

QZSS Updates

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1. System Overview

Functional Capability:

GPS Complementary

GNSS Augmentation

Messaging Service

Coverage: Asia and Pacific region

Signals (QZS-1):

L1C/A, L1C, L2C and L5

L1S (L1-SAIF) on 1575.42 MHz

L6 (LEX) on 1278.75MHz

L1Sb will be added as SBAS from 2020's



1. QZSS Overview

Japan Region

- Over 20 degrees elevation
More than 2-QZS are available
- Over 60 degrees elevation
1 QZS is available

Functional Capability:

GPS Complementary
GNSS Augmentation
Messaging Service

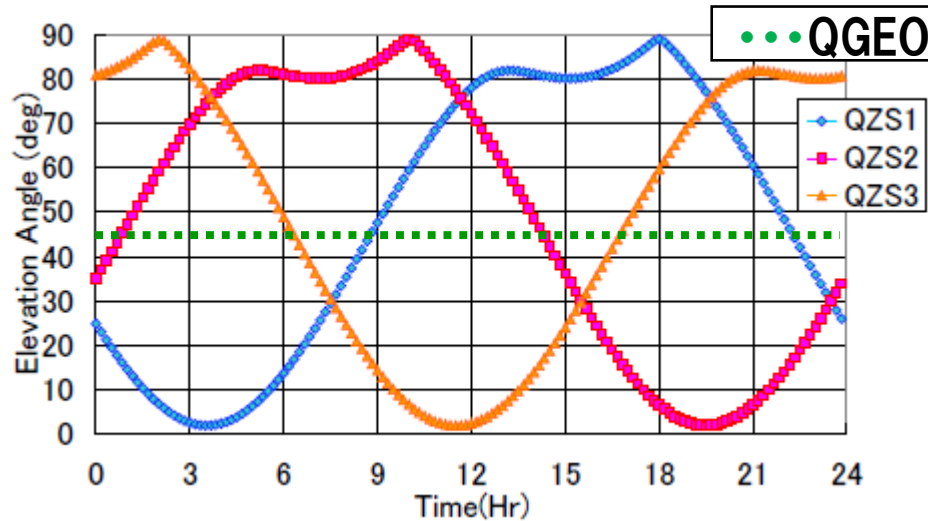
Coverage: Asia and Pacific region

1 Geostationary satellite

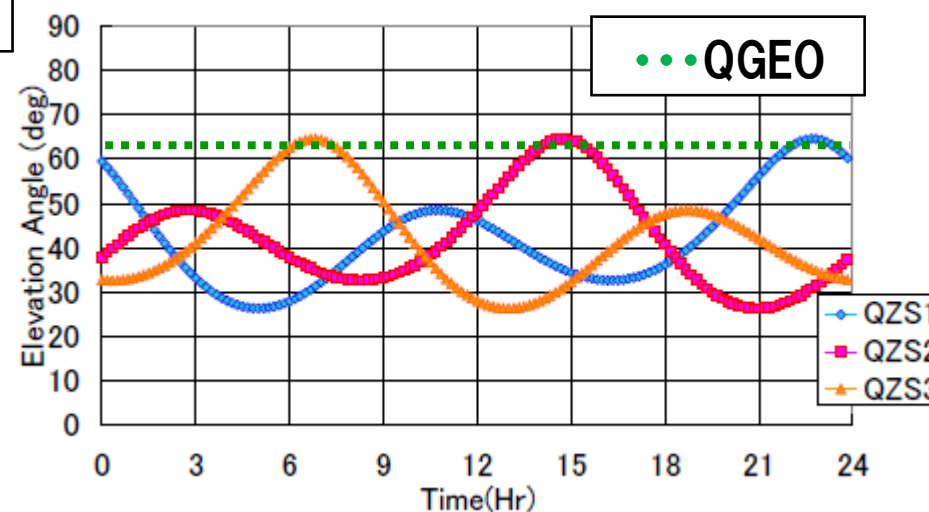


Four satellites constellation will be established and the service will start in 2018.

