

Name	Year	ORF1	6	9	11	15	23	33	54	106	119	126	145	174	185	208	242	291	293	294	297	304	309	310	315	317
MG214988.1 GII.Pe GII.4Syd/JN010/CN	2017	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	V	T	H	A	S	N	E	I
MH469206.1 GII.Pe GII.4Syd/GZ2017-L615/CN	2017	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	H	A	S	N	E	I
KX657729.1 GII.Pe GII.4Syd/16-CL-1/TW	2016	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	H	A	S	N	E	I
KX657737.1 GII.Pe GII.4Syd/D031/TW	2016	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	H	A	S	N	E	I
KU678205.1 GII.Pe GII.4Syd/16-J-1/TW	2016	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	H	A	S	N	E	I
KX158279.1 GII.Pe GII.4Syd/13-38/CA	2015	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	H	A	S	N	E	I
LC066046.2 GII.Pe GII.4Syd/Osaka/OSF78/J	2015	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	H	A	S	N	E	I
LC177659.1 GII.Pe GII.4Syd/NN15_1296/VN	2015	GII.Pe	S	N	S	A	N	V	S	Q	V	P	V	P	P	P	F	T	I	T	R	A	N	E	I	
MH469167.1 GII.Pe GII.4Syd/GZ2015-L400/CN	2015	GII.Pe	S	N	S	A	N	V	S	Q	V	P	V	P	P	P	F	T	I	T	R	A	S	N	E	I
KY488575.1 GII.Pe GII.4Syd/D001/TW	2014	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	R	A	S	N	E	I
KT202798.1 GII.Pe GII.4Syd/GZ2014-122/CN	2014	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	R	A	S	N	E	I
KT202798.1 GII.Pe GII.4Syd/GZ2014-1307/CN	2014	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	R	A	S	N	E	I
KX354033.1 GII.4Syd/2015-SP-0386 010913 HI/US	2013	GII.Pe	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KR131783.1 GII.4Syd/Pune-131742/IN	2013	GII.Pe	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KR904223.1 GII.4Syd/Johannesburg 12163ZA	2013	GII.Pe	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
JX459908.1 GII.Pe GII.4Syd/NSW0514/AU	2012	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	R	A	N	E	I	
KF509946.3 GII.Pe GII.4Syd/AlbertaE1063/CA	2012	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	P	P	P	F	T	I	T	R	A	N	E	I	
JX459907.1 GII.Pe GII.4Syd/Woonona/NSW3309/AU	2012	GII.Pe	S	N	S	A	N	V	N	Q	V	P	V	S	P	P	F	T	I	T	R	A	N	E	I	
KF060080.1 GII.4Syd/NSW628G/AU	2012	GII.Pe	S	N	S	A	N	A	N	Q	V	P	V	S	P	P	F	T	I	T	R	A	N	E	I	
KC517370.1 GII.4Syd/CGMH60/TW	2012	GII.Pe	S	N	S	A	N	V	N	Q	V	S	I	S	L	P	F	T	I	T	R	A	N	E	I	
KF060062.1 GII.4Syd/NSW558V/AU	2012	GII.Pe	S	N	T	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KF060126.1 GII.4Syd/NLV-12-1056/NZ	2012	GII.Pe	S	N	S	A	N	V	N	E	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KX354017.1 GII.4Syd/2012-SP-0566 103112 TX/US	2012	GII.Pe	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
AB972499.1 GII.Pe GII.4Syd/HK01/J	2011	GII.Pe	S	N	S	A	N	V	N	Q	V	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KX354140.1 GII.4Syd/2015-SP-0399 122815 OR/US	2015	GII.P16	S	S	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KX354146.1 GII.4Syd/2015-SP-0385 111315 LAC/US	2015	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KY947550.1 GII.P16 GII.4Syd/Pasadena 3477/US	2015	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
KY887601.1 GII.P16 GII.4Syd/NOR-2565/UK	2016	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
LC153121.1 GII.P16 GII.4Syd/OH16002/J	2016	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
LC153122.1 GII.P16 GII.4Syd/OC16023/J	2016	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
LC175468.1 GII.P16 GII.4Syd/Kawasaki194/J	2016	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
AlbertaE1084/CA	2016	GII.P16	N	S	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
AlbertaE1277/CA	2016	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
LC331997.1 GII.P16 GII.4Syd/Aichf25/J	2017	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
