I'm Ellen Ochoa, Director of NASA's Johnson Space Center. I'd like to welcome you to today's event each year NASA joins the nation in observing Hispanic Heritage Month. Hispanics have shaped and strengthened the fabric of this country through contributions and accomplishments that span every facet of American society. Here at NASA we welcome and rely on the diverse backgrounds, perspectives, and ideas of all of our talented workforce. I'm personally so grateful that I've had the opportunity to be a valued member of the NASA team.
for almost 30 years sharing in our joint

achievements the Hispanic outreach and

leadership Alliance team has assembled a

stellar line-up of talent from across

the nation today's speakers will discuss

the importance of Hispanic

representation in STEM education and

careers and highlight successes and

challenges these are important topics

because our future success depends on

our ability to continue to attract the

best and brightest and then develop our

workforce and future leaders enjoy the

program
good morning one of the s thank you so much for being here at NASA headquarters

welcome and to those watching online

thank you for joining us today we will celebrate Hispanic Heritage Month here

at NASA we take a moment to acknowledge the rich history Beauty diversity

contributions and accomplishments of the Hispanic community across the nation so I'm so thrilled to have you here today

this is the second year we have planned activities for NASA headquarters my name is Maria Santos and I am the chair of
the Hispanic outreach and leadership

44
00:01:53,519 --> 00:01:59,909
Alliance group here also known as Ola

45
00:01:57,109 --> 00:02:02,039
All's mission is basically to foster

46
00:01:59,909 --> 00:02:04,259
awareness and promote the contributions

47
00:02:02,040 --> 00:02:06,600
of the Hispanic community here at NASA

48
00:02:04,260 --> 00:02:09,060
to create and facilitate collaborative

49
00:02:06,599 --> 00:02:10,109
cross-cultural opportunities and to

50
00:02:09,060 --> 00:02:12,060
encourage the recruitment and

51
00:02:10,110 --> 00:02:16,320
professional development of a highly

52
00:02:12,060 --> 00:02:19,140
skilled and diverse workforce so I was

53
00:02:16,319 --> 00:02:21,180
thinking you know this takes a few

54
00:02:19,139 --> 00:02:23,879
months to plan an activity like this and

55
00:02:21,180 --> 00:02:26,969
I kept thinking about what we wanted to

56
00:02:23,879 --> 00:02:29,669
focus on this year and my team and I

57
00:02:26,969 --> 00:02:33,569
were debating what the focus should be
but then one day it just hit me after reading an article about the U.S. population the U.S. labor workforce and the education system in this country and then it hit me that hmm Latinos STEM up it's time it's time to step up not only because it's a necessity but it's a social obligation not only for Hispanics in the country but also across the board professionals educators people in the public private sectors it's important because Hispanics comprised almost 18 percent of the U.S. population and growing nowadays about 25
percent of students in K through 12

schools are Hispanics so that got me thinking okay so it's a growing population

and then I looked into it amore and it's a very young population it's actually a two to three years younger than the average of non-hispanic American so what does this mean this basically means that Hispanics will be have been and will continue to be a great contributor to this country's economic political educational systems right so what are we doing to not only encourage Hispanics to
go into STEM fields because science

technology engineering and mathematics

is important especially for us here at NASA stem is what we do so how do we prepare these students to go into stem

how do we prepare individuals to grow within those STEM careers as well so

today I’m very excited because we have an amazing panel from across NASA so this is an agency wide initiative here and we also are so thrilled to have our national professionals here recognized in their fields in their STEM fields across the country so I think you're in
for a really good good a panel

00:04:48,978 --> 00:04:52,668
discussion here I hope you enjoy it

00:04:50,870 --> 00:04:54,319
but I did want to share a little bit

00:04:52,668 --> 00:04:57,799
about myself so that you understand

00:04:54,319 --> 00:04:59,300
where I'm coming from and this is just

00:04:57,800 --> 00:05:04,129
between us I haven't really told many

00:04:59,300 --> 00:05:05,780
people that's right so I'm actually an

00:05:04,129 --> 00:05:09,680
immigrant so my family moved to the

00:05:05,779 --> 00:05:11,449
states and that 1980s during the civil

00:05:09,680 --> 00:05:14,598
wars in El Salvador

00:05:11,449 --> 00:05:16,250
so for me hearing bombs going off in a

00:05:14,598 --> 00:05:19,219
distance and watching people walk around

00:05:16,250 --> 00:05:22,098
with you know rifles was common

00:05:19,220 --> 00:05:24,970
occurrence so we left when I was about

00:05:22,098 --> 00:05:28,909
six years old I'm the youngest of eight
first to go to college actually second

to go to college because I have a sister

who went to

a community college so she actually

paved the way but I say that to say that

when we moved here we did not know the

language we did not know anyone in this

country we ended up in a tiny little

place called Parrish Florida south of

Tampa Florida and I didn't know anyone

that looked like me they went to college

or held a professional career and it

wasn't because I actually had a couple

guidance counselors and a lady from the
school board who actually believed in me

and got me into the upper bound program

and which changed my life and so I was

then afforded the opportunity to apply

and got accepted to different colleges

and universities well then the real

hurdle came which was having to tell my

mother that her youngest child female

was going to leave home right four hours

away it was unheard of and of course she

said no because it's you know she's she

didn't understand the importance of

having me go off and go to college so

she actually was hearing from my
teachers my guidance counselor's anybody

and everybody could speak to her to try

to encourage her to let me go basically

and my mother said no if she wants to

study she can go down the street to the

Community College but I got full ride

you know full scholarships and so they

felt my my counselors felt that it would

be a waste for me to let that just go

eventually my sister my hero put her

foot down and she said no she's going

she actually parked myself in her little

car and drove me off to college my

mother would not go to drop me off to


college so I ended up you know

00:07:19.959 --> 00:07:24.399
graduating and this and that and I

00:07:21.939 --> 00:07:27.579
started my federal career about ten

00:07:24.399 --> 00:07:30.549
years ago and my background is in Human

00:07:27.579 --> 00:07:33.969
Resources so I had access to data and I

00:07:30.550 --> 00:07:36.340
was just surprised at the fact that we

00:07:33.970 --> 00:07:38.530
had this population that kept growing

00:07:36.339 --> 00:07:40.839
you know the research was there the

00:07:38.529 --> 00:07:42.848
stats were there but yeah it wasn't

00:07:40.839 --> 00:07:45.728
representative across federal

00:07:42.848 --> 00:07:48.038
government and so I got involved with

00:07:45.728 --> 00:07:51.998
employee resource groups trying to bring

00:07:48.038 --> 00:07:53.558
this forward and trying to show listen

00:07:51.999 --> 00:07:55.360
the researchers there the stats are

00:07:53.559 --> 00:07:58.119
there there's something that we have to
do to prepare right we need to look forward and prepared the the next or the future workforce so needless to say nowadays my mother is the biggest advocate for education there is anybody and everybody she meets she introduces me as this is my daughter Maria she works at NASA right and then she talks to every kid that she meets every young person that she meets and encourages them to get that education and so you know that's just one story my story is not unique I'm sure a lot of us share that story
and I wanted to share today because like

