ex minor	Intro	Genotype	PB2	PB1	PA	HA	NP	NA	M	NS	Constellation	reassorted genes
	A1	A1	ea1	ea1	ea1	ea1	ea1	ea1	ea1	ea1	ea1|ea1|ea1|ea1|ea1|ea1|ea1|ea1	none
	A2	A2	ea2	ea2	ea2	ea2	ea2	ea2	ea2	ea2	ea2|ea2|ea2|ea2|ea2|ea2|ea2|ea2	none
	A3	A3	ea3	ea3	ea3	ea3	ea3	ea3	ea3	ea3	ea3|ea3|ea3|ea3|ea3|ea3|ea3|ea3	none
	A4	A4	ea4	ea4	ea4	ea4	ea4	ea4	ea4	ea4	ea4|ea4|ea4|ea4|ea4|ea4|ea4|ea4	none
	A5	A5	ea5	ea5	ea5	ea5	ea5	ea5	ea5	ea5	ea5|ea5|ea5|ea5|ea5|ea5|ea5|ea5	none
	A6	A6	ea6	ea6	ea6	ea6	ea6	ea6(N5)	ea6	ea6	ea6|ea6|ea6|ea6|ea6|ea6(N5)|ea6|ea6	fully Eurasian (**N5**)
	A1	B1.1	am1.1	am1.1	ea1	ea1	am1.2	ea1	ea1	ea1	am1.1|am1.1|ea1|ea1|am1.2|ea1|ea1|ea1	PB2 PB1 NP
	A1	B1.2	am1.1	am1.1	am1	ea1	am1.2	ea1	ea1	ea1	am1.1|am1.1|am1|ea1|am1.2|ea1|ea1|ea1	PB2 PB1 NP
	A1	B1.3	am1.3	am1.3	am1.2	ea1	am1.2	ea1	ea1	ea1	am1.3|am1.3|am1.2|ea1|am1.2|ea1|ea1|ea1	PB2 PB1 NP
	A1	B2.1	am1.2	ea1	ea1	ea1	am1.1	ea1	ea1	ea1	am1.2|ea1|ea1|ea1|am1.1|ea1|ea1|ea1	PB2 NP
minor03	A1	B2.2	am1.2	ea1	ea1	ea1	am1.1	ea1	ea1	am1.2	am1.2|ea1|ea1|ea1|am1.1|ea1|ea1|am1.2	PB2 NP NS
	A1	B3.1	am2.1	ea1	ea1	ea1	am1.4.1	ea1	ea1	ea1	am2.1|ea1|ea1|ea1|am1.4.1|ea1|ea1|ea1	PB2 NP
	A1	B3.2	am2.1	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am2.1|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
minor23	A1	B3.3	am13	am1.4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am13|am1.4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
minor21	A1	B3.4	am4	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am4|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP
minor22	A1	B3.5	am3.2	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am3.2|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
minor20	A1	B3.6	am5	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am5|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
Minor49	A1	B3.7	am2.2	am4	ea1	ea1	am4	ea1	ea1	am1.1	am2.2|am4|ea1|ea1|am4|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	B3.8	am5	am4	ea1	ea1	am1.2	ea1	ea1	am1.1	am5|am4|ea1|ea1|am1.2|ea1|ea1|am1.1	PB2 PB1 NP NS
MInor69	A1	B3.9	am2.2	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am2.2|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
Minor59	A1	B3.10	am5	am4	ea1	ea1	am4	ea1	ea1	am1.1	am5|am4|ea1|ea1|am4|ea1|ea1|am1.1	PB2 PB1 NP NS
Minor54	A1	B3.11	am5	am4	ea1	ea1	am1.1	ea1	ea1	am1.1	am5|am4|ea1|ea1|am1.1|ea1|ea1|am1.1	PB2 PB1 NP NS
Minor64	A1	B3.12	am5	am4	ea1	ea1	am11	ea1	ea1	am1.1	am5|am4|ea1|ea1|am11|ea1|ea1|am1.1	PB2 PB1 NP NS
Minor72	A1	B3.13	am2.2	am4	ea1	ea1	am8	ea1	ea1	am1.1	am2.2|am4|ea1|ea1|am8|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	B4.1	am2.2	ea1	ea1	ea1	am1.3	ea1	ea1	ea1	am2.2|ea1|ea1|ea1|am1.3|ea1|ea1|ea1	PB2 NP
	A1	B5.1	ea1	ea1	ea1	ea1	am1.4.2	ea1	ea1	ea1	ea1|ea1|ea1|ea1|am1.4.2|ea1|ea1|ea1	NP
	A2	C1.1	ea1	am1.3	ea1	ea2	ea1	ea2	ea1	ea1	ea1|am1.3|ea1|ea2|ea1|ea2|ea1|ea1	PB1
