

HAYA2\_REBORN  
隼鸟2号 重生

配音文稿/正文

时间码	配音对象翻译	英文原文	中文翻译
0:00:10	对观众	Remember, where were you... on that great day?	还记得吗？在那个重要的日子，你在哪里？
0:00:18		When he sacrificed himself, to deliver the capsule to Earth	他牺牲了自己，把样品舱胶囊送回了地球。
0:00:24		Around the world, we gazed at his last light, across the sky.	在全球各地，我们注视着他最后的光芒划过天空。
0:00:37	对隼鸟2号	You overcame many troubles on the asteroid Itokawa.	你在小行星系川上克服了重重困难。
0:00:43		You were lost in space for many, long weeks. [...for more than 6 weeks]	你在太空中失联长达数个星期【...共计六周有余】。
0:00:50		Yet even with your battered body, you managed to deliver the samples from Itokawa to Earth.	但是你带着残破的身躯，还是把从系川收集的样品送回了地球。
0:01:01		During your journey through 6 billion kilometers, we felt a deep attachment to you.	在你的60亿公里旅途中，我们对你有着深深的牵挂。
0:01:08		We'll never forget: the burning flame of your re-entry...and the legacy of your accomplishments.	我们永远不会忘记你重入大气层时燃烧的火焰，和你留下的不朽遗产。
0:01:24		Hayabusa, we have rebuilt you, and now you are heading to another asteroid mission.	隼鸟号，我们已经将你重建，现在你要前去执行另一个小行星任务了。
0:01:36	旁白	A year after its departure from Earth	在离开地球一年之后，
0:01:38		Hayabusa-2 has come back to our neighborhood, if only for a moment.	隼鸟2号回到了地球附近，虽然仅仅是那么

			一瞬间。
0:01:42		It can use the Earth's gravity to swing-by and accelerate itself.	它能借用地球的引力飞掠并让自己得到加速。
0:01:50	对隼鸟2号	Do you remember?	你记得吗？
0:01:52		You once passed through this same window, to head out toward Itokawa.	你曾在这个同样的窗口经过，奔上去往系川的旅途。
:02:00		This time, your target is the asteroid Ryugu.	这一次，你的目标是小行星龙宫。
0:02:04		Your new mission is to probe the mystery of the origin of life,	你的新任务是去探测生命起源的秘密。
0:02:14	旁白	Today, fans all over Japan observed the path of Hayabusa-2 across the starry night.	今天，全日本的粉丝都在观察隼鸟2号穿过星空的路线。
0:02:39		On December 3, 2015, 7:08pm Japan time	日本时间2015年12月3日晚间7时08分，
0:02:46		Hayabusa 2 passed overhead, just 3,090 kilometers away from Earth.	隼鸟2号从头顶飞过，距离地球仅仅3090公里。
0:02:56		Then, over the South Pacific sky in the twilight hours, he turned his back and headed out toward the asteroid Ryugu.	然后，在傍晚时分的南太平洋上空，他转过身，朝向小行星龙宫飞去。
0:03:23	旁白	That bright star over there... That's our Sun.	那里那颗明亮的恒星就是我们的太阳。
0:03:29		And those barely-illuminated little points are the planets, orbiting around the Sun.	那些勉强被照亮的小点就是行星，围绕着太阳旋转。
0:03:38		They are cousins of the asteroid Ryugu.	他们都是小行星龙宫的亲戚。
0:03:44		The Solar System is incredibly vast, but its grand scale is difficult to know until you have to travel	太阳系大得不可思议，但要不是在里面旅

		through it.	行，如此宏大的尺度很难了然于胸。
0:03:57		Since departing Earth, Hayabusa-2 was in flight for 2 years, before he finally entered the trajectory heading toward Ryugu.	从离开地球开始，隼鸟2号飞行了两年之后，才最终进入飞往龙宫的轨道。
0:04:11	对隼鸟2号	Hayabusa, we sent you back into outer space.	隼鸟号，我们再次把你送往外太空。
0:04:19		On a mission to unknown parts, to find out about our origins.	执行前往未知空域的任务，去寻找我们的起源。
0:04:26		Why do we persist, to find out who we are?	我们为何执着于探究我们是谁这个问题呢？
0:04:40		4.6 billion years ago, the Earth and the asteroids both were formed from debris floating in space.	46亿年前，地球和小行星都从漂浮在太空中的尘埃之中形成。
0:04:49		This debris included water and organic matter, the raw materials that were the basis of life.	这些尘埃中含有水和有机物，它们是生命的基础原料。
0:05:00		The debris accumulated over time, and asteroids formed.	尘埃随着时间累积，于是形成了小行星。
0:05:09		Itokawa formed close to the Sun, so it doesn't contain any water or organic matter.	糸川的形成位置距离太阳较近，所以它不含有任何水和有机物。
0:05:26		But this time, your destination, Ryugu, is a little further away.	但这一次，你的目的地是龙宫，距离要更远一些。
0:05:32		The asteroid Ryugu is far enough away from the sun to contain water and organic matter.	从小行星龙宫到太阳的距离够远，能够含有水和有机物。