I said it's not unique it's pretty common within the Hispanic community

which is why we have to keep pushing for education pushing for the importance of going into STEM fields pushing for just preparation in general not only within the Hispanic community but across the federal government across this nation

now I'm so excited to have actually mr. Elvis Cordova moderate this panel discussion for me today I actually know Elvis on a personal level he was one of the first people that I met when I first
moved to DC you know I moved to DC not knowing anyone and I was just impressed he so has such energies enthusiasm always willing to go above and beyond to help his community and so when I was looking for someone who could lead such a distinguished panel I couldn't think of anybody better than Elvis so let me share a little bit about mr. Cordova he was appointed by President Obama to serve various leadership roles at the US Department of Agriculture he was most recently served as acting under secretary at the US Department of
Agriculture where he hoped to strengthen

in advance U.S. agricultural interests

worth about a hundred billion dollars annually he oversaw food labeling programs including organic and biotechnology international trade

regulations and expansion of regional labeling programs

food systems he also serves as the white task force for Puerto Rico focusing on building private public partnerships

a USDA he also focused on the development and implementation of outreach strategies to foster diversity

inclusion and innovation as well as boosting investments aid aimed at
enhancing the delivery of our cultural education programs to underserved population he became a federal employee as when he entered a presidential management fellow program and then eventually went to energy where he worked on alternative energy economic development financial services and congressional public affairs you know outside of federal government he's been the vice president of public relations at tolkien media director of public American programs a self reliance foundation and a consultant for United
Nations so he's kind of a big deal I'm excited to he's here I do want to say though that we will have a question-and-answer portion later on and we know we have a lot of people logging on online so we encourage you to send in your questions so later on we will open it up and please feel free to email your questions we'll take about two or three questions you can email them at HQ - Ola atmail nasa.gov them I'm sure they'll put it up thank you again HQ - Ola at male nasa.gov and we will take those questions from our online
audience that being said please join me in welcoming our moderator and our panelists for today which is good access money and buenos dias to all of you it's a such a pleasure to be here I'll tell you a story in a minute but just know that since I was little I thought of being at NASA and so being here it's a real I keep pinching myself just make sure I'm not dreaming but I really want to thank Maria in the Ola team for putting together such an amazing event I know the work that you put into it the
thought you put into it and so I just  

272  
00:12:22,549 --> 00:12:27,289  
really want to thank you and just give  

273  
00:12:25,009 --> 00:12:30,590  
you a moment to shine because you and  

274  
00:12:27,289 --> 00:12:32,149  
your team I really thought this out  

275  
00:12:30,590 --> 00:12:33,889  
really well and I think what can come  

276  
00:12:32,149 --> 00:12:35,720  
out of this is going to be important so  

277  
00:12:33,889 --> 00:12:40,340  
if we could just please give them a  

278  
00:12:35,720 --> 00:12:42,379  
round of applause amazing work and on a  

279  
00:12:40,340 --> 00:12:44,149  
personal note thank you for helping a  

280  
00:12:42,379 --> 00:12:48,169  
personal dream come true and bringing me  

281  
00:12:44,149 --> 00:12:49,340  
here so one of the things we want to do  

282  
00:12:48,169 --> 00:12:51,169  
here today is we want to start a  

283  
00:12:49,340 --> 00:12:53,930  
conversation and we want this  

284  
00:12:51,169 --> 00:12:55,610  
conversation to later lead to action so  

285  
00:12:53,929 --> 00:12:57,709  
what we do here today is going to be
important because it'll instill the thoughts that can take action later and so we definitely want all of you to participate not only today but beyond today and really help continue this movement we hope that we'll be able to provide you with enough seeds for you all to grow some amazing endeavors later on and what I want to do is I want to take a moment to recognize our panel and have them do small in two quick intros about the work that they're doing because they're just absolutely stellar no pun intended and they're doing some
amazing things and I'd like to start off

who's the deputy center director for the

Steve is if you could give us a quick synopsis of your work good morning when

ods thank you very much for the opportunity to be here and look forward to the panel discussion

questions later on so I serve as center deputy director and NASA Glenn Research Center and in there I share responsibilities with the ascended director for planning organizing and
managing all the programs of projects

that are agency level assigned to the center so again thank you very much

thank you dr. Perez Davis second we have Sandra Alba Kauffman who is the deputy director for the earth science division at the science mission the tick turret and here directory pardon me my action came out okay that’s a headquarters please tell us a little bit about your work here at NASA thank you so much all a constant it is nice to be here celebrating Hispanic History Month with all of you so I am the deputy director
for the earth science division at NASA

headquarters and we oversee all of the

earth science aspects of the entire

agency for your science so when I first

took this position I was telling the

neighbor that I was gonna be working on

earth science and the first thing they

asked me was you're not going to launch

satellites anymore and of course we have

satellites you don't know you know in

earth science is an amazing program and

we are constantly looking at earth

looking at our home planet and what we

do and I share responsibilities with the

director and overseeing the entire
portfolio of our science missions and
not only the flight and the technology
and the research but also all the
societal benefits that entail in finding
out you know how this little planet that
we live in functions and works so thank you thank you very much next we have dr.
Gary Scott Corrado Vega who is yes
[Laughter]
it's a physical science at the NASA
Goddard Space Flight Center yes my name
is Jericho Java Vega call jasmine um but
nobody I got it knows me like that know
me asked jadi
because a lot easier actually call me Yari which I'm okay with that.

I've been I got it for 14 years I'm originally from Puerto Rico my little island which is suffering a little bit now and I do I'm actually the lead for the space bullet team there I work with the community coordinating modeling the Community Coordinating Modeling Center we do validation of models for space weather and we do space weather forecasting to protect NASA robotic missions and I love I love my job wonderful thank you very much next we have Marie Lake: Robles who is the
education outreach coordinator for the

NASA Langley Research Center thank you so much

my name is Marie Lai and I'm also from Puerto Rico so thank you so much for your prayers and help for our island it really means a lot

I'm an education specialist so I get to engage and inspire teachers and students all around the country and particularly with the globe program the Global Learning and observations to benefit the environment what it is is an international program where anybody can
enter their data if they follow the instructions that we have there and then you get to include your observations so that researchers can do their observations of the planet Earth and NASA Langley which we're celebrating 100 years right now we send you what a satellite observe if you send us your cloud observations so you get an email from NASA with your observations next to a satellite that was right on top of you at the same time as you did your observations so it's really powerful and I get to pay it forward which is always my passion wonderful thank you so much
Marie Leigh next we have Dr. Karolina Giri who is the director for STEM education at the University.