	A2	C2.1	am19	am20	am3	ea2	ea1	ea2	ea1	ea1	am19|am20|am3|ea2|ea1|ea2|ea1|ea1	PB2 PB1 PA
Minor85	A2	C3.1	am22	am10	ea1	ea2	am5	ea2	ea1	am5	am22|am10|ea1|ea2|am5|ea2|ea1|am5	PB2 PB1 NP NS
	A3	D1.1	am24	ea3	am4	ea3	am1.3	am4(N1)	ea3	ea3	am24|ea3|am4|ea3|am1.3|am4(N1)|ea3|ea3	PB2 PB1 NP PA
	A1	minor01	am1.1	ea1	ea1	ea1	am1.2	ea1	ea1	ea1	am1.1|ea1|ea1|ea1|am1.2|ea1|ea1|ea1	PB2 NP
	A1	minor04	ea1	ea1	ea1	ea1	am1.1	ea1	ea1	ea1	ea1|ea1|ea1|ea1|am1.1|ea1|ea1|ea1	NP
	A1	minor07	am2.1	ea1	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am2.1|ea1|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 NP NS
	A1	minor08	am2.2	ea1	ea1	ea1	am1.6	ea1	ea1	ea1	am2.2|ea1|ea1|ea1|am1.6|ea1|ea1|ea1	PB2 NP
	A1	minor09	ea1	ea1	ea1	ea1	am1.4.1	ea1	ea1	ea1	ea1|ea1|ea1|ea1|am1.4.1|ea1|ea1|ea1	NP
	A1	minor10	am14	ea1	ea1	ea1	am1.6	ea1	ea1	ea1	am14|ea1|ea1|ea1|am1.6|ea1|ea1|ea1	PB2 NP
	A1	minor11	am2.3.2	ea1	ea1	ea1	am1.5	ea1	ea1	ea1	am2.3.2|ea1|ea1|ea1|am1.5|ea1|ea1|ea1	PB2 NP
	A1	minor12	ea1	ea1	ea1	ea1	am1.6	ea1	ea1	ea1	ea1|ea1|ea1|ea1|am1.6|ea1|ea1|ea1	NP
	A1	minor13	am1.2	ea1	ea1	ea1	am1.4.1	ea1	ea1	ea1	am1.2|ea1|ea1|ea1|am1.4.1|ea1|ea1|ea1	PB2 NP
	A1	minor14	am2.3.1	am2	am2	ea1	am2	ea1	ea1	am1.3	am2.3.1|am2|am2|ea1|am2|ea1|ea1|am1.3	PB2 PB1 PA NP NS
	A1	minor15	am2.1	am1.2	ea1	ea1	am1.4.1	ea1	ea1	ea1	am2.1|am1.2|ea1|ea1|am1.4.1|ea1|ea1|ea1	PB2 PB1 NP
	A1	minor16	am2.2	am6	ea1	ea1	am3	am1(N4)	ea1	ea1	am2.2|am6|ea1|ea1|am3|am1(N4)|ea1|ea1	PB2 PB1 NP **NA**
	A1	minor17	am3.1	ea1	ea1	ea1	ea1	ea1	ea1	ea1	am3.1|ea1|ea1|ea1|ea1|ea1|ea1|ea1	PB2
	A1	minor18	am3.3	am2	ea1	ea1	am1.4.1	ea1	ea1	am1.4	am3.3|am2|ea1|ea1|am1.4.1|ea1|ea1|am1.4	PB2 PB1 NP NS
	A1	minor19	am1.2	am1.2	ea1	ea1	am1.1	ea1	ea1	ea1	am1.2|am1.2|ea1|ea1|am1.1|ea1|ea1|ea1	PB2 PB1 NP
	A1	minor24	am2.2	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am2.2|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor25	am1.2	am1.1	ea1	ea1	am1.1	ea1	ea1	am1.2	am1.2|am1.1|ea1|ea1|am1.1|ea1|ea1|am1.2	PB2 PB1 NP NS
	A1	minor26	am1.2	am1.2	ea1	ea1	am1.2	ea1	ea1	ea1	am1.2|am1.2|ea1|ea1|am1.2|ea1|ea1|ea1	PB2 PB1 NP
	A1	minor27	am2.1	ea1	ea1	ea1	am1.1	ea1	ea1	am1.1	am2.1|ea1|ea1|ea1|am1.1|ea1|ea1|am1.1	PB2 NP NS
	A1	minor28	am1.1	am1.2	ea1	ea1	am1.2	ea1	ea1	am1.2	am1.1|am1.2|ea1|ea1|am1.2|ea1|ea1|am1.2	PB2 PB1 NP NS
	A1	minor29	am1.2	am1.2	ea1	ea1	am1.1	ea1	ea1	am1.1	am1.2|am1.2|ea1|ea1|am1.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor30	am1.2	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am1.2|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor31	am1.2	am1.2	ea1	ea1	am1.4.1	ea1	ea1	ea1	am1.2|am1.2|ea1|ea1|am1.4.1|ea1|ea1|ea1	PB2 PB1 NP
	A1	minor32	am2.1	am5	ea1	ea1	am4	ea1	ea1	am1.1	am2.1|am5|ea1|ea1|am4|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor33	am2.1	am1.2	ea1	ea1	am1.1	ea1	ea1	am1.1	am2.1|am1.2|ea1|ea1|am1.1|ea1|ea1|am1.1	PB2 PB1 NP NS

