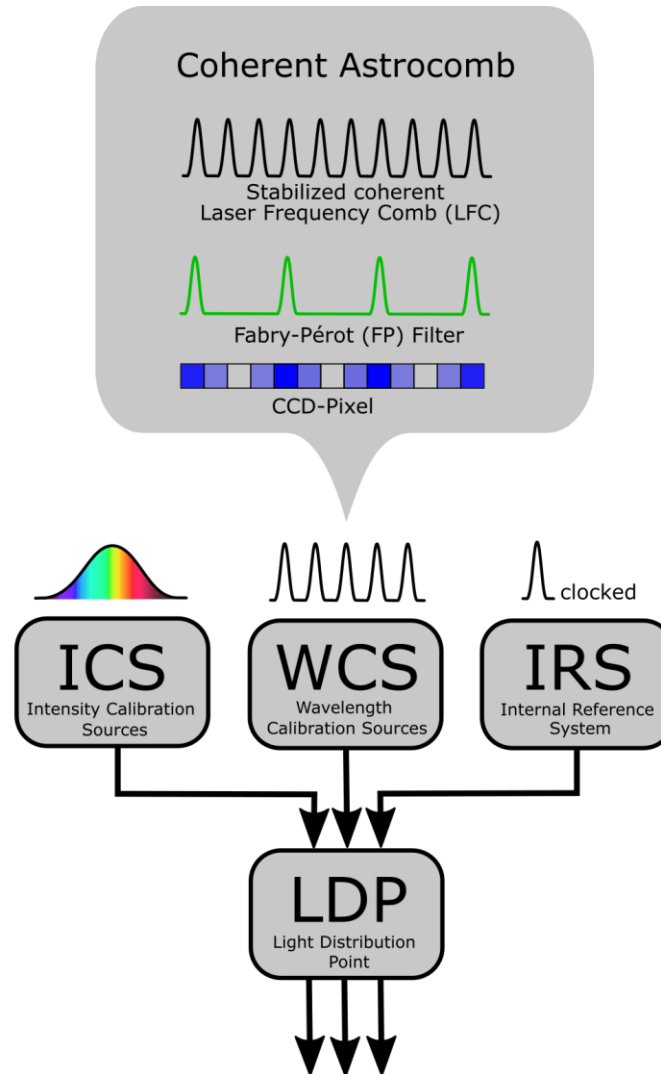
Calibration Unit – Why Calibration?



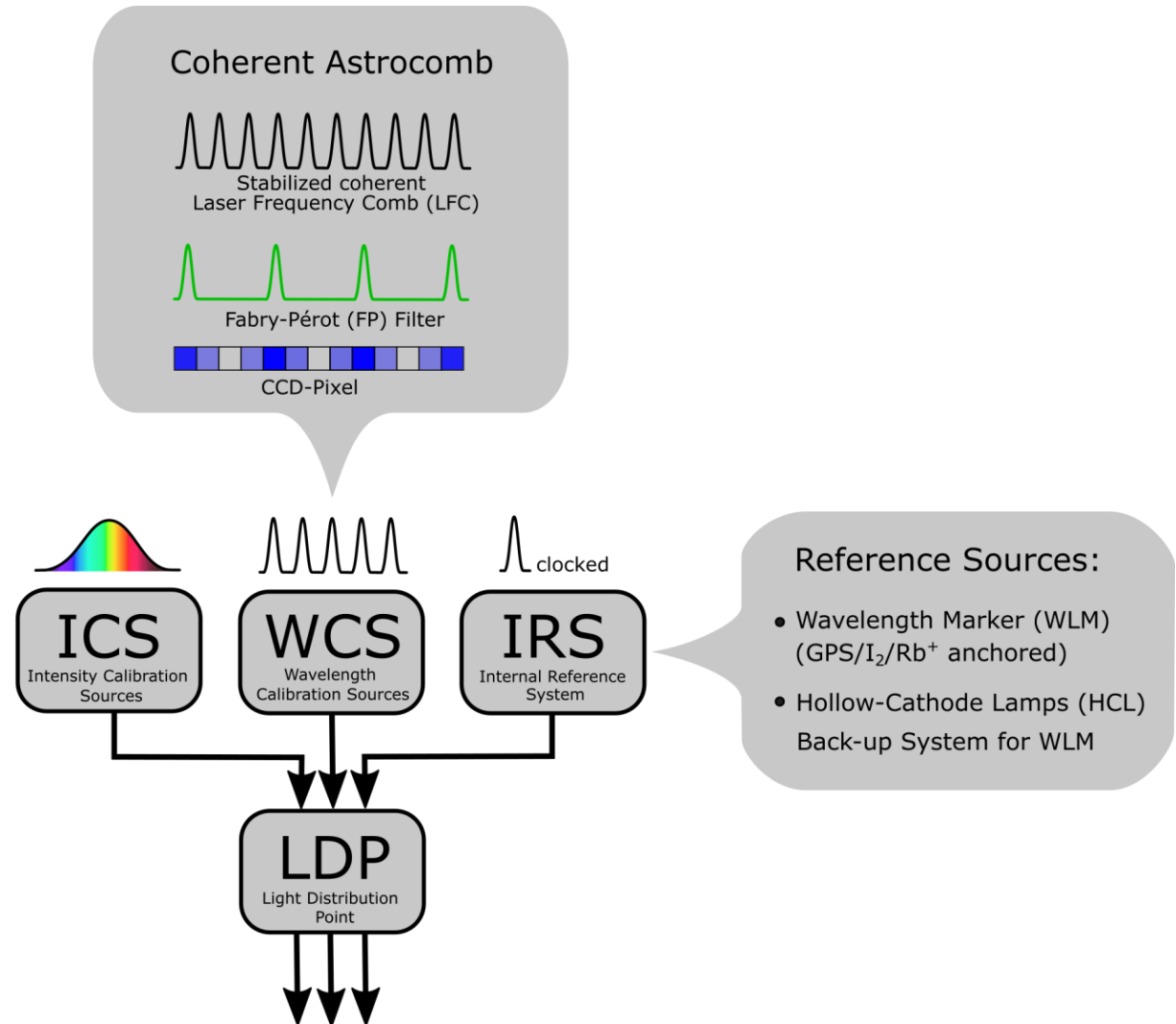
Calibration Unit – Why Calibration?



