

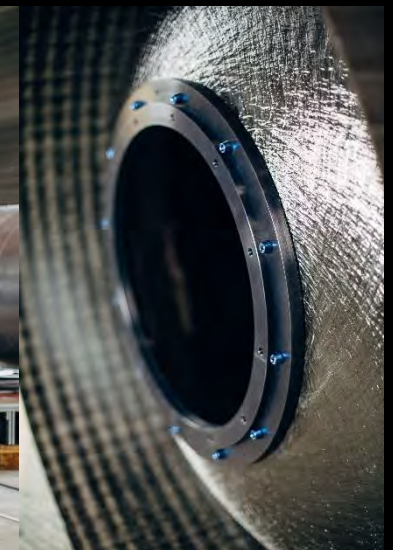
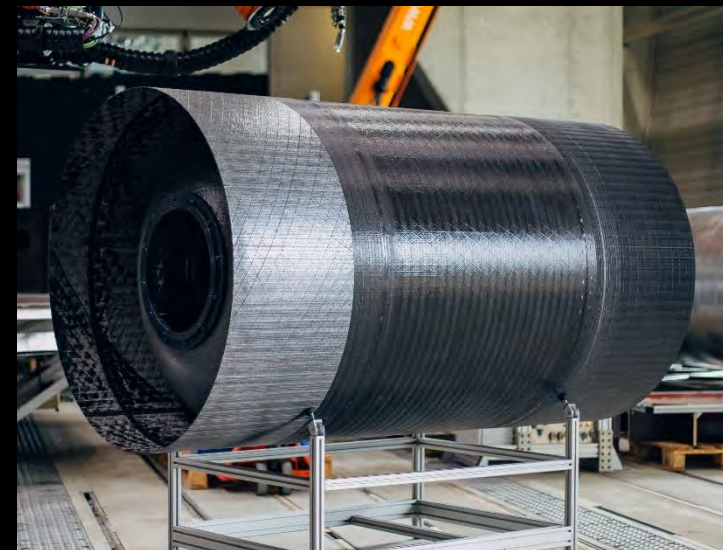
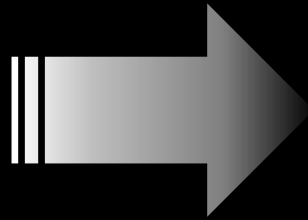
3. World-First Composite LOX Tank

SPACE WALKER



arianeGROUP

DLR



German Aerospace Center DLR
Project PROCOMP
(<https://www.youtube.com/watch?v=xIMHHebGuGI&t=10s>)



