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## POLARISATION WORK PACKAGE DEFERRED WORK UNIT DESCRIPTION

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## 1. INTRODUCTION

We are making polarization infrastructure and technical components for the instruments. This document contains WBS 27 – 32, which are deferred to 2028 and beyond with schedule to be determined. For WBS 1 – 26 in the current scope, refer to documents [1], [2], and [3].

## 2. TIMELINE SUMMARY

### WBS 27

BIFROST - supermirror analyser, polariser and guide field

1 unit

Labour 191 440 €

Non-labour 817 760 €

Details in section 5.3.3 BIFROST in [1] and [2].

### WBS 28

FREIA - polariser, guide field, interface

1 unit

Labour 122 160 €

Non-labour 47 680 €

Details in section 5.3.5 FREIA in [1] and [2].

### WBS 29

ODIN - supermirror polariser & analyser, optics exchanger

1 unit

Labour 174 600 €

Non-labour 567 680 €

Details in section 5.3.1 ODIN in [1] and [2].

### WBS 30

HEIMDAL - polariser, guide field, interface

1 unit

Labour 205 680 €

Non-labour 51 520 €

Details in section 5.3.6 HEIMDAL in [1] and [2].

## 3. SUMMARY

SSO Polarisation team staff cost not included. Team includes 1 scientist, 1 engineer, 1 design lead, 2 technicians.

WBS element	Labor (Excluding Polarisation team staff)	Labor (Excluding Polarisation team staff)	Non-Labor
	Hours	EUR	
#27	3254	191 440 €	817 760 €
#28	2096	122 160 €	47 680 €
#29	2856	174 600 €	567 680 €
#30	3344	205 680 €	51 520 €
Total	11550	693 880 €	1 484 640 €

#### 4. GLOSSARY

Term	Definition
PDR	Preliminary Design Review
CDR	Critical Design Review
FAT	Factory Acceptance Test
SAT	Site Acceptance Test

#### 5. REFERENCES

- [1] ESS-5972816 Polarisation Work Package Technical Description.
- [2] ESS-5972818 Polarisation Work Package Schedule, Budget, Resource.
- [3] ESS-5996549 Polarisation Work Package Description.

#### DOCUMENT REVISION HISTORY

Revision	Reason for and description of change	Author	Date
1	First issue	Wai Tung Lee	2026-03-01