You may go hello and thank you for having me here. I am very excited like you are about NASA. I am excited. I am from Albuquerque, New Mexico. I work at the University of New Mexico Valencia branch, so it's a community college and at that college I direct a STEM grant which is reaching rural STEM students so for a living I've been writing grants and providing funding and direction for students to align them into the STEM field.
fields wonderful thank you very much

thank you

and that last but not least is it's a very impressive individual who's a close friend of mine in a mentor of mine Jose Antonio Tod no it's the president's EE or the Hispanic Heritage Foundation we all like to call him Tony so Tony please tell us a little bit about the great work that you do we focus on education workforce development public awareness and all through kind of across all of those things is connectivity leadership and innovation
but we also want to work backwards from what America's priorities are which end up being the most part in the STEM fields wonderful so as you can see we have an amazing diversity of folks not only in nationalities but also in their thoughts and so I promised you a personal story back when I first arrived into this country I grew up in this salvadora like Maria and it was funny because I used to what I remember watching cartoons that were from Japan there were these early magna cartoons about being
in outer space and exploring and when we

00:19:47,919 --> 00:19:53,230
migrated to the US due to the Civil War

444
00:19:50,319 --> 00:19:55,148
I remember that one of the first things

that greeted me and that made me feel

00:19:53,230 --> 00:19:57,370
comfortable were these cartoons right so

00:19:55,148 --> 00:19:59,379
these but they were now in English and

00:19:57,369 --> 00:20:00,939
believe it or not it was these cartoons

00:19:59,380 --> 00:20:02,470
that actually helped me learn English

00:20:00,940 --> 00:20:03,880
because I remembered what they were

00:20:02,470 --> 00:20:06,159
saying in Spanish and slowly things

00:20:03,880 --> 00:20:08,020
started to translate for me right so the

00:20:06,159 --> 00:20:09,880
International aspects of there's a

00:20:08,019 --> 00:20:11,710
cartoon in Japan being shown in Latin

00:20:09,880 --> 00:20:12,120
America

00:20:11,710 --> 00:20:15,569
greeting me in the United States talks
about the power of communication and so

later on when I was about to go to high

school I wrote a letter to NASA I said

hey I want to be an astronaut and I'm
gonna go to high school can you please
tell me what courses I should take so I
can prepare and at the time I got this
form back just a general form and had

checked off that said NASA normally
picks its astronauts from the scientific
and military community so we have no

specific curriculum for you to follow I

was like what's a curriculum need to

follow a curriculum I need to go find a
I tell that story because there wasn't a clear path for me to take that dream got deferred. My passion and interest in science and astronomy always remained, but I wasn't able to materialize it. So I wanted to really use that example as saying that for young kids, it's really important for them to have that cheeseball right and for that to be nurtured and for really a path forward to be developed so that they can follow it. And particularly, I think for Latinos, this is relevant.
immigrated to the United States and for that case all immigrants who immigrated to the United States are used to long journeys are used to going into the unknown and to some extent there they're almost children of two worlds right in terms of the old country and in the new country and adapting to that but also the generations right because the immigrants who come here and then have children here their children are staying here and so this generation of Latinos what we tend to call the first generation of Latinos is here to stay in
the US and we want to contribute and we

00:22:02,730 --> 00:22:08,099
love the US this is such this is our

00:22:05,430 --> 00:22:10,920
homeland right but our parents right we

00:22:08,099 --> 00:22:13,289
our language our customs still hearken

00:22:10,920 --> 00:22:17,160
back to this old world right so as

00:22:13,289 --> 00:22:20,069
Latinos it's almost like we have in our

00:22:17,160 --> 00:22:22,170
cultural Dannette DNA you know what it

00:22:20,069 --> 00:22:25,559
would take to partake in space

00:22:22,170 --> 00:22:25,890
exploration in the STEM fields become

00:22:25,559 --> 00:22:27,480
very

00:22:25,890 --> 00:22:31,110
important because they begin to draw

00:22:27,480 --> 00:22:33,809
that out but cooperation is really what

00:22:31,109 --> 00:22:36,089
leads to this and it's it's cooperation

00:22:33,809 --> 00:22:37,829
and it's how can we all be working

00:22:36,089 --> 00:22:39,599
together to fit in these different
pieces when we think about the greatest accomplishments in the United States among them is the space race right and that's when we had a sense of destiny that's when we had a sense of we're going to accomplish this we set a clear path a clear goal for ourselves and we put all our resources into it right it was the cooperation of many different fields it was the cooperation of many different peoples that brought that about and so we now have the opportunity to go to Mars it's within our grasp and really being able to take the space race
to the next level it's to some extent harkens back to what humanity's challenge is right from leaving the cradle of civilization and expanding throughout the globe and now looking at space and it's ironic because space is emptiness right but within that emptiness is really where we can find our destiny as a human race but that's going to take all of us working together and I think the space programs in science demands that right as you look at where we've been heading now we have an International Space Station right we
knew that one country couldn't do it

alone so how can countries work together

to get this accomplishment done and so

in that spirit we have a lot of work to do and so as Latinos now as we are part of this larger collective how do we contribute to this larger what's because to me space is the ultimate relay race right it's going to be multi-generational and it's going to take all of us really working together

putting our resources together and so our panel today can discuss about how we can really provide such a path forward
for young students high school students

and those going into college degrees and

how can we be really accomplishing this

so with that being said I wanted to

really have this conversation between

all of us and start exploring those

paths because there's a lot of work to

do

so maybe I can just kind of throw this

out at least to the group but let's

start with why STEM education important

and why particularly should we be

engaging the Latino community some would

say that we need to engage everybody yes

but if we can focus on why it is
important for Latinos to really be able
to step up and fulfill their and I open
it to whoever would like to take that
one first so you talk about you know
it's space exploration and you know
that's one of the drivers there's also
aeronautics so is technical leadership
how we can sustain the technical
leadership in this country so when you
look at how many Hispanic the Hispanic
population in you know United States you
have 17 18 percent that are Hispanic
so that's untapped potential we have to
find a way to tap that potential because
only 10 percent get to stem so that's a very small amount so first of all we have to retain that 10 percent because 10 percent is what get out of the you know high education institutions some of them stay in the STEM fields some of them do not stay in the stem field so we do have a responsibility to tap that potential you know the storytelling I think you know we heard some stories this morning I came from you know Puerto Rico so I have my story too but we have to use the power of the storytelling to really motivate and inspire that
generation that is possible that can be
done take words but again you mention
that there used to challenges it's not
like they don't know the challenge but
we have to provide the opportunities you
really on top that potential I also want
to say like like she said like the
storytelling it's very important as a
scientist when I do representation I
want to say what is my sciences and
explain it but I also want to say Who I
am so people can connect with me in a
different level
and that also started when I always did
education outreach because I really loved it