Polycarbonate Impregnated
Pitch Carbon Fiber Tape*
- LOX compatible -

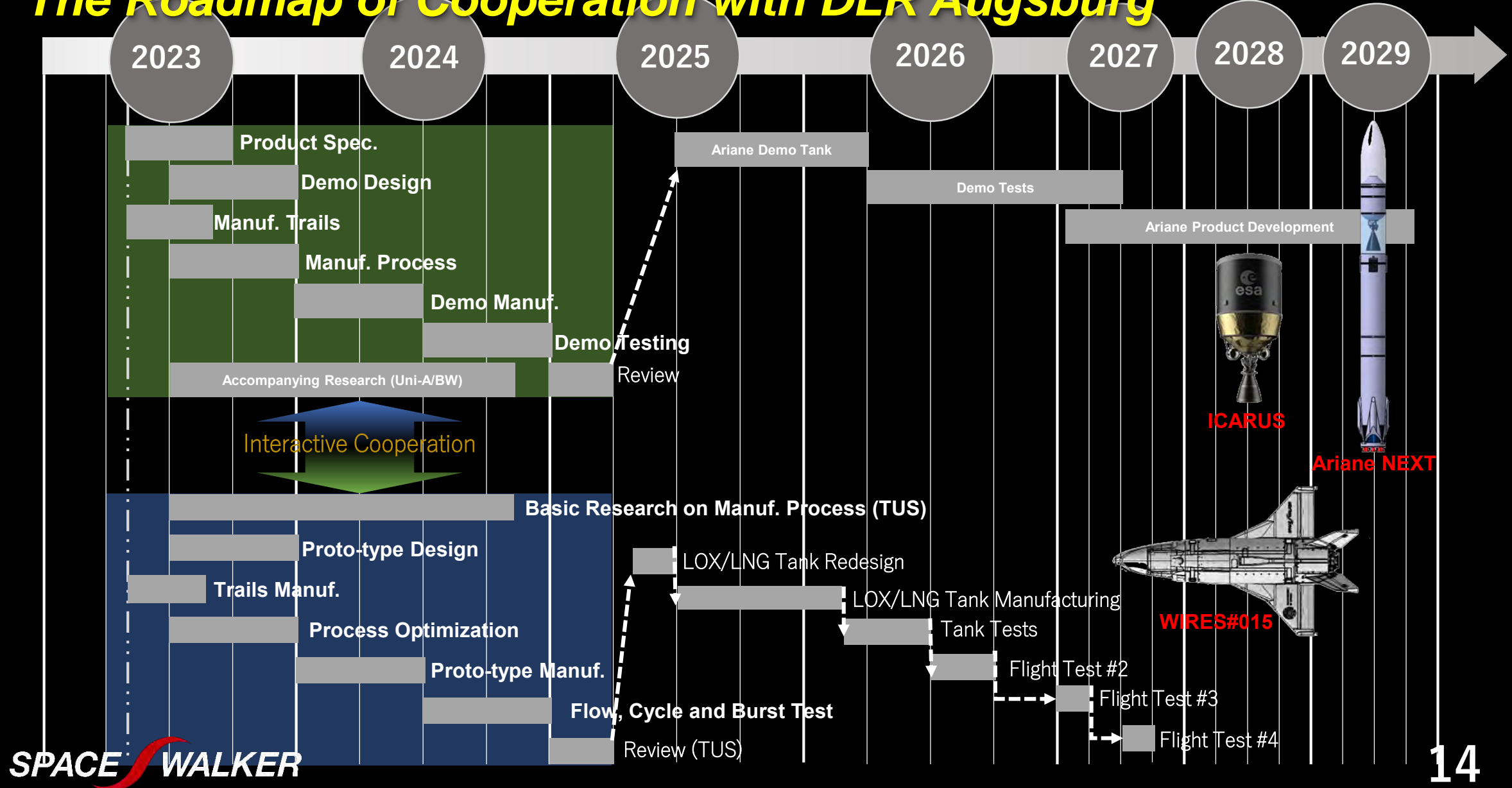
* Japanese Patent No. 7111311

U.S. Patent Approval - Oct. 13, 2023 (Application No. 16/755,355)

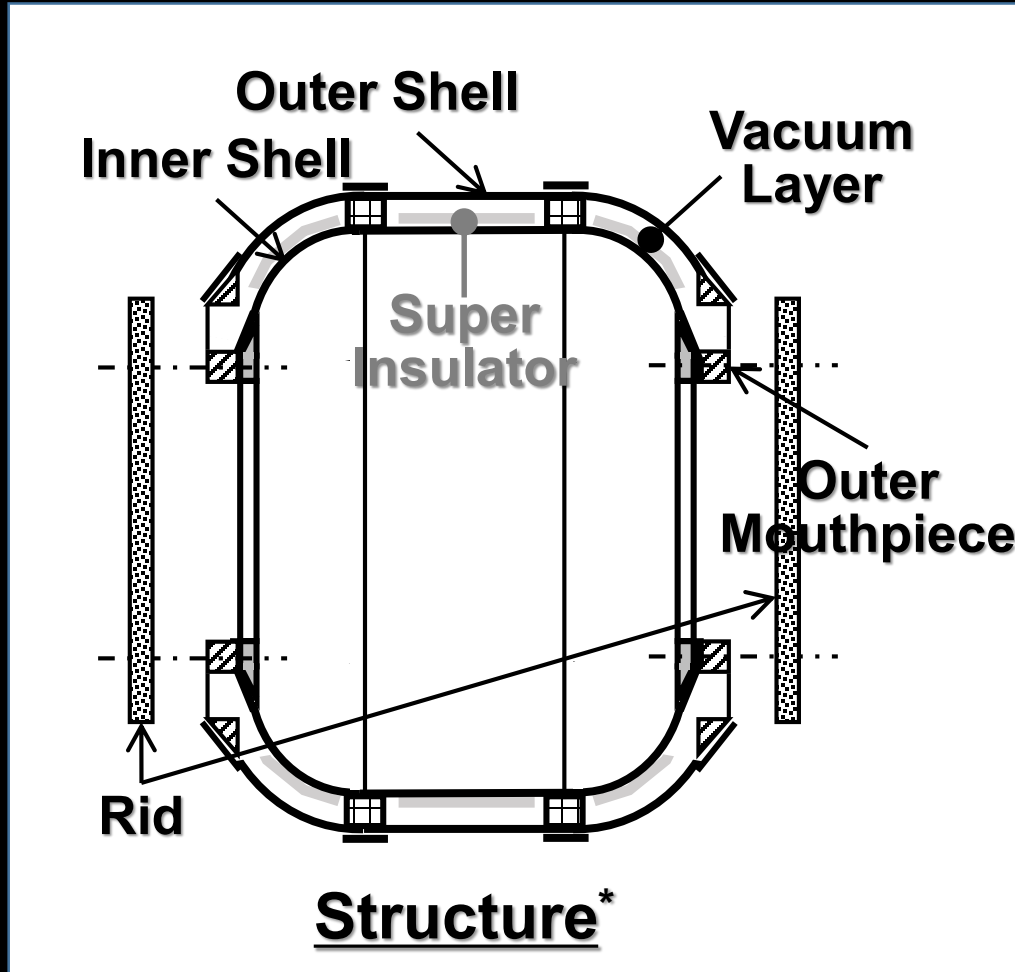
Under Patent Application to China, France, Germany