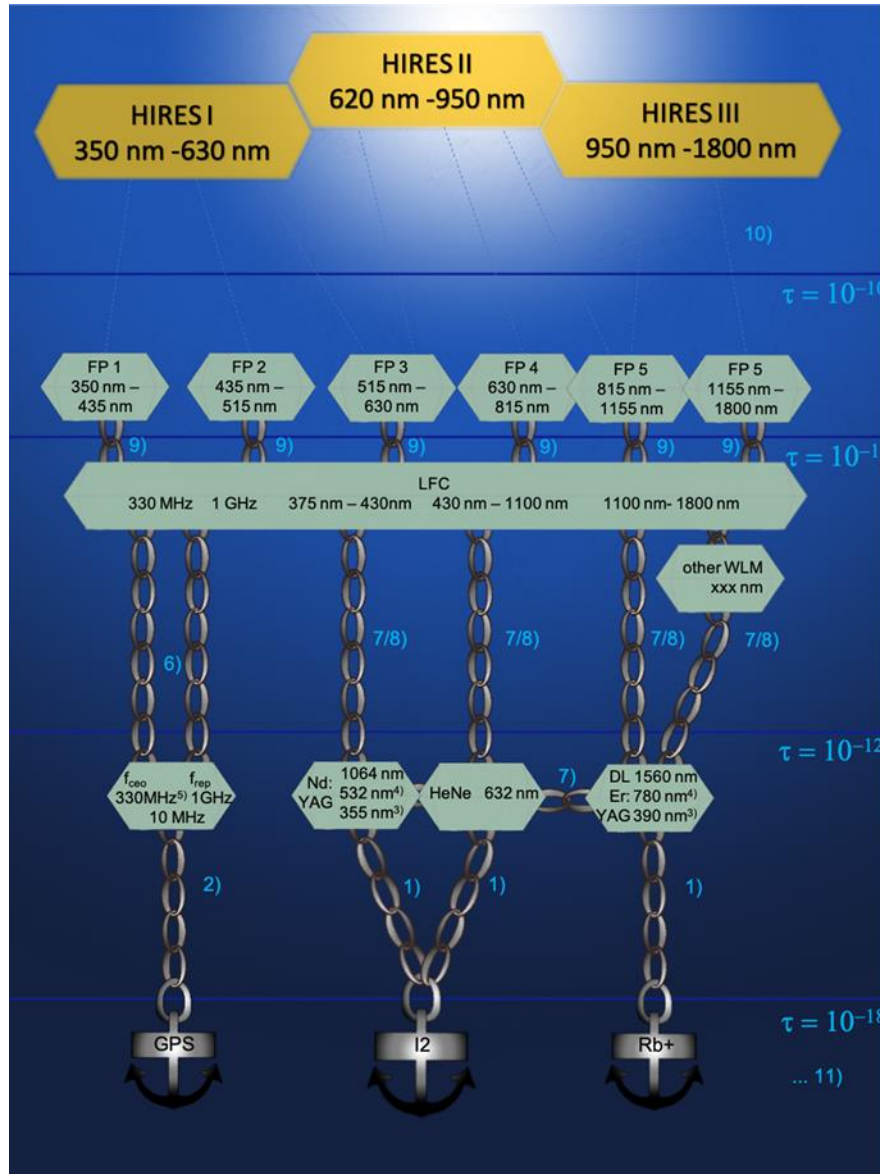
Calibration Unit – Functional Overview



Calibration Unit – Functional Overview



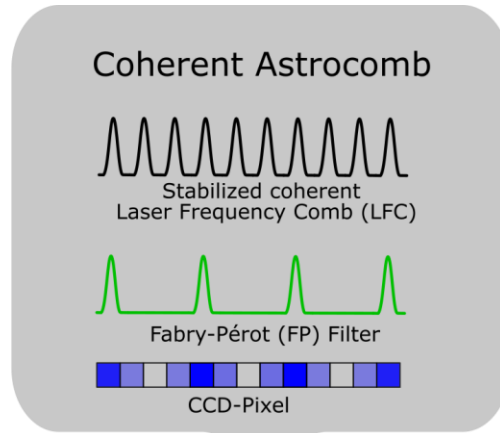
Calibration Unit – Functional Overview



Reference Sources:

