1
00:00:12,750 --> 00:00:10,350
sometimes even as scientist we fall into

2
00:00:15,119 --> 00:00:12,760
old habits one such old habit is to

3
00:00:17,760 --> 00:00:15,129
assume that all stars have the same

4
00:00:20,400 --> 00:00:17,770
composition we would never assume that

5
00:00:23,040 --> 00:00:20,410
all humans are the same none of us are

6
00:00:26,580 --> 00:00:23,050
exactly alike we each have our own

7
00:00:28,770 --> 00:00:26,590
unique DNA this is true with stars as

8
00:00:31,770 --> 00:00:28,780
well where we used to just categorize

9
00:00:34,650 --> 00:00:31,780
stars by their mass age or metallicity

10
00:00:37,590 --> 00:00:34,660
we now know that they can vary in every

11
00:00:39,420 --> 00:00:37,600
single element here is a graphical

12
00:00:42,030 --> 00:00:39,430
representation of just one element

13
00:00:44,700 --> 00:00:42,040

silicon for a handful of stars in our

14
00:00:46,680 --> 00:00:44,710
solar neighborhood with our son being in

15
00:00:49,430 --> 00:00:46,690
the center of the image you can see the

16
00:00:52,080 --> 00:00:49,440
variation that exists all around us

17
00:00:54,170 --> 00:00:52,090
every star is different and each star

18
00:00:56,010 --> 00:00:54,180
has its own unique fingerprint as

19
00:00:58,020 --> 00:00:56,020
exciting as it is to explore the

20
00:00:59,970 --> 00:00:58,030
differences in each individual star it

21
00:01:02,100 --> 00:00:59,980
leads us to more important questions