SPACE WALKER

The Roadmap of Cooperation with DLR Augsburg



● Vacuum Insulation Composite Tanks Using ATP



➤ Tanker Truck (LOX, LNG, LH₂)



© Iwatani

➤ Hydrogen Airplane



© Airbus

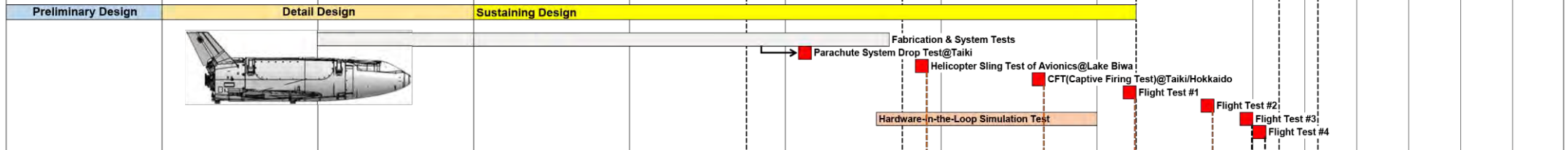
➤ Hydrogen Tanker



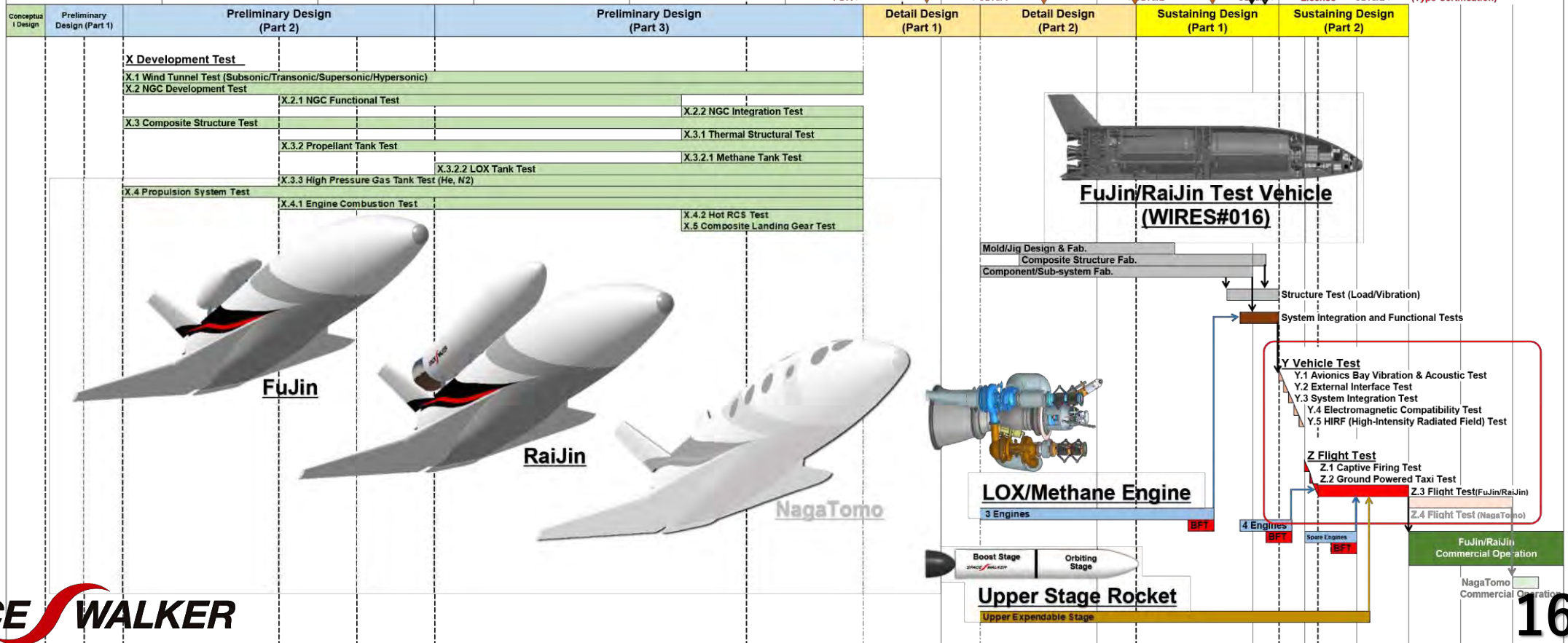
© Kawasaki

4. Development Plan

Experimental Winged Rocket WIRES#015 (Winged REusable Sounding vehicle)



Suborbital Spaceplane "FuJin/RaiJin" (Science Mission/Small Satellite Launch)



5. 米国商業宇宙輸送法

CFR (Code of Federal Regulation) 14 Aeronautics and Space
Vol. 4, Chapter III COMMERCIAL SPACE TRANSPORTATION, Part 400-1199

Index	Title	和訳	Words	Pages	Expendable [%]	Reusable [%]	Suborbital [%]	Orbital [%]
SubchapterA	General	一般						
400	<u>Basis and Scope</u>	基準及び範囲	7,020	3	100	0	0	0
401	<u>Organization and Definitions</u>	組織及び定義	35,261	24	25	25	25	25
SubchapterB	Procedure	手続き						
404	<u>Petition and Rulemaking Procedures</u>	申請及び法整備に関する手続き	12,994	7	0	27	0	0
405	<u>Compliance and Enforcement</u>	コンプライアンス及び施行	7,821	3	0	33	0	0
406	<u>Investigations, Enforcement, and</u>	調査, 施行, 及び機関による評価	77,625	72	0	0	0	0
SubchapterC	Licensing	ライセンス						
411	<u>[Reserved]</u>	[留保]						
413	<u>License Application Procedures</u>	ライセンス申請手続き	20,002	12	0	8	0	0