and one of the things that I always say is where I'm from and I usually say something in Spanish you know to get the conversation going and one time and one of the presentations on this small small kid came to meet a female and she said wow I didn't know I could become a scientist and that for me I'll actually hit my heart because she was telling me that I made an imprint on her you know I made that change on her mind and it has to do also by the culture that they come up you know I had a very supportive
family which I'm very blessed for but I did have people around me saying you're not gonna get to NASA you're not gonna work for now so you're not gonna be a scientist look at you because they have these stereotypes in their minds and they let that clear the path when you know you don't have to change who you are to actually do what you love so that's part of the whole idea get the story going so the kids actually understand where you come from how you became what you are and they can also do it I have to say kids is gonna be what
they cannot see too so we have to be role models and you know female Hispanic of course you know I like to show the girls that it can be done and are you always you know it Hispanics are the fastest-growing community in the United States and like Marla was saying unison untapped potential Solara girls who say well I'm female I'm Hispanic and maybe I cannot aspire to be you know a scientist or an engineer and I have made it my my life mission to you really encourage and empower all of these girls in particular in Hispanic communities that they really
can be whoever they want to be if they put forth the effort it's not easy I you know I come from Costa Rica I also immigrated to the United States and it wasn't easy to me seven years pass through college it was very hard but you know I did it and in and by sharing the storytelling sharing the stories and and how I was able to accomplish the dreams that I had you know it is a it is a way for these girls and I have had so many girls come and said you know I didn't know that I could and in and I'm a very trying and I'm
gonna stick the path and I'm gonna

671
00:29:14,220 --> 00:29:18,870
continue putting forth the effort you

672
00:29:16,829 --> 00:29:21,329
know so I saw it was very rewarding when

673
00:29:18,869 --> 00:29:23,039
you hear those kind of messages back

674
00:29:21,329 --> 00:29:25,500
that whatever little seeds you are

675
00:29:23,039 --> 00:29:27,269
planting out there are taking food and

676
00:29:25,500 --> 00:29:29,160
and they're gonna grow and we have to

677
00:29:27,269 --> 00:29:30,569
start with it in the mental school I

678
00:29:29,160 --> 00:29:33,529
think that's where you plant those seeds

679
00:29:30,569 --> 00:29:36,569
I got it

680
00:29:33,529 --> 00:29:38,190
inspired to buy you know to work on the

681
00:29:36,569 --> 00:29:40,470
space program when I was 7 years old and

682
00:29:38,190 --> 00:29:43,529
I mean 75 years old I don't know we know

683
00:29:40,470 --> 00:29:46,170
but we wanted that age so we have to

684
00:29:43,529 --> 00:29:48,599
plant Oct 10 and then it slowly nurtured
them so they can grow and developing we

are beautiful blooming flowers and

everything you know that question please

yes two big areas one is that as a

community we've been recently devalued

and defined by others in order to find

ourselves and present that value

proposition to America that we as

Latinos or as immigrants or as women

offer we have to work backwards from

what America needs the most and right

now there's half a million jobs unfilled

in the tech space I'll just stick to one

part of the stem areas there's 1.1
699 00:30:25,500 --> 00:30:30,690
million that will have to be filled over

700 00:30:26,789 --> 00:30:32,250
next three years so as much as Latinos

701 00:30:30,690 --> 00:30:34,170
traditionally have always answered the

702 00:30:32,250 --> 00:30:36,809
call in terms of jobs that need to be

703 00:30:34,170 --> 00:30:38,940
done in America well fight your wars

704 00:30:36,809 --> 00:30:41,159
will build your bridges will build your

705 00:30:38,940 --> 00:30:43,440
homes will take care of your children

706 00:30:41,160 --> 00:30:47,490
will pick your food will serve your food

707 00:30:43,440 --> 00:30:49,799
whatever it takes we nobly do it now the

708 00:30:47,490 --> 00:30:52,200
great need for the workforce is in the

709 00:30:49,799 --> 00:30:55,409
STEM fields and once again we'll be able

710 00:30:52,200 --> 00:30:57,660
to fill those areas and there's nothing

711 00:30:55,410 --> 00:31:00,690
America can do we need they need us and

712 00:30:57,660 --> 00:31:03,360
we need America so it is a
responsibility that we all have as my

mother told me you have a greater

responsibility than somebody that's born

here because we had to fight to get

here you owe America a lot more than

America Lucy who and I think that we

carry that with us in our hearts and it

drives us in terms of what those

contributions are but as of right now

10,000 baby boomers reached retirement

age every single day over the next

decade 10,000 who's gonna fill that gap

youngest segment of the population

fastest-growing segment of the
population seven out of ten new jobs in

America will be filled by Latinos new

jobs so it's two out of three we want to

make sure that those jobs are in the

STEM fields again to work backwards from

what America and we're always up to the

task and we have to make sure that our

kids are getting that cheespa of

inspiration from an early early stage we

were just talking about how my kids we

put in front of them whether it was I

think was like Angry Birds or something

that actually was coding even though

they thought they were playing video

games it wasn't it was a form of coding
and at our organization we always try to look at things where Latinos over-index in terms of playing video games that we do programs where we engage kids by saying you like to play video games how about developing one and that leads into cyber opportunities and encoding and all these other things so I think those are critical pieces to me is that we need to define ourselves and to find that value that we offer America and the way to do that is work backwards from what America needs most which are the STEM jobs and you bring an interesting point
on it because Latinos are the fastest-growing in terms of you know early childhood education and in pre high school you know there's 25% of the population is made up on Latinos and Latino graduation rates are actually increasing which is great to see but this there's a gap in the STEM fields and so I wanted to engage our remaining panelists why do you think this gap exists and of course it's open to all but I wanted to give Dr. Catalina and Madol a chance to talk well I actually was gonna add to your point and
also to answer this question is the other thing that we see here in the United States is that we are in knowledge economy we are counting on that knowledge economy to make us the innovators to continue to push us forward to come up with the next best thing and it always well it is seemingly always in an area of stem that all the great innovations are coming from if most of our hispanic population is not able to participate in that knowledge economy because they are finishing high.
school now at a better rate which is

good however they're still not participating in the economy in the way

that the world needs us to and it's not just the United States but we're

innovators were thinkers we create solutions we're problem solvers and if we aren't educating or if that gap continues Latinos will continue to do

well but they also need their place in the knowledge economy they need to have the opportunity to innovate and it was brought up the need for a term that an educator used in the 90s of windows and mirrors so that they can see
someone that looks like them speaks like them went through similar situations so that they can relate so when we go and say you can have a stem opportunity you can work at NASA they see it as an actual possibility right the other one are windows that we need to show them the opportunities that exist and through that we really need to work with the teachers of these students we need to work the communities and the family so really involving everybody together and the beauty of stem is that standeth and everything right we have basically
supercomputers in our hands right our
phones right that is stem they are ready
doing stem so it's really supporting
those teachers the community that
parents to say this is already stem and
you're doing it and you can go forward
with it I think that's very important
and necessary it's wonderful
yeah um how important how important is
stem curriculum in early learning for
Hispanic communities and how do you
think we can be doing better job of
preparing our students for the STEM
fields when you get the kids when
they're really early that's when you plant the seed and it's very interesting

because when you give presentations to different levels a kids you see how they change their minds at the beginning