ex minor	Intro	Genotype	PB2	PB1	PA	HA	NP	NA	M	NS	Constellation	reassorted genes
	A1	minor34	am11	am1.2	ea1	ea1	am5	ea1	ea1	am1.1	am11|am1.2|ea1|ea1|am5|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor35	am2.1	am1.2	ea1	ea1	am1.2	ea1	ea1	am1.1	am2.1|am1.2|ea1|ea1|am1.2|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor36	am1.3	am1.3	am1.2	ea1	am1.2	am2(N5)	ea1	ea1	am1.3|am1.3|am1.2|ea1|am1.2|am2(N5)|ea1|ea1	PB2 PB1 NP
	A1	minor37	am15	am6	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am15|am6|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor38	am6	am7	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am6|am7|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor39	am7	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am7|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor40	am1.2	am8	ea1	ea1	am1.1	ea1	ea1	am1.2	am1.2|am8|ea1|ea1|am1.1|ea1|ea1|am1.2	PB2 PB1 NP NS
	A1	minor41	am10	am9	ea1	ea1	am6	ea1	ea1	am1.1	am10|am9|ea1|ea1|am6|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor42	am11	am10	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am11|am10|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor43	am1.2	ea1	ea1	ea1	am1.1	ea1	ea1	am1.1	am1.2|ea1|ea1|ea1|am1.1|ea1|ea1|am1.1	PB2 NP NS
	A1	minor44	am2.2	am1.2	ea1	ea1	am7	ea1	ea1	am1.1	am2.2|am1.2|ea1|ea1|am7|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor45	am12	am11	ea1b	ea1	am1.3	ea1	ea1	am1.2	am12|am11|ea1b|ea1|am1.3|ea1|ea1|am1.2	PB2 PB1 PA NP NS
	A1	minor46	am8	am12	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am8|am12|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor47	am9	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am9|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	minor48	am1.3	am1.3	am1.2	ea1	am1.2	ea1	ea1	am3	am1.3|am1.3|am1.2|ea1|am1.2|ea1|ea1|am3	PB2 PB1 PA NP NS
	A1	Minor50	am13	am1.2	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am13|am1.2|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor51	am5	am7	ea1	ea1	am8	ea1	ea1	am1.1	am5|am7|ea1|ea1|am8|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor52	am2.2	am4	am1	ea1	am4	ea1	ea1	am1.1	am2.2|am4|am1|ea1|am4|ea1|ea1|am1.1	PB2 PB1 PA NP NS
	A1	Minor53	am2.2	am4	ea1	ea1	am1.1	ea1	ea1	am1.1	am2.2|am4|ea1|ea1|am1.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor55	am5	am13	ea1	ea1	am9	ea1	ea1	am1.1	am5|am13|ea1|ea1|am9|ea1|ea1|am1.1	PB2 PB1 NP NS
	A2	Minor56	am16	am2	ea1	ea2	am1.1	am3(N6)	ea1	am4	am16|am2|ea1|ea2|am1.1|am3(N6)|ea1|am4	PB2 PB1 NP NA NS
	A2	Minor57	am17	am14	ea1	ea2	am10	ea2	ea1	ea1	am17|am14|ea1|ea2|am10|ea2|ea1|ea1	PB2 PB1 NP