0:05:4 1		If we can land on Ryugu and bring back a sample of rocks, maybe we can learn something about our own origins.	如果我们能够在龙宫着陆并带回岩石样本，或许我们能够了解到一些与我们起源有关的信息。
0:05:5 0		In other words, the original materials that formed the basis of life.	换句话说，那是构成生命基础的原初材料。
0:06:1 2	对隼鸟 2 号	Hayabusa, Ryugu has finally come into view.	隼鸟号，终于能够看到龙宫了。
0:06:1 7		It's that point of light, just over there.	它是那个亮点，就在那边。
0:06:2 2		What will the new asteroid look like upclose?	这颗新的小行星靠近看会是什么样呢？
0:06:2 8		Shut off your ion engines here, and proceed carefully.	在这里把你的离子推进器关机，小心地前进。
0:06:4 6		Hayabusa-2 adjusts its trajectory precisely, as it approaches Ryugu at a walking speed.	隼鸟 2 号精准地调整自己的轨道，以漫步的速度靠近龙宫。
0:06:5 7		But Ryugu is not a stationery object.	但是龙宫不是静止不动的物体。
0:07:0 0		He must match the speed of Ryugu, perfectly.	隼鸟必须与龙宫速度完全一致。
0:07:1 3	独白	Now the shape of Ryugu is coming into view!	现在龙宫的外形已经能够看到了。
0:07:3 7	旁白	On June 27, 2018, Hayabusa-2 reached a distance of 20km from Ryugu	2018 年 6 月 27 日，隼鸟 2 号到达距离龙宫 20 公里的位置。
0:07:5 1	独白	This is ... Ryugu.	这是...龙宫。

0:07:56		After travelling 3.2 billion kilometers, this is uncharted territory.	在飞行了 32 亿公里之后，这里是一个未知的领域。
0:08:09		What we were not able to observe from Earth, we can now see in full, before our eyes.	原本在地球上无法观察的天体，现在尽现眼前、一览无余。
0:08:27	旁白	To land here safely, to touch-down and collect rock samples, we must find a flat place.	为了在此安全降落，着陆并获取岩石样本，我们必须找到一处平坦位置。
0:08:39		But, the entire surface seems to be covered by a rough, uneven terrain.	但是整个小行星表面似乎遍布着崎岖不平的地形。
0:08:48	对隼鸟 2 号	Hayabusa, you can only touch-down where the ground is flat enough.	隼鸟号，你只能在足够平坦的地表着陆。
0:09:04	旁白	The time limit to stay on Ryugu is only 1 year and a half.	能留在龙宫的时间只有一年半。
0:09:10		All of the probe's tasks will have to finish by then.	所有的探测任务都需要在此期间完成。
0:09:17		Before attempting a touch-down, Hayabusa-2 first took reconnaissance measurements from above.	在尝试着陆之前，隼鸟 2 号首先在龙宫上空进行了侦测。
0:09:29		Ryugu's size is about 1 kilometer in diameter.	龙宫的直径大约有一公里。
0:09:33		Roughly twice the size of Itokawa.	差不多是系川的两倍。
0:09:40		Ryugu's rotational axis is almost perfectly vertical.	龙宫的自转轴几乎完全垂直。
0:09:45		This enabled Hayabusa-2 to measure Ryugu's whole surface, without needing to maneuver around it.	因此隼鸟 2 号能够测量其整个表面，而不需要围绕它转。
0:10:02		At the south pole, there is a large boulder, 70 meters high and 160 meters wide.	在龙宫南极有一块巨石，高 70 米，宽 160

			米。
0:10:14		And, near to the equator, there is a giant crater, 290 meters wide.	在它的赤道附近，还有一个巨坑，宽达 290 米。
0:10:31		Unfortunately, based on the reconnaissance data, no flat areas were identified.	糟糕的是，根据侦测数据，并未发现平坦的地表。
0:10:41		So, in order to survey Ryugu in more detail, 2 types of mini rovers were deployed.	于是为了更详尽地测量龙宫，隼鸟号投放了两种类型的微型登陆器。
0:11:02		The MINERVA-II-1 rover landed successfully.	密涅瓦二-1 型巡视器成功着陆。
0:11:06		It was our first time to touch the surface of Ryugu.	这是我们首次接触龙宫的地表。
0:11:13		MINERVA was able to hop around and send images of various places on the asteroid, but every image showed only rough terrain.	密涅瓦能够跳跃，并且传回小行星上各个不同地点的图像，但是在所有图像上都只能看到崎岖的地形。
0:11:27		Next, the MASCOT rover was deployed to the surface of Ryugu.	之后，吉祥物探查机也被投放到龙宫的表面。
0:11:40		However, again no sufficiently flat places were found.	但是，还是没有发现充分的平坦地面。

