

HabEx Launch (Baseline Opt 4.0H)

4/24/19

FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	
2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	

Telescope Phases

Phase A (24 m)

Phase B (30 m)

Phase C (54 m)

Phase D (30 m)

Phase E

Milestones

KDP-A ▲ 10/24
MCR ▽

KDP-B ▲ 09/26
SRR/MDR ▽

KDP-C ▲ 04/29
PDR ▽ 02/29

CDR ▽ 03/31

KDP-D ▲ 10/33
SIR ▽

KDP-E ▲
ORR ▽

PLAR
★ Launch ▽ 03/36

Technology Development (Pre-A/Phase A Effort)

Post SS Scaled up Petal Shape stability & Deployment Accuracy Test

Coronagraph

4m Mirror Prototype

Telescope Payload

System Engineering

Telescope

4.0 Mirror

Coronagraph

UV Spectrograph

Starshade Instrument

Workhorse Camera

Payload I&T

System Engineering

Design

Procure/Fab & Assemble

I&T

Design

Procure/Fab/Assemble

I&T

Design

Procure/Fab

I&T

Design

Procure/Fab

I&T

Design

Procure/Fab

I&T

Design

Procure/Fab

I&T

PL I&T

Telescope	Schedule Margin Required	HabEx scheduled
S/S	57d	66d
PL I&T	57d	71d
ATLO	55d	64d
Launch Ops	19d	22d
Total	188d	223d

Telescope S/C

Flt. System Engineering

Subsystems

Software

Spacecraft I&T

Telescope Flt. Segment I&T

Telescope Launch Ops

System Engineering

Design

Assemble

Test

Design

Assemble

Test

S/C I&T

Starshade Phases

Phase A (18 m)

Phase B (18m)

Phase C (51 m)

Phase D (30m)

Milestones

KDP-A ▲ 10/26
MCR ▽

KDP-B ▲ 03/28
SRR/MDR ▽

KDP-C ▲ 08/29
PDR ▽ 07/29

CDR ▽ 02/31

KDP-D ▲ 10/33
SIR ▽

KDP-E ▲
ORR ▽

PLAR
★ Launch ▽ 03/36

Starshade Payload

System Engineering

Starshade Petals & Disk

Occluder I&T

System Engineering

Design

Procure/Fab/Assemble

I&T

I&T

Starshade S/C

Flt. System Engineering

Subsystems

Software

Spacecraft I&T

Starshade Flight Segment I&T

Launch Operations

System Engineering

Design

Procure/Fab/Assemble

Test

Design

Procure

Test

S/C I&T

Starshade	Schedule Margin Required	HabEx scheduled
S/S	82d	93d
PL I&T	30d	45d
ATLO	49d	63d
Launch Ops	10d	36d
Total	171d	237d

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Mission Ops/ Ground Segment

▲ NASA Milestone

▽ Key Project Milestones

█ Schedule Margin

█ Critical Path

★ Launch Milestone

█ Starshade Effort

█ Telescope Effort