they're always like exciting wow I love that science and you think it's really excited about everything that you talk about then in middle school they start asking more about how that happens you know everything like that and then in high school then they do real a little bit because now they're interested in how much money you make that's reality
that's the questions that I get how much

money do you make

and I said well I mean I wanted to be

tourism when I was in high school

because I I always wanted to be a

scientist when I was a kid but then I

got really real of myself and in high

school I thought about doing tourism but

then once one teacher said no you good a

science go to science so I started my

undergrad in physics so I decided to be

poor but you know everybody that the

sign knows that it's not a feels to be

rich is you do it because you love it

right and when I gave that presentation
to the high school where they started

saying you know how much you make I said

oh my god

yeah we need to plant a seed on the

smallest ones but we also need to keep

them in their path while they go through

the whole school time right because at

the high school level I wish I had a

scientist go to my school and say what

did they do and how they worked out and say

that they work for NASA because that

would have actually given me a little

bit more of push off keep doing it what

I did right so I think it's really
important to actually for us to be mentors all the time

and like you said she said it's not only to the kids it's also to the teachers we also have to communicate to the teachers

so the teachers can give that kind of impact and communication to this kid the kids when they work with them

every single day school is a second home so that's where they learn the most

right yes no you can make a million dollars more in a stem field than in a non stem field so there there is I was going to say that I usually get this

going to say that I usually get this
from kids well I'm not that good at math

it's not whether you're good or bad at math it's how much ever you want to put

might take a little more a little less

but you know if you want something you can do it and the other thing is that they are afraid you know we're a little failure and the first time you fail calculus you know you're like I'm not good at this well what do you do you take it again until you learn it I took a class three times and I know I needed it for
engineering and I wasn't gonna be an engineer if I wasn't gonna invite didn't take electromagnetic theory and by the third time I took it I learned it thank God but it is the the biggest issue that we have is retaining the kids in those careers you know once they fail or they find that they are not doing so well in a class that is required then they drop out and then go into some other field that is a lot easier so we have to encourage them to stick the path and it's hard it's not easy but they can do it if they put forth a year for then I know you know some of us had to go
through a lot of things to do it but it

is it is it is and that actually

happened to me too I was in an undergrad

and I was taking physics for the first
time graduated uh you know undergrad

physics and I took the first exam and

said no this is not for me I’m gonna do

electrical engineer because that’s what

I like I like electricity everything

that is laughs attract and when that

time I actually had to when I wanted to

withdraw from the whole major you had

the professor had to sign it the one

that it was the chair of the faculty and
he was the same professor that was giving me the physics course and he said no you're not going and I said well yeah I need you to sign this and he's like no I'm not gonna sign and I said I have a senior class he's like yeah from the first exam take it easy cuz you know the first examples always the the hardest you're gonna be a great physicist one day and that was a turn-on point for me because if he hadn't done that who knows where you know I wouldn't know but right now I work for NASA and I'm a scientist we
face weather so it's so you said something really important which was the mentors and again with our theme of you know how do we find a path forward I know that Marla and Sandra you two have had incredible careers very distinguished careers and really moving high up the ranks in government could you talk a little bit about your personal journeys and what advice you would have for others who want to emulate that who want to follow in your footsteps or develop and carve a path for themselves as they move forward with
their careers so the first thing mentors let's start with mentors I think
mentors are very important every journey it doesn't matter personal professional
but they stick with the Sam
when I was growing up in Puerto Rico I didn't have mentors or role models
individuals that were engineers but as
many of them have taught I write chemistry and math and one good day and
this is true story I pull out a book and
I look at the definition of an engineer and at that point in time there was not
as many type of engineers that we have now so there was just the basic you know
electrical you know chemical civil

engineer so I look at those and I said

oh I like chemistry and I like math so

I'm gonna be a chemical engineer so I

went to my chemistry teacher very

excited about I know what I'm gonna be

I'm gonna be a chemical engineer and my

teacher said why do you want to be that

you can't not be an engineer so my heart

was broken but I just like many of us

you know it's just ok listen but not

listen that's harming to be an a

chemical engineer so I went to the only

engineer school at that point in Puerto
Rico which is Miss University of Puerto Rico Mayaguez

number of engineer school these days at that point in time there was only one and I started Chemical Engineering so looking back I could be very wrong because again I didn't have the benefit of having role models or other engineers around I had been very fortunate to have the career that I have and I get there now - my responsibility so I truly believe on Mentors I have mentors or my career since I started NASA and some of them has stick through the journey some
of them has been you know for a period of time but I think the value of mentorship is incredible the other thing is once you start getting in your career you also have the responsibility now to pay back you gotta be a mentor you have to be a mentor I think that's the way that one cap some of that knowledge that is out there that's the way that we inspire and motivate people it is not just for students is also in the workplace I think the value of mentorship is incredible I can tell you that every time I mentor someone I learn
as much as hopefully they learn from me

because it is a two-way street

it's not just one-way street the value

of mentorship is incredible so I really

ask everyone in this room and the ones

that I listen please find time to mentor

find the time to mentor someone at you

know school level universities at the

workplace and or you know it's one of

those things that you never know what

you're gonna get out of it sometimes it

doesn't work so let's be clear there's

something about the chemistry between

the individuals but that also is a

learning by itself so that would be you
know my advice to individuals find someone that is in your career path

someone that is not because sometimes we get very narrow in terms of we understand our world and we forgot that there's all the worlds out there so find someone also that is not in your field because that's the way to make sure that you connect and you also express the value of what in stem and how all these fields are related I think you know it was mentioned everything is stem is everywhere so the value of Technology is
in every single step that we take these
days and so that so that would be my my
advice Sandra please no I didn't have
mentors when I was little I only had a
bold dream and a mother who was very
couraging and my mother didn't finish
high school but to her you know she knew
that the ticket to be you know how have
a life and everything was said to
education to do education and to really
be whoever you wanted to be and that
when I told her I wanted to go to the
moon and she says sure you know put your
mind to it and so I tried to go to the
moon but you know the the only time when

I first had somebody who could be a mentor or potential mentor was a high school math teacher and she I had a conversation was heard and you know I'd like math and it wasn't that I was good at it I just worked hard and that she said you know you oughta look at the studying on engineering and she says I tried and I couldn't because you know I'm a woman and whatever but maybe nowadays you can well when I graduated and went to college I sort of happened but Marla happened they told me I
couldn't be an engineer because I was a woman so you know I spent they let me study Industrial Engineering which it was still engineering but in and they said it was the ladylike engineering because there were four girls in the pool but I still wanted to study Electrical and even after doing a little research as to their various disciplines and everything I was bound and determined that I wanted to be an electrical engineer so I tried to transfer a couple of times and they still turn me down so my heart was broken
like Marlisa, and that's when I decided to come to the States and you know I threw away basically seven semesters of Education I had in Costa Rica and I changed majors and I finally graduated with a double major in electrical engineering and physics.

