

MASS Prize 2 December 15, 2020

Guests Made	Name	Date	Difference from Actual	Actual
11/11/2016	Dean	7/4/2018	1 697	
11/11/2016	Phil	1/1/2018	1 881	
1/7/2017	Silvio	7/10/2018	1 691	
11/11/2016	Jim A.	8/2/2017	1 1033	
11/11/2016	Keith	8/10/2018	1 660	
11/11/2016	Jim M.	8/18/2018	1 652	
11/11/2016	Carol	8/19/2017	1 1006	
1/7/2017	Sophia	1/7/2020	1 346	
11/11/2016	Dave	7/4/2018	1 697	
12/24/2016	Ed	7/4/2018	1 697	
11/11/2016	Harry	12/4/2018	1 544	
12/10/2016	Kevin	9/26/2017	1 978	

Sophia wins!!!

Guests Made	Name	Date	Difference from Actual	Actual
12/10/2016	SpaceX in-flight test	1/19/2020	1 actual	
12/20/2019	SpaceX uncrewed	3/3/2019	1 actual	
12/20/2019	Boeing uncrewed	12/20/2019	1 actual, needs redo	
12/20/2019	SpaceX DM2 crewed	5/31/2020	1 actual	
12/20/2019	NASA Need	9/1/2020	1 actual	
12/20/2019	SpaceX oper CREW1	11/15/2020	1 actual	
12/20/2019	Boeing uncrewed 2nd	2/15/2021	1 scheduled	
12/20/2019	Boeing crewed	6/15/2021	1 scheduled	
12/20/2019	Boeing oper mission	12/15/2021	1 scheduled	

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Since the guesses were made:  
 9/1/16 SpaceX's Falcon 9 rocket blew up on the pad and they subsequently said they would resume flights in Nov 2016  
 10/11/16 Boeing delayed their launch dates by 6 months due to aerodynamic problems and troubles with a test article  
 11/8/16 Trump is President Elected

NASA plans on the Commercial Crew companies being certified by the end of 2018. It has not purchased any Soyuz seats for 2019 and it is probably to late to do so.  
 11/4/2016 Musk says Falcon9 launches to resume mid Dec 2016; delayed to Jan 2017.  
 12/13/2016 After MASS round 2 guesses made, SpaceX announce 6 month delay on their schedule dates

1/4/2017 SpaceX resumes launches with Hridium satellites from Vandenberg  
 5/20/2017 SpaceX delays unmanned Dragon test by 4 months from Nov 2017 to March 2018  
 7/13/2017 Chris Ferguson of Boeing hints that Starliner first manned mission slipping to 4th qtr 2018  
 7/20/2017 SpaceX schedule says uncrewed test flight Feb 2018, 1st crewed flight June 2018  
 7/20/2017 Boeing uncrewed in June 2018, 1st crewed in Aug 2018  
 10/13/2017 SpaceX slips 2 months on uncrewed (Apr 2018) & crewed (Aug 2018) flights  
 Boeing slips 2 months on uncrewed (Aug 2018) & 3 months on crewed (Nov 2018)  
 1/12/2018 SpaceX slips 4 months uncrewed mission Aug 2018 & crewed one Dec 2018  
 Boeing unchanged its uncrewed Aug 2018 & crewed Nov 2018  
 8/1/2018 Boeing thruster malfunction on Starliner slips uncrewed launch by 6 months to Spring 2019  
 8/2/2018 SpaceX uncrewed flight Nov 2018, first crewed test flight Apr 2019  
 Boeing uncrewed flight late 2018-early 2019, first crewed test flight mid 2019  
 8/29/2018 NASA need date extended to January 2020 by lengthening upcoming Soyuz missions  
 Chris Ferguson added to Boeing Demo-2 mission and is training for a possible ISS stint

9/17/2018 Musk hints at delay during announcement of Japanese BFR tourist when he says uncrewed Dragon test to be in Dec 2018 and crewed flight in 2nd qtr 2019  
 10/5/2018 NASA announces new dates: SpaceX uncrewed Jan 2019, crewed June 2019 and Boeing uncrewed Mar 2019, crewed Aug 2019; 1st PCM flights Aug 2019 & Dec 2019  
 PCM (Post Certification Missions) are flights that will deliver ISS crews for multi-months  
 NASA will give monthly status on schedule of launches  
 11/30/2018 Bridenstine says issue with SpaceX using an uncertified parachute company might cause DM-1 mission to slip from Jan 7, 2019 to Spring. Only one certified chute company and they are having trouble supplying SpaceX, Boeing and Orion parachute needs.  
 12/8/2018 DM-1 mission delayed from 1/7/19 to 1/17/19 to deconflict with CRS-16 resupply mission  
 1/21/2019 NASA says DM-1 by SpaceX scheduled for Feb 9, 2019 about a 1 month delay from Jan 2019  
 Government shutdown effect uncertain.  
 2/4/2019 NASA pushed date for DM-1 by SpaceX to Mar 2, 2019 and Boeing first flight to April  
 crewed launch for SpaceX pushed back 1 month to July 2019, Boeing stays at Aug 2019  
 3/23/2019 Unofficial new dates after successful DM-1 mission launched on 3/21/19 and splashed down on  
 March 8, SpaceX DM-2 set for NET 7/25/19 (1 month delay from June) and Boeing first  
 uncrewed flight delayed to NET 8/17/19 (4 month delay from April) and manned flight  
 delayed to Nov 2019 (3 month delay from August)