	A1	Minor58	am5	am4	ea1	ea1	am7	ea1	ea1	am1.1	am5|am4|ea1|ea1|am7|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor60	am2.1	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am2.1|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	MInor61	am1.1	am15	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am1.1|am15|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	MInor62	am17	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am17|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor63	am18	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am18|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A2	MInor65	am19	ea2	am3	ea2	ea1	ea2	ea1	ea1	am19|ea2|am3|ea2|ea1|ea2|ea1|ea1	PB2 PA
	A2	Minor66	ea1	am13	ea1	ea2	am9	ea2	ea1	am1.2	ea1|am13|ea1|ea2|am9|ea2|ea1|am1.2	PB1 NP NS
	A2	Minor67	am17	am16	am1	ea2	am10	ea2	ea1	ea1	am17|am16|am1|ea2|am10|ea2|ea1|ea1	PB2 PB1 PA NP NS
	A1	Minor70	am5	am1.3	ea1	ea1	am1.1	ea1	ea1	am1.1	am5|am1.3|ea1|ea1|am1.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor71	am5	am17	ea1	ea1	am8	ea1	ea1	am1.1	am5|am17|ea1|ea1|am8|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor73	am20	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am20|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	MInor74	am6	am4	ea1	ea1	am1.6	ea1	ea1	am1.1	am6|am4|ea1|ea1|am1.6|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor75	am19	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am19|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	MInor76	am2.2	am18	ea1	ea1	am4	ea1	ea1	am1.1	am2.2|am18|ea1|ea1|am4|ea1|ea1|am1.1	PB2 PB1 NP NS
	A2	Minor77	am11	ea2	ea1	ea2	ea1	ea2	ea1	ea1	am11|ea2|ea1|ea2|ea1|ea2|ea1|ea1	PB2
	A2	Minor78	am2.2	ea2	ea1	ea2	am11	ea2	ea1	ea1	am2.2|ea2|ea1|ea2|am11|ea2|ea1|ea1	PB2 NP
	A1	Minor79	am5	am4	ea1	ea1	am1.6	ea1	ea1	am1.1	am5|am4|ea1|ea1|am1.6|ea1|ea1|am1.1	PB2 PB1 NP NS
	A2	Minor80	am7	am10	ea1	ea2	am5	a2	ea1	am4	am7|am10|ea1|ea2|am5|a2|ea1|am4	PB2 PB1 NP NS
	A2	Minor81	am19	am14	ea1	ea2	am10	ea2	ea1	ea1	am19|am14|ea1|ea2|am10|ea2|ea1|ea1	PB2 PB1 NP
	A1	Minor82	am21	am4	ea1	ea1	am1.4.1	ea1	ea1	am1.1	am21|am4|ea1|ea1|am1.4.1|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor83	am5	am18	ea1	ea1	am1.5	ea1	ea1	am1.1	am5|am18|ea1|ea1|am1.5|ea1|ea1|am1.1	PB2 PB1 NP NS
	A1	Minor84	am19	am4	ea1	ea1	am1.4.1	ea4b	ea1	am1.1	am19|am4|ea1|ea1|am1.4.1|ea4b|ea1|am1.1	PB2 PB1 NP NA NS
	A2	Minor86	am2.2	ea2	ea1	ea2	am1.1	ea2	ea1	ea1	am2.2|ea2|ea1|ea2|am1.1|ea2|ea1|ea1	PB2 NP
	A2	Minor87	am19	am20	am3	ea2	am1.1	ea2	ea1	ea1	am19|am20|am3|ea2|am1.1|ea2|ea1|ea1	PB2 PB1 PA NP
	A2	Minor89	am19	am20	ea1	ea2	ea1	ea2	ea1	ea1	am19|am20|ea1|ea2|ea1|ea2|ea1|ea1	PB2 PB1
	A2	Minor90	am19	am2	am3	ea2	am5	ea2	ea1	ea1	am19|am2|am3|ea2|am5|ea2|ea1|ea1	PB2 PB1 PA NP
	A2	Minor91	am19	am20	am3	ea2	am1.2	ea2	ea1	ea1	am19|am20|am3|ea2|am1.2|ea2|ea1|ea1	PB2 PB1 PA NP
	A2	Minor92	am23	ea2	ea1	ea2	am10	ea2	ea1	am1.2	am23|ea2|ea1|ea2|am10|ea2|ea1|am1.2	PB2 NP NS
	A2	Minor93	am23	ea2	ea1	ea2	ea1	ea2	ea1	ea1	am23|ea2|ea1|ea2|ea1|ea2|ea1|ea1	PB2
	A2	Minor94	am19	am12	am1	ea2	am12	ea2	ea1	ea1	am19|am12|am1|ea2|am12|ea2|ea1|ea1	PB2 PB1 PA NP