You know to be seven years start the path you know but you know I've always tried to find mentors I've always try to seek out the help of others you have to speak up if you need help you cannot you know people don't know that you need help if
you don't if you need help go and ask

for the help you know people don't read

minds and and also you know mentors are

not there waiting for mentees to come to

them you know go and ask people and and

I've always tried to have more than one

mentor and the best mentors that I have

ever had other mentors that are

listening to me that are really trying

to extract my thoughts and not tell me

what to do but they help me figure it

out on my own how I'm going to do things

my own way and you know so in and I also

like to mentor people now that did I
have that I mean you know growing up

I guess in my career and you don't have so

many years here and you know the

up-and-coming generation and and I try
to kind of do the same thing that my

older mentor said you know listen to

them and try to ask them questions so

they can figure out their own path you

know cause it's not what I tell them to

do that it's going to make or break them

it's what they figured out how they're

going to proceed on on their own but

mentorship mentoring is so important

and asking for help if you don't know

and
something you can ask for help I mean

00:47:49,909 --> 00:47:53,750
they're important you know there are a

00:47:51,650 --> 00:47:56,599
lot of angels out there who are willing

00:47:53,750 --> 00:47:58,250
to help you succeed and help you with

00:47:56,599 --> 00:48:01,338
whatever you know things that you need

00:47:58,250 --> 00:48:03,949
so don't stop asking questions and

00:48:01,338 --> 00:48:06,019
don't stop seeking Mentors I know Tony

00:48:03,949 --> 00:48:07,639
you wanted to chime in on that and what

00:48:06,019 --> 00:48:09,230
I wanted to do is also present an

00:48:07,639 --> 00:48:12,440
additional question for you and Marie

00:48:09,230 --> 00:48:14,329
lay in terms of the work that you all

00:48:12,440 --> 00:48:15,740
that you do at Hispanic Heritage

00:48:14,329 --> 00:48:17,750
Foundation deals a lot with these

00:48:15,739 --> 00:48:20,858
competitions right coding competition

00:48:17,750 --> 00:48:23,659
and stem so I wanted you also comment on
you know how important are these and how are they engaging that next generation and inspiring them and opening doors for them so the first thing is going back to the role model thing it's really important that we also promote young role models there's a young woman named Sophia Sanchez Mayas who is now actually at JPL even though she's a junior in college and she's working there she was quoted for the Mars rover at 16 years old she developed I think the most efficient way of turning algae into a biofuel
that's ever been done when she was like 14 years old that in Las Cruces New Mexico so Sofia to me is more important than anyone to be a role model because she's currently still a teenager and having a huge impact through our organization when we awarded her with the Youth Award part of it was sending out a public awareness campaign based on her accomplishments and on her radiating that possibilities that everyone can have through natural curiosity so I remember setting up a panel and I had ellen ochoa on the panel and I had
Sophia and at that time I think she was 17 and Ellen Ochoa of course has accomplished as you can get and it was interesting as she walked up and said you know you're my role model and I said you know it's even more important that you're somebody's role model right now because of everything that she's accomplished we work that into our programs so for instance I laid out that a who's a sophomore to start her sophomore year at Georgetown in computer science and is also focusing on cyber security
this young lady is from Rio Grande Valley received their fellowship for the video gaming then received our Youth Award brought her up to Washington DC and she wants to do policy kind of STEM policy and computer science policy well she's teaching our code as a second language program in the DC area at seven at 18 years old and she's the one that's going for the different schools and and introducing kids to coding so it's really important that programmatically that you're out there pushing the STEM fields as a viable option for youth and a lot of times it's really important
00:50:38,800 --> 00:50:43,360
that you have somebody that's near their
age as much as you appreciate a male 70
year old X engineer teaching a fifteen
year old girl I think it's more
important to have a 19 20 21 year old
young woman teaching the girls about
stem and that's the importance of all of
you to being latina to have that resume
the other thing that we're doing and it
had to give
to Jasmine right there someone I know
who's our overseas our programs I mean
she just developed this program where we
go into 15 different communities and the
kids actually can hack a career in stem
and work with experts like some of you
to act and with a curriculum to actually
work through what their career look like
so all of you were now gonna be hit on
to be part of this program and young
people actually work through what that
career would look like and it really
lays out a path but they then get to go
back and do research and see what those
careers will be like and I'm hearing
that a lot in terms of the exposure that
you had luckily your Chi saludos and
just went ahead somebody was trying to
discourage you but we want to make sure you encourage and all of you play such a significant role in doing and this is a great segue because these competitions give students and the teachers an opportunity of what it looks in real life you can't really aspire to be a scientist if you don't see what it is like you can't aspire to be an engineer especially when you're in high school if you don't see what it's like so these competitions more than just competing is really helping each other learning that it's an actual team competition we...
didn't land Rovers on Mars by one just

00:52:21,030 --> 00:52:26,010
individual it was teams it was different

00:52:23,699 --> 00:52:30,149
centers so it really brings that

00:52:26,010 --> 00:52:33,810
opportunity to the forefront and also

00:52:30,150 --> 00:52:36,990
makes them more secure that they can

00:52:33,809 --> 00:52:38,480
actually do it and see other people role

00:52:36,989 --> 00:52:40,349
models they can become role models

00:52:38,480 --> 00:52:43,079
themselves right one of my teachers

00:52:40,349 --> 00:52:45,839
calls it a co-op Atisha n-- you're

00:52:43,079 --> 00:52:49,949
cooperating with the other teams but

00:52:45,840 --> 00:52:53,220
it's still a competition so as we know

00:52:49,949 --> 00:52:54,960
that we learn different ways these stem

00:52:53,219 --> 00:52:58,139
competitions are not so much about

00:52:54,960 --> 00:53:01,590
competitions but about bringing what it

00:53:01,590 --> 00:53:03,449
is like and really focusing on how we
need to support each other and lift everybody up you know time really does fly when you’re having fun and I know that we’re reaching the end of this particular segment before you have some questions from the audience and those watching on the livestream but I wanted to give that last question to Yari in Karolina and I know that yeah you were the co-hosts for the solar eclipse television television program that NASA put together and I wanted to focus in on the communication piece and also Karolina right how can we
be using these different methods of communication to be doing better outreach to inspiring folks and to just think of new ways of really being able to engage a young public in a public that maybe had not thought about science and saying oh I can be part of this if you could talk a little bit about that please actually like to piggyback on what she said earlier as far as being present and being just a person that it's very approachable that students can talk to and so forth I find that with a lot of the university students when they
come across the class that they are now struggling with oh I guess science wasn't for me they don't hear enough how many times an accomplished scientist had to take a class over you know how many parties they may have missed how much work they didn't get to do and the real issue is many of the students that I work with it's again it's a it's a trade-off if I am putting this much time and energy into my school how do I have time and energy for this part-time job and energy into my school how do I have time and energy for this part-time job that I absolutely need because I don't have gas in my car I cannot get to
school without gas in my car so I see