Span in days	7 yrs =	8 yrs =	9 yrs =
678	2555 days	2920	3285
700			
2098			
3445			

4/20/2019 anomaly on Dragon2 static test of super Draco thrusters; capsule exploded  
 5/30/2019 SpaceX will use the DM-2 Dragon capsule for in-flight abort test and the next capsule will be used for DM-2  
 SpaceX in-flight abort scheduled for end of July 2019  
 SpaceX crewed flight test might be by year's end if in-flight anomaly is resolved  
 Boeing no crewed flight test will be no earlier than end of August 2019 and crewed maybe by year end  
 Boeing pad abort test scheduled for White Sands in Summer 2019

6/24/2019 SpaceX has 11/15/19 place holder for DM-2 mission (7 days at ISS with Bob Behken and Doug Hurley)  
 Boeing has uncrewed date of 9/17/19 for 5 days docked to ISS and 11/30/19 for crewed 6 month ISS mission  
 7/31/2019 SpaceX has 12/17/19 place holder for DM-2 mission  
 Boeing late Sept 2019 for uncrewed Starliner

8/14/2019 Testarati says in-flight abort test will be 11/10/19 for SpaceX  
 8/20/2019 Boeing says uncrewed flight test, OFT, in Oct 2019, pad abort test to be shortly thereafter  
 SpaceX says in-flight abort test Oct or Nov, still hopes DM-2 will occur in 2019  
 Roscosmos contract expires Sept 2020

10/11/2019 Boeing - pad abort test 11/4/19; uncrewed flight test 12/17/19 landing 12/24/19 in New Mexico  
 crewed flight test unspecified date  
 SpaceX - in-flight abort test 11/11/19; 10 successful tests of Mark 3 parachutes by 12/31/19  
 crewed flight test 1st qtr 2020  
 11/1/2019 Boeing - crewed flight March-June 2020  
 SpaceX - static fire test 11/6/19, in-flight abort test early December, crewed flight test Feb-Mar 2020

11/4/2019 Boeing - pad abort test done  
 SpaceX - 13 successful parachute tests completed  
 11/13/2019 SpaceX performed the Dragon static fire test to close out the anomaly investigation  
 12/4/2019 Boeing uncrewed flight test delayed 2 days to 12/19/19

12/20/2019 Boeing OFT-1 uncrewed Starliner mission didn't dock with ISS  
 1/19/2020 SpaceX in-flight abort test went well; more chute tests; hardware ready end of Feb;  
 DM-2 flight 2nd quarter 2020 per Musk; NASA needs to decide if 2 week or long duration  
 5/30/2020 DM-2 launches with Doug Hurley & Bob Behken  
 5/31/20 docks to ISS  
 8/1/20 undocks from ISS  
 8/2/20 splashes down in the Gulf of Mexico, 64 days in space

8/21/2020 SpaceX operational CREW1 mission with 4 astronauts delayed to Oct 23, 2020  
 delay from end of September is to avoid conflict with other ISS traffic  
 8/26/2020 Boeing says second unmanned Starliner test OFT-2 in Dec 2020 or Jan 2021 and  
 crewed test mission in Summer of 2021, operational mission Winter 2021  
 9/29/2020 SpaceX operational CREW1 mission delayed to Oct 31, 2020  
 will give more time to troubleshoot small air leak

10/10/2020 CREW1 delayed to Nov 1-21, 2020, need a review of Falcon9 gas turbine pressure  
 10/14/2020 Kate Rubins launched on Soyuz, possibly the last NASA paying astronaut to do so.  
 NASA anticipates Russians to launch on Commercial Crew vehicles and our  
 astronauts to launch on Soyuz under a trade agreement.  
 10/27/2020 CREW1 launch set for Nov 14, 2020

11/15/2020 CREW1 launches and docks to ISS on 11/16/20 with a 6 month crew of 4  
 11/18/2020 OFT-2 delayed to first quarter of 2021  
 12/11/2020 Boeing says OFT-2 set for March 29, 2021

