

## GOSAT-2 path calendar

NIES GOSAT-2 Project

November 24, 2022

The orbit of GOSAT-2 is a sun-synchronous sub-recurrent orbit. The recurrent period is 6 days, and the number of revolutions per a recurrent period is 89. A path number is given to each revolution starting from one ascending node to the next ascending node passing through the Arctic pole and the Antarctic pole as shown in Fig.1. The path number increases each time as moving westward to the next adjacent orbit. The path number of the descending path which passes through Lamont, Oklahoma in the USA (36.6N, 97.5W), one of the validation sites of TCCON (Total Carbon Column Observing Network) is 68.

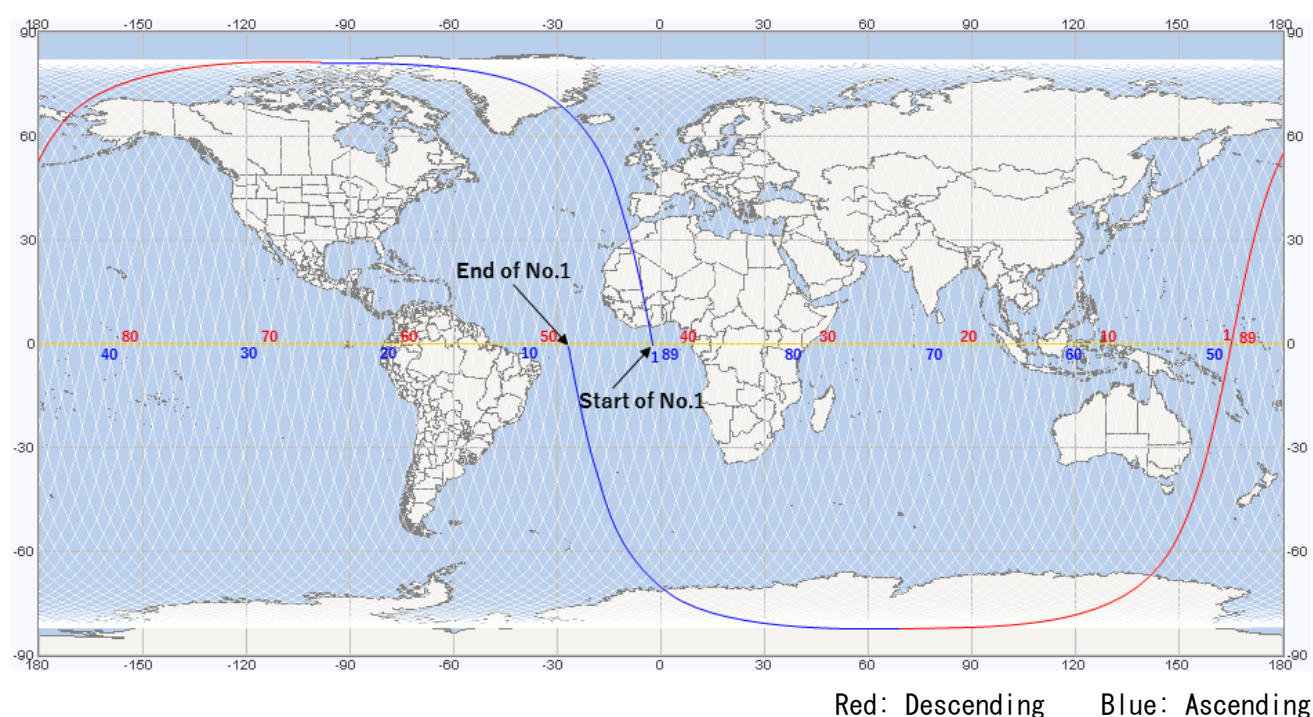


Fig.1 GOSAT-2 path numbers

As the recurrent period of GOSAT-2 is 6 days, the paths are grouped into 6 groups (A, B, C, D, E and F). The path group for the day is color-coded and shown in the path calendar on the next page. The date in the path calendar is defined at the longitude of the ascending node.

## GOSAT-2 Path Calendar 2023

GROUP	COLOR	Path Number
A		89 , 6 , 12 , 18 , 24 , 30 , 36 , 42 , 48 , 54 , 60 , 66 , 72 , 78 , 84
B		1 , 7 , 13 , 19 , 25 , 31 , 37 , 43 , 49 , 55 , 61 , 67 , 73 , 79 , 85
C		2 , 8 , 14 , 20 , 26 , 32 , 38 , 44 , 50 , 56 , 62 , 68 , 74 , 80
D		86 , 3 , 9 , 15 , 21 , 27 , 33 , 39 , 45 , 51 , 57 , 63 , 69 , 75 , 81
E		87 , 4 , 10 , 16 , 22 , 28 , 34 , 40 , 46 , 52 , 58 , 64 , 70 , 76 , 82
F		88 , 5 , 11 , 17 , 23 , 29 , 35 , 41 , 47 , 53 , 59 , 65 , 71 , 77 , 83

\* No. 80, 81, 82, 83, 84 and 85 observations are made across dates.

**January 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

**July 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**February 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

**August 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

**March 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

**September 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

**April 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

**October 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

**May 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**November 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

**June 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

**December 2023**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Fig.2 and Fig.3 show the path group of each descending path and ascending path. The path numbers grouped for each path group are shown in the table below.