0:11:4 9		MASCOT was equipped with several instruments for more comprehensive data collection.	吉祥物上装配有几种仪器，能够进行更全面的 数据采集。
0:11:5 5		Ryugu was all rocks, lacking any sand or dust as previously was found on Itokawa.	龙宫全部为石质，缺乏之前在系川上所具有 的那种砂质或尘埃地形。
0:12:0 3		If you are not able to touch-down successfully, there would be no point in returning to Earth.	如果你不能够成功地着陆，那么返回地球就 没有意义了。
0:12:2 2		The touch-down relies on this sampler horn.	着陆要靠这个取样杆。
0:12:2 7		It's designed to shoot projectiles down into the surface of Ryugu, and then collect the debris that flies up from the explosions.	其设计可以让它向龙宫发射投射物，然后采 集爆炸后飞起的碎片样本。
0:12:3 7		The sampler horn is about 1 meter long.	取样杆大约有一米长。
0:12:4 1		So, a touch-down is possible on an area where the surrounding rocks are all lower than this height.	所以能够进行着陆的区域，其周围所有岩石 都得低于这一高度
0:12:4 9		Are there any places on Ryugu that meet the criteria?	龙宫上有符合这个条件的地点吗？
0:13:0 9		This area is 20m wide.	这个区域宽 20 米。
0:13:1 0		Touch-down could be feasible here.	在这里着陆或许可行。
0:13:1 5		Good. First, drop the target marker.	好，先投放目标标示器。
0:13:3 4	对准鸟 2 号	The target marker is a beacon to help guide the touch-down.	目标标示器是用来指引着陆的一个信标。
0:13:3 8		So, it needs to fall as close as possible to the touch-down target location.	所以它要尽可能落到靠近目标位置的地方。
0:13:4 8		Altitude: 25 meters	高度：25 米。

0:13:51		It takes 30 minutes to send and receive communications with Earth from Ryugu.	龙宫到地球间的信号发送加接收需要花费 30 分钟。
0:13:57		We can only watch, as you control the landing.	我们只能看着你来控制着陆。
0:14:06		Ryugu is rotating, so the target location shifts by 6 meters every minute.	龙宫在旋转，所以目标地点会每分钟移动六米。
0:14:12		Use your thrusters to adjust your speed and position.	要用推进器来调整你的速度和位置。
0:14:19		No good. That's too fast.	不行，太快了。
0:14:23		Aim carefully!	小心瞄准！
0:14:27		You have to drop the target marker inside that circle.	你必须得把目标标示器投放到那个圆圈里。
0:14:33		Hayabusa, you're still off-course.	隼鸟号，你仍然在偏航。
0:14:42		Altitude: 13 meters. At this rate, you are going to crash!	高度，13 米。按这个速度，你将会坠毁！
0:14:49		Pull up!	拉起！
0:15:06	旁白	The target marker missed completely and was dropped outside of the circle.	目标标示器完全脱靶，落到了圆圈之外。
0:15:26	对隼鸟 2 号	Hayabusa, the area around the marker is going to be very difficult for a touch-down.	隼鸟号，在标示器周围的区域将很难实现着陆。
0:15:43		The surrounding flattish areas are all very small.	它周围比较平坦的区域非常小。
0:15:52		6 meters...The largest space is just 6 meters wide. That's all!	六米，最大的空间只有六米宽，就这么大！
0:16:03		By design, for a safe landing, you should have a zone of 20 meters in	根据设计，要想安全着陆，你需要直径 20 米



		diameter.	的一个区域。
0:16:11		To land in a 6 meter area, you' ll have to control the timing of your thrusters...very precisely.	要在一个六米的区域内着陆，你需要对推进器的时间把握得...非常精准。
0:16:24		Outside this area, the terrain is completely covered in rocks.	在这个区域之外，是遍布岩石的地形。
0:16:30		It' s critical to decide where to land. We need to choose very carefully.	决定在哪里着陆至关重要，我们需要非常谨慎地选择。
0:16:39		Can we run numerical simulations to improve your required precision for touch-down?	我们能否通过数字模拟来提升你降落所需的精度呢？
0:16:58	对隼鸟2号	On the right of the Sun...see that blue dot? It' s our home planet Earth.	在太阳右侧，看到那个蓝点了吗？那就是我们的行星家园，地球。