MG002630.1 GII.P16 GII.4Syd/BNE1/AU	2017	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
MG002633.1 GII.P16 GII.4Syd/BNE4/AU	2017	GII.P16	S	N	S	A	N	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
AlbertaE1487/CA	2017	GII.P16	S	N	S	A	S	V	N	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
AlbertaE1231/CA	2018	GII.P16	S	N	S	A	N	V	S	Q	I	P	I	S	P	P	F	T	I	T	R	A	N	E	I	
GU445325.2 GII.P4NO GII.4NO/New Orleans1805/US	2009	GII.P4 New Orleans	S	N	S	T	N	V	N	Q	I	P	I	S	P	P	F	T	I	P	R	A	N	S	E	I

Name	Year	ORF1	322	330	333	341	350	351	359	368	372	373	377	380	393	396	404	412	413	414	436	451	512	534	539	540
MG214988.1 GII.Pe GII.4Syd/JN010/CN	2017	GII.Pe	G	I	M	D	T	V	A	E	N	N	A	N	G	H	V	N	T	P	S	C	N	A	A	L
MH469206.1 GII.Pe GII.4Syd/GZ2017-L615/CN	2017	GII.Pe	G	I	M	D	T	V	A	E	N	N	A	N	G	H	V	N	T	P	S	C	N	A	A	L
KX657729.1 GII.Pe GII.4Syd/16-CL-1/TW	2016	GII.Pe	G	I	M	D	T	V	A	E	N	N	A	N	G	H	V	N	T	P	S	C	N	A	A	L
KX657737.1 GII.Pe GII.4Syd/D031/TW	2016	GII.Pe	G	I	M	D	T	V	A	E	N	N	A	N	G	H	V	N	T	P	S	C	N	A	A	L
KU678205.1 GII.Pe GII.4Syd/16-J-1/TW	2016	GII.Pe	G	V	V	D	T	V	A	E	N	H	A	N	G	H	V	N	T	P	S	C	N	T	A	L
KX158279.1 GII.Pe GII.4Syd/13-38/CA	2015	GII.Pe	G	I	V	D	T	V	A	E	D	H	A	N	S	H	V	N	T	P	S	C	N	T	A	L
LC066046.2 GII.Pe GII.4Syd/Osaka/OSF78/J	2015	GII.Pe	G	I	V	D	T	V	A	E	N	H	A	N	G	H	V	N	T	P	S	C	N	T	A	L
LC177659.1 GII.Pe GII.4Syd/NN15_1296/VN	2015	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	P	S	C	N	T	A	L
MH469167.1 GII.Pe GII.4Syd/GZ2015-L400/CN	2015	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	P	S	C	N	T	A	L
KY488575.1 GII.Pe GII.4Syd/D001/TW	2014	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	P	S	C	N	T	A	L
KT202798.1 GII.Pe GII.4Syd/GZ2014-122/CN	2014	GII.Pe	G	I	V	D	T	V	A	E	D	R	A	N	G	H	V	N	I	P	S	C	N	T	A	L
KT202798.1 GII.Pe GII.4Syd/GZ2014-1307/CN	2014	GII.Pe	G	I	V	D	T	V	A	E	D	H	A	N	G	H	V	N	T	P	S	C	N	T	A	L
KX354033.1 GII.4Syd/2013-SP-0386 010913 HI/US	2013	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KR131783.1 GII.4Syd/Pune-131742/IN	2013	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KR904223.1 GII.4Syd/Johannesburg 12163ZA	2013	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	Y	T	A	L
JX459908.1 GII.Pe GII.4Syd/NSW0514/AU	2012	GII.Pe	G	I	V	D	T	V	A	E	D	R	A	N	G	H	V	N	T	H	S	C	N	T	A	V
KF509946.3 GII.Pe GII.4Syd/AlbertaE1063/CA	2012	GII.Pe	G	I	V	D	T	V	A	E	D	H	A	N	G	H	V	N	T	H	S	C	N	T	A	V
JX459907.1 GII.Pe GII.4Syd/Woonona/NSW3309/AU	2012	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KF060080.1 GII.4Syd/NSW628G/AU	2012	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KC517370.1 GII.4Syd/CGMH60/TW	2012	GII.Pe	G	I	M	D	T	M	A	E	D	H	A	N	G	H	V	N	T	H	P	R	N	T	V	V
KF060062.1 GII.4Syd/NSW558V/AU	2012	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KF060126.1 GII.4Syd/NLV-12-1056/NZ	2012	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KX354017.1 GII.4Syd/2012-SP-0566 103112 TX/US	2012	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
AB972499.1 GII.Pe GII.4Syd/HK01/J	2011	GII.Pe	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KX354140.1 GII.4Syd/2015-SP-0399 122815 OR/US	2015	GII.P16	A	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KX354146.1 GII.4Syd/2015-SP-0385 111315 LAC/US	2015	GII.P16	A	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
KY947550.1 GII.P16 GII.4Syd/Pasadena 3477/US	2015	GII.P16	G	I	M	D	I	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	A	V
KY887601.1 GII.P16 GII.4Syd/NOR-2565/UK	2016	GII.P16	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
LC153121.1 GII.P16 GII.4Syd/OH16002/J	2016	GII.P16	G	I	M	D	T	V	A	E	D	H	A	N	S	H	V	N	T	H	S	C	N	T	V	V
LC153122.1 GII.P16 GII.4Syd/OC16023/J	2016	GII.P16	G	I	M	D	T	V	A	E																