00:55:02,969 --> 00:55:10,708 that students are are trying to balance

00:55:06,748 --> 00:55:14,238 these items and so I I think that the

00:55:10,708 --> 00:55:18,719 communication to them is extremely

00:55:14,239 --> 00:55:21,389 important and the trust it's not only to

00:55:18,719 --> 00:55:23,030 the students but to their parents they

00:55:21,389 --> 00:55:25,879 have to trust

00:55:23,030 --> 00:55:27,650 that this is all gonna be worth it and I

00:55:25,880 --> 00:55:29,660 think that a lot of what you do and

00:55:27,650 --> 00:55:33,320 being very present for the students is

00:55:29,659 --> 00:55:34,909 extremely important thank you and it's a

00:55:33,320 --> 00:55:36,350 different environment right high school

00:55:34,909 --> 00:55:38,719 is very different then you go to college

00:55:36,349 --> 00:55:40,369 and I mean it's like the trader I

00:55:38,719 --> 00:55:42,769 thought the work that you have to do is
super different and some kids just get shocked by that and they have to understand that you have to work hard if what to do what you really love to do talking about the clips one of the things that was that I did very innocent but I really wanted people to know that I was from Puerto Rico I actually were a teacher that was from my university and I had the logo of the University of Puerto Rico Mayaguez and the thing is that I innocently write I thought oh yeah there niversity is gonna find out in a couple days that I wore the shirt
while I was there doing the TV show my phone didn't stop vibrating and it was all people from my aiways sending texts to friends that friends that knew me and then my friends were texting me and like my Facebook account was you know bombarded with posts and it was amazing and I thought wow I knew that it was gonna be an impact but I didn't expect it to be that big and it’s because I took the opportunity that I had being in a TV show right to say I am here you can also be here but like I said it was an amazing and unexpected reaction
wonderful well we definitely want to give the audience both here and watching on live stream to be able to participate in this conversation so there's a mic going around if there are any questions if you can please raise your hand and we'll make sure that the mic goes to you and if there I see one in the back and specifically Tony making the point of the million dollar job on stems I think it's important and a one-year opinion to give kids choices so it was very interesting how Elvis asked NASA what I need to do and you got an answer
saying oh you and I know NASA is a

website of careers what is your opinion

on when you're doing these presentations
to kids to provide them with a wide
array of options like range from just
doing like a two-year tech all the way
through phd's because in each of those
steps you have you can tap into
different workforces and so maybe a PhD
is not for everybody and maybe a
two-year degrees not for everybody but
when they have their eye on NASA what is
the range that they can think in access
to get a job because the question that
you get in high school how much money am
I gonna make it's a very real question kids are gonna have to pay for college if they want to go to college is it worth it I am a scientist I'm a PhD and I find it sometimes hard to encourage young women to pursue a PhD and I am compelled to tell them how what are the challenges they're gonna find and I think if a person is very it's really truly inspired and that is what they want to do they will follow their dream but it is I find that it we need to be honest with them and let them know look this is the challenge that you're gonna
have that you're gonna find you're not

gonna be rich you're not gonna be poor

but this is your spectrum so when I hear

your opinion and what are the dangers or

what are the pros and cons between of

starting to give kids this information

it's like you said there's pros and cons

right to telling the information about

that's challenges like when you say a

kid say I want to be a scientist and you

have to tell them that you need a PhD to

be a scientist and probably you be at

school longer that if you

wanna be an engineer but you also have
to give them that diverse you know curriculum like you you want to be scientist and yes you can do this but also you know you can also do some kind of scientist you do a lot of math but you give them that kind of like introduction to the reality of things right and engineers work with scientists all the time and vice versa that's how NASA is built and not only that people also think that NASA is composed by only scientists and engineers that's wrong there's a lot of Business Administration people here and a lot of people don't
know that and that's also another

1412
01:00:09,400 --> 01:00:14,289
opportunity for them to come to work

1413
01:00:11,469 --> 01:00:17,859
with NASA without people controlling and

1414
01:00:14,289 --> 01:00:19,840
having that kind of ability to do the

1415
01:00:17,860 --> 01:00:21,730
management of the projects scientist

1416
01:00:19,840 --> 01:00:23,619
engineer won't be able to put things out

1417
01:00:21,730 --> 01:00:27,760
there right we need everybody working

1418
01:00:23,619 --> 01:00:31,119
together I also tell them my story like

1419
01:00:27,760 --> 01:00:33,310
it wasn't I left my Island to come here

1420
01:00:31,119 --> 01:00:35,170
to do my PhD and I had a master's

1421
01:00:33,309 --> 01:00:38,289
physics master's from University of

1422
01:00:35,170 --> 01:00:41,079
Puerto Rico but I want to be a scientist

1423
01:00:38,289 --> 01:00:43,389
so I had to have my PhD so I had to

1424
01:00:41,079 --> 01:00:45,130
leave my Island not only that had to go

1425
01:00:43,389 --> 01:00:47,980
back and forth because I was in a
program and every time I did that I had to rent furniture you know move around all the time so it wasn't an easy journey so I think like I said you know being personal tell them your own journey so they know it's not gonna be easy and also given that diverse curriculum like you can be all this to work for NASA I think you helped can I answer that too and I have to go back to my own kids because I mean you wanna give this you wanna treat these kids and give them the same advice that you will give your own your own kids up to voice
and my oldest son is on his third year on his PhD and he has an undergraduate in psychology and when he said he was going to be a psychologist you know we just kind of my husband is a physicist and I'm engineering you know and but you know he decided he wanted to he doesn't want to be a doctor than that you know we tried to give him the best honest advice that we could you know it wasn't gonna be easy if you really wanted to do something with psychology he had to go for an advanced degree and this is you know what you do and he did his research
and he

to get a PhD in cognitive systems which
is sort of like the marriage between
computers in the brain and don't ask me
what he's doing now but and my youngest
is different you know the kids are all
different and you know so you sometimes
you want to give them the best advice
and the best honest advice but again you
know one back to the mentoring you know
help them form their own opinions and
how it's gonna work for them because I
mean I know my kids and I know what kind
of advice I can give them because I know
them but I don't know all of these kids

and you have to extract all that from

them so they can form their own ideas as

to what is it the day how hard they want
to work do they really have what it

takes to get a PhD or not that's it

really you know do they really have you

know want to be an engineer or what a

scientist or a mathematician

some of them are really good musicians

and that's all they want to do and it

doesn't matter you know what you tell

them they are not going to go in all

these careers you know but you want them
to really pursue their passion and do
something with their lives and be productive members of society so and so