GROUP	COLOR	Path Number
A	Red	89 , 6 , 12 , 18 , 24 , 30 , 36 , 42 , 48 , 54 , 60 , 66 , 72 , 78 , 84
B	Orange	1 , 7 , 13 , 19 , 25 , 31 , 37 , 43 , 49 , 55 , 61 , 67 , 73 , 79 , 85
C	Yellow	2 , 8 , 14 , 20 , 26 , 32 , 38 , 44 , 50 , 56 , 62 , 68 , 74 , 80
D	Green	86 , 3 , 9 , 15 , 21 , 27 , 33 , 39 , 45 , 51 , 57 , 63 , 69 , 75 , 81
E	Blue	87 , 4 , 10 , 16 , 22 , 28 , 34 , 40 , 46 , 52 , 58 , 64 , 70 , 76 , 82
F	Purple	88 , 5 , 11 , 17 , 23 , 29 , 35 , 41 , 47 , 53 , 59 , 65 , 71 , 77 , 83

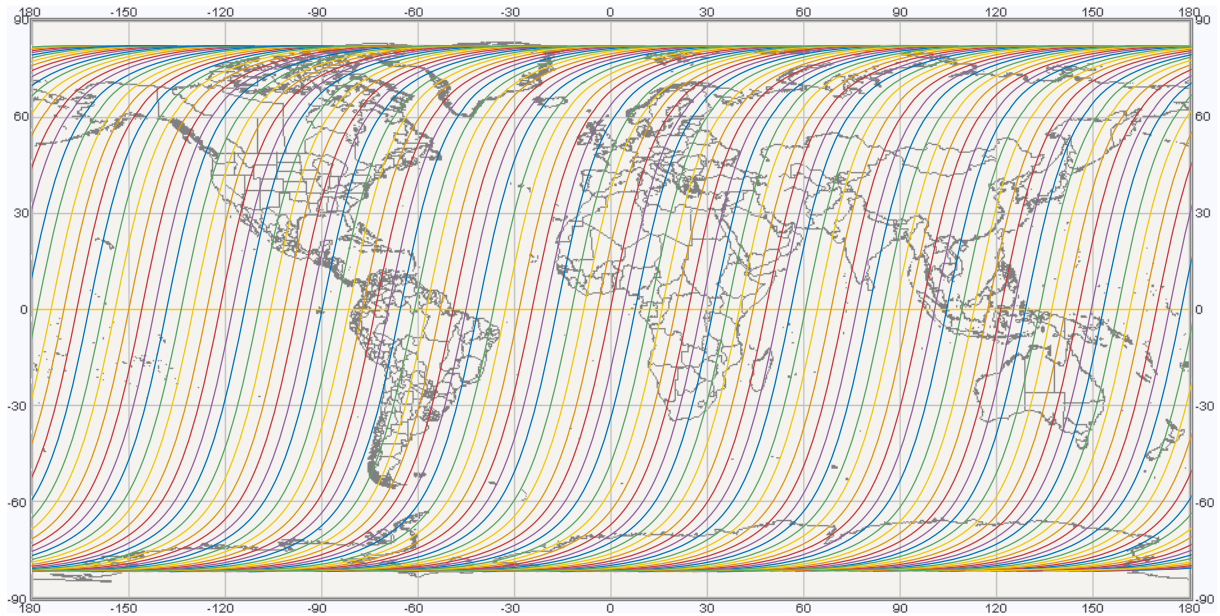


Fig.2 path groups (descending paths)

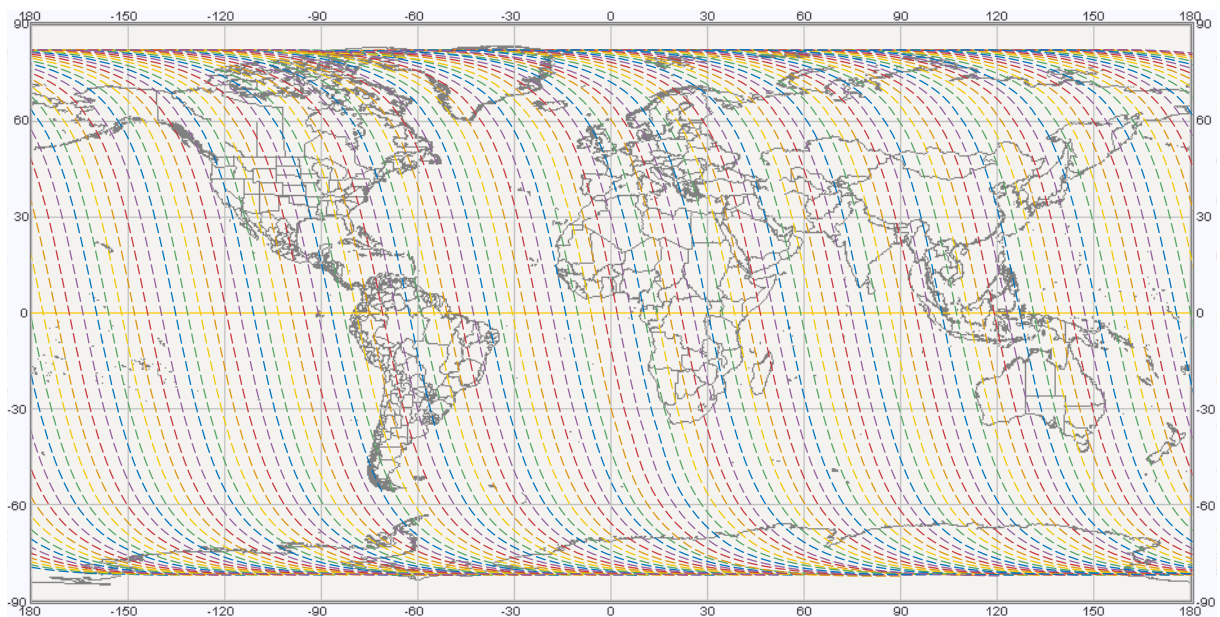


Fig.3 path groups (ascending paths)