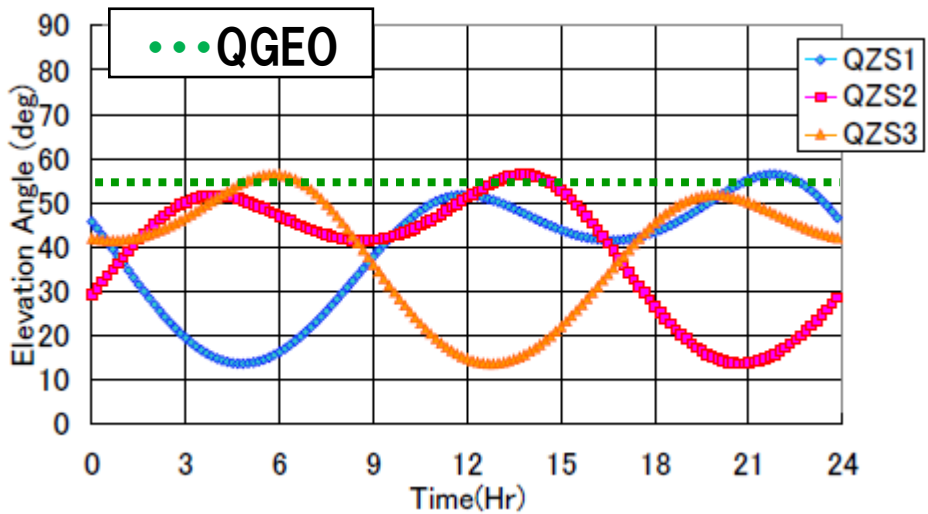
QZSS Visibility Time



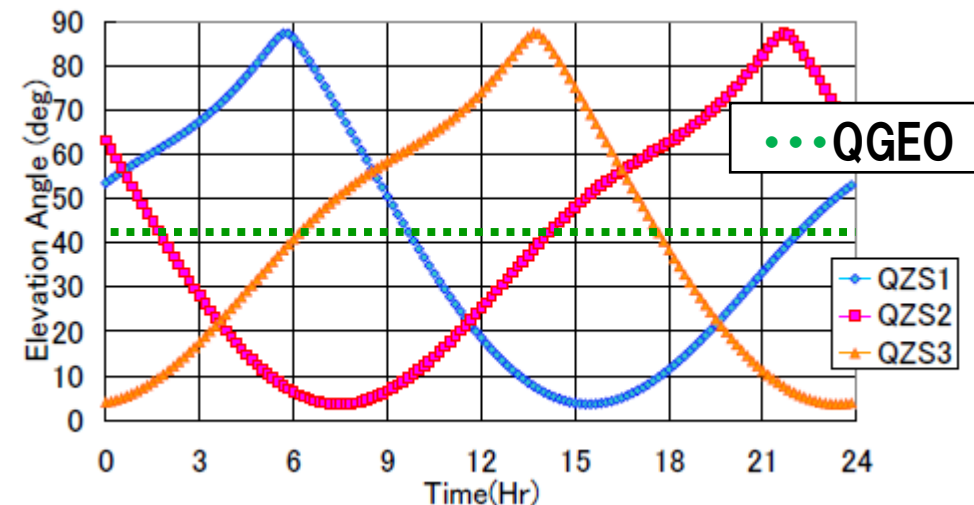
TOKYO



SINGAPORE



BANGKOK



SYDNEY

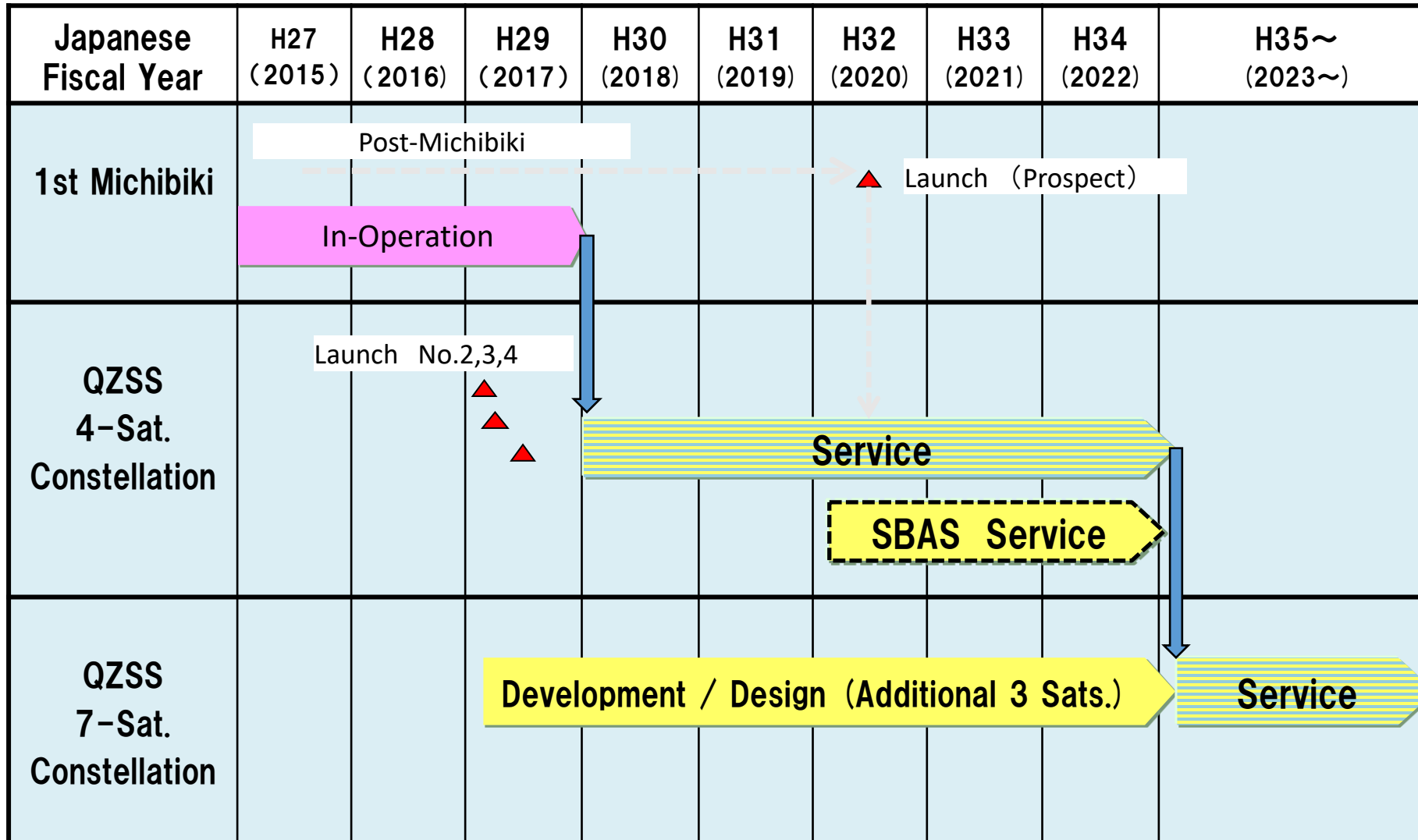
Ref. : IS-QZSS v1.7, JAXA, 7 Jul. 2016

Positioning Signal of QZSS (as of Nov. 2016)

Positioning Signal of QZSS						
Not only positioning complementation signal, but satellite orbit, time, and ionosphere correction information will be also transmitted as augment information.						
				1 st Satellite	2 nd -4 th Satellite	
				QZO	QZO	GEO
L1C/A	1575.42 MHz	Positioning	complement GPS	○	○	○
L1C		Positioning	complement GPS	○	○	○
L1S		Augmentation (SLAS)		○	○	○
		Message Service		○	○	○
L2C	1227.60 MHz	Positioning	complement GPS	○	○	○
L5	1176.45 MHz	Positioning	complement GPS	○	○	○
L5S		Augmentation Experimental Use		—	○	○
L6	1278.75 MHz	Augmentation (CLAS)		○	○	○
L1Sb	1575.42	Augmentation	SBAS	—	—	○

SBAS Service will be available from the beginning of 2020's.

QZSS Program Schedule (Update)



SBAS Service will be available from 2020's under Ministry of Land, Infrastructure, Transport and Tourism jurisdiction.

QZSS was Declared Operational on 1st NOV 2018



Declaration Ceremony of QZSS Operation

http://qzss.go.jp/events/ceremony_181105.html

Training on GNSS – Course (T151-30), Organized by: GIC/AIT, CSIS/UT and ICG, held at: GIC/AIT, Thailand from 14 – 18 JAN 2019

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PRN	SVN	Satellite	Launch Date (UTC)	Orbit (*1)	Positioning Signals	Clock(*2)
193	J001	QZS-1	2010/9/11	QZO	L1C/A, L1C, L2C, L5	RB
183					L1S	
193					L6	
194	J002	QZS-2	2017/6/1	QZO	L1C/A, L1C, L2C, L5	RB
184					L1S	
196					L5S	
194					L6	
199	J003	QZS-3	2017/8/19	GEO	L1C/A, L1C, L2C, L5	RB
189					L1S	
197					L5S	
187					L1Sb	
199					L6	
-					Sr/Sf	
195	J004	QZS-4	2017/10/9	QZO	L1C/A, L1C, L2C, L5	RB
185					L1S	
200					L5S	
195					L6	