414	<u>SAFETY Element Approvals</u>	安全要素証明	24,652	15	0	0	0	0
415	<u>Launch License</u>	打上げライセンス	57,416	42	100	0	40	42
417	<u>Launch SAFETY</u>	打上げ安全	629,320	629	100	0	27	10
418-419	<u>[Reserved]</u>	[留保]						
420	<u>License to Operate a Launch Site</u>	発射場運営ライセンス	112,684	114	100	100	100	100
421-430	<u>[Reserved]</u>	[留保]						
431	<u>Launch and Reentry of a Reusable</u>	再使用型ロケットにおける打上げと再突入	45,755	32	0	41	5	5
432	<u>[Reserved]</u>	[留保]						
433	<u>License to Operate a Reentry Site</u>	再突入サイト運営ライセンス	7,593	2	0	0	0	0
434	<u>[Reserved]</u>	[留保]						
435	<u>Reentry of a Reentry Vehicle Other</u>	再使用型ロケット(RLV)以外の再突入機の再突	14,574	7	53	42	0	0
436	<u>[Reserved]</u>	[留保]						
437	<u>Experimental Permits</u>	試験許可	28,968	19	0	100	100	0
438-439	<u>[Reserved]</u>	[留保]						
440	<u>Financial Responsibility</u>	財務責任	133,759	105	0	82	82	2
441-449	<u>[Reserved]</u>	[留保]						
450	<u>Launch and Reentry License</u>	打上げ及び再突入ライセンス要件	123,982	110	62	64	26	26
451-459	<u>[Reserved]</u>	[留保]						
460	<u>Human Space Flight Requirements</u>	有人宇宙飛行要件	16,333	8	13	31	19	6
461-1119	<u>[Reserved]</u>	[留保]						
Total			1,355,759	1204				

Thanks
for your attention!



Space Systems Lab. <https://space-systems.me.noda.tus.ac.jp/en/>
SPACE WALKER Inc. (<https://www.space-walker.co.jp>)