- Wavelength Marker (WLM) (GPS/I₂/Rb⁺ anchored)
- Hollow-Cathode Lamps (HCL) Back-up System for WLM

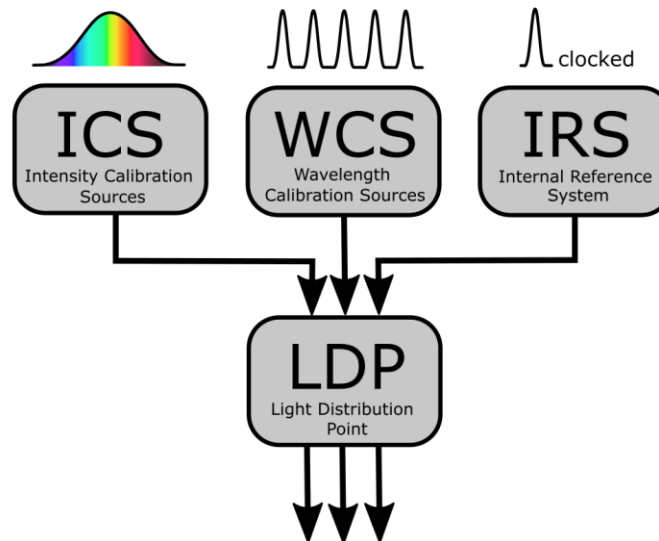
Calibration Unit – Functional Overview



Sources:
LDLS, Halogen, LED/Other

Application:

1. CCD Calibration
Dark Image, BIOS, Flat Field
2. Incoherent Astrocomb
+FP

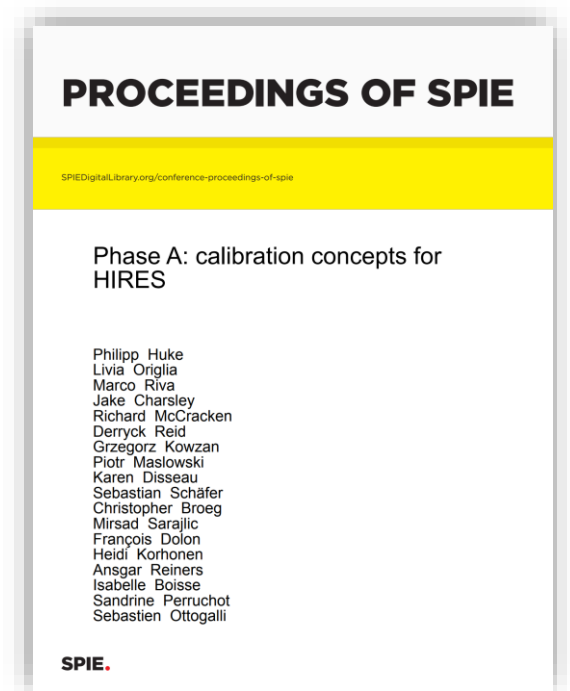


Reference Sources:

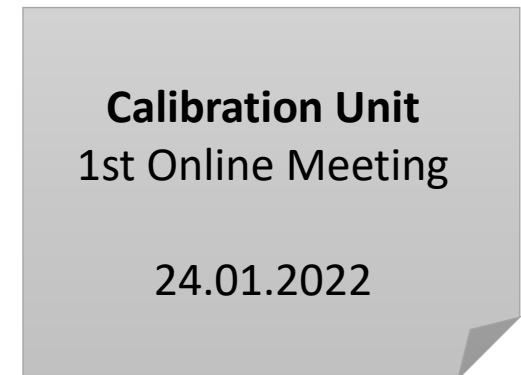
- Wavelength Marker (WLM)
(GPS/ I_2 /Rb⁺ anchored)
- Hollow-Cathode Lamps (HCL)
Back-up System for WLM

Previous Work – Phase A

- Preliminary design to fulfill all TLR
- Selection of sources how they can be combined
 - WCS (LFC, FP, HCL)
 - ICS (LDLS, Halogen lamps, LEDs, ...)
 - IRS (WLM, FTS)
- FTS independent instrument
 - to identify the astrocomb lines in combination with WLM
 - robust and compact, track down longterm drifts
 - determine spectral intensity distribution of each calibration source with high accuracy



<https://doi.org/10.1117/12.2271782>



Thank you for your attention

Questions?

