



1
00:02:01,840 --> 00:02:05,350

okay

2
00:02:09,749 --> 00:02:06,830

looks like it's in

3
00:02:11,830 --> 00:02:09,759

there okay are you ready for me to let

4
00:03:15,990 --> 00:02:11,840

go okay

5
00:03:20,390 --> 00:03:18,149

we'd done everything that we thought we

6
00:03:22,309 --> 00:03:20,400

had to do to prove you know to ourselves

7
00:03:23,830 --> 00:03:22,319

that it was going to work but there's no

8
00:03:24,949 --> 00:03:23,840

substitute for seeing that it actually

9
00:03:26,309 --> 00:03:24,959

did work

10
00:03:33,190 --> 00:03:26,319

and that the thousands of things that

11
00:03:37,350 --> 00:03:35,589

it's visually fascinating because

12
00:03:39,910 --> 00:03:37,360

we know that the planetary nebula has

13
00:03:41,509 --> 00:03:39,920

been or the star that is dying

14

00:03:43,430 --> 00:03:41,519

has been creating this nebula the

15

00:03:45,509 --> 00:03:43,440

material that you now see

16

00:03:47,670 --> 00:03:45,519

just in the past few few tens of

17

00:03:50,149 --> 00:03:47,680

thousands of years a very just an

18

00:03:52,630 --> 00:03:50,159

instant in astronomical time

19

00:03:54,309 --> 00:03:52,640

but now the central star

20

00:03:56,390 --> 00:03:54,319

is illuminating all of this material

21

00:03:58,949 --> 00:03:56,400

that it's created and thrown around

22

00:04:05,270 --> 00:03:58,959

all around it and it literally lights it

23

00:04:10,149 --> 00:04:07,750

it weighs about 600 pounds it's about as

24

00:04:12,550 --> 00:04:10,159

big as a small piano

25

00:04:14,949 --> 00:04:12,560

and about as heavy

26

00:04:21,270 --> 00:04:14,959

its job is very simple it collects the

27

00:04:25,189 --> 00:04:23,110

it's going to be uh it's going to be a

28

00:04:26,870 --> 00:04:25,199

tough moment when uh it comes out of the

29

00:04:29,350 --> 00:04:26,880

hubble because i remember exactly the

30

00:04:31,590 --> 00:04:29,360

moment it was in place in the hubble i

31

00:04:32,790 --> 00:04:31,600

can still see the astronauts slowly

32

00:04:34,469 --> 00:04:32,800

pushing it in

33

00:04:36,629 --> 00:04:34,479

and hoping on hope that they got the

34

00:04:37,749 --> 00:04:36,639

prescription for the for the correction

35

00:04:38,870 --> 00:04:37,759

correct

36

00:04:41,030 --> 00:04:38,880

uh

37

00:04:42,710 --> 00:04:41,040

so that i i i'll always remember that

38

00:04:43,909 --> 00:04:42,720

moment as it was coming in i'm sure i'm

39

00:04:46,230 --> 00:04:43,919

going to remember the moment when it's

40

00:04:47,990 --> 00:04:46,240

coming down but i really look forward to

41

00:04:49,990 --> 00:04:48,000

be able to walk up to it and touch it