I would like to add something a little bit different I think you know in options there's also the power of collaborations because we and NASA we have a lot of areas that we influence with them on technology but sometimes is difficult difficult for us to translate that to students so I think that's the power of relationship you know with universities with our K to 12 with organizations nonprofit organizations that really get the
message out we can't take the message to some level but I think we need that bridge to make sure to provide the options in a way that they understand I think you know I resonate with the curriculum right we talk about curriculum like something that everybody knows well so nice that's the first question what is the curriculum right so I think we need to establish that relationship to do the translation and really be able to reach out to that population and I think it's really powerful as we talk about role models
that rarely is that a straight narrow path it's always six zagging you go to over here you go over there and at the end it all makes sense like I studied music then I studied chemistry in education but now it all makes sense and rarely is it straight and I think that is very can depress people thinking that it's a straight path and that's not the reality bring the life will bring you all the opportunities that you'll need for that future you and I know that we have a question from our livestream we have a question from our livestream
audience so Maria please we're talking

about getting kids encouraged and

motivating and um

so on and so forth but I think it's also

very important for them to empower

themselves through research right you

find everything online NASA we have

unlimited resources online in terms of

getting a career somebody asked well how

do you get them in the door first of all

once they you know we have to be very

involved in the communities and colleges

and universities we have to be planting

those seeds and harvest so that you can

then harvest them right the way to bring
them into the workforce is for them to become as competitive as possible so just empower yourself to research find out what it takes to obtain a job learn about our different centers the different opportunities we have we have opportunities across the board from administration to science engineering you know from A through Z we have careers so yes you can be a scientist yes you can be an engineer but you can also be an accountant you can be a procurement analyst you can be so on and so forth you know what I mean but I did
want to ask a question going into the
career path my question is for dr. Marla
so once you have those individuals in
the career pipeline you as
the deputy director of our clean
Research Center what do you look for
when you're looking for talent for
workforce how do you cultivate those
employees how do you grow your workforce
so that's an excellent question
you know one thing is bringing people
right we talked about that untapped
potential we bring the potential here so
now we have responsibility to make sure
that we provide that career growth

so couple of things that we haven't

talked about diversity inclusion we talk

a lot about diversity that's great but

we also have to take steps toward

inclusion and that were really you

develop the people skills and knowledge

so there's two two-way street again here

one is the organization has a

responsibility to foster diversity and

inclusion and empowerment that really

promote and poster you got it develop

yourself and then there's the individual

responsibility sometimes you know we get
the same way like we're going through

01:06:58,349 --> 01:07:03,298
high school it's like a cycle we get

01:07:01,199 --> 01:07:05,039
discouraged there's frustration in the

01:07:03,298 --> 01:07:06,509
workplace it's not like you can in the

01:07:05,039 --> 01:07:08,910
workplace and everything is great

01:07:06,509 --> 01:07:11,519
there's gonna be challenges so you have

01:07:08,909 --> 01:07:13,649
to have to learn about those challenges

01:07:11,518 --> 01:07:16,468
and trying to figure out where is your

01:07:13,650 --> 01:07:19,349
path within your career because not

01:07:16,469 --> 01:07:21,599
everybody wants to be you know a PhD

01:07:19,349 --> 01:07:23,838
scientist right some people are okay

01:07:21,599 --> 01:07:26,479
dedicate they're on the grass they get

01:07:23,838 --> 01:07:29,159
outstanding contributions to the NASA

01:07:26,478 --> 01:07:31,498
there's other individuals that have this

01:07:29,159 --> 01:07:33,958
need to continue their development and I
really think that that is really very critical having that self motivation

self-awareness to grow with your career

because things change you have to adapt

and you have to strive to be better than what you are today but there's also the organization component anyone that has a position also is in a leadership position as an a leader you have to make sure that you recognize that you also influence the environment and you have to have an environment that is inclusive you have to have an environment that you reward people
for their development I think that's how we make sure that we continue the career development so is both ways individual and organization thank you and I know that we have an online question yes good morning so we've had some really good comments on there that we won't happy to share with you but one particular question is for the entire panel but in particular for dr. Karolina what would be your advice for young people who find that they have family pressure to stay near their other family because as Latinos and immigrants in general we
culturally experience pressure to stay near our families regardless of local opportunity and this came in from Doris thank you that's a very real and daily occurrence at the campus that I work at and that at actually at all of the campuses that I've been on is it is a big scary world and if you're coming from a family or community where resources are scarce and I know that is the case with everyone here you speaking and hearing about your stories but from a rural community when your presence is needed nearby to assist the family or to
be part of that community while you're
going to school there's a lot of
pressure on these students and the
thought of leaving the state to go to an
internship even to be gone for a whole
summer that is a very big ordeal for the
family because they may not have the
funds to purchase even clothing and
airline tickets so that you can
participate in the internship and so
oftentimes students are discouraged in
taking advantage of opportunities that
would be game changers in their life and
in their career and their families are
afraid of losing them their families are
afraid of what might

to them out there and that they would

not be there to support them so those

are very real and the way that that

those can be overcome is one by building

confidence with the families so that

means that here's a college student and

it's twenty-two years old and wants to

go on an internship that might mean that

I'm talking to the students parents that

might mean that I'm talking to family

and trying to build their confidence and

coaching the student on what they can

tell their family and how they can come
up with making ends meet to be able to
take advantage of internships or going
on to graduate school I was director of
a Ronald E McNair program and one of the
key components with that program was to
have the students do undergraduate
research and then take their research
and present it out-of-state at a
conference when I traveled with these
students many of them had never been on
an airplane they had never been in an
airport that had a moving sidewalk oh my
goodness so but yet they were very well
educated students were brilliant so it's
those experiences that make a difference

and all I can say to our callers or

you just have to build their confidence

that it will be okay and the little

things that seem like barriers they're

not that much we can find a way past

that barrier because guess what there'll

be another one down the road and now

you'll know how to solve that one too

well folks unfortunately the time has

come for us to really begin wrapping up

this segment of the program so we wanted

to number one thank our distinguished

panelists for their thoughts and

panelists for their thoughts and

01:12:23,859 --> 01:12:29,448
their time and dedication you all are

01:12:27,319 --> 01:12:31,908
amazing heroes and I applaud you for the

01:12:29,448 --> 01:12:34,279
work that you're doing and continue and

01:12:31,908 --> 01:12:36,920
for the rest of us here how can we

01:12:34,279 --> 01:12:39,050
really step up right what can we be

01:12:36,920 --> 01:12:41,359
doing to help each other out what can we

01:12:39,050 --> 01:12:43,579
do in to inspire each other and what can

01:12:41,359 --> 01:12:47,630
we be really doing to keep on dreaming

01:12:43,578 --> 01:12:49,069
right because dreams do come true so

01:12:47,630 --> 01:12:52,609
thank you very much for everybody who

01:12:49,069 --> 01:12:54,408
participated and I will turn it now to

01:12:52,609 --> 01:12:55,009
Barbara who will take us to the next

01:12:54,408 --> 01:12:57,859
segment

01:12:55,010 --> 01:13:00,380
Ola I'm Barbara Trujillo I'm proud to be

01:12:57,859 --> 01:13:03,348
serving as the Ola vice chair here at
01:13:00,380 --> 01:13:09,559
NASA headquarters can I just say Wow

01:13:03,349 --> 01:13:12,289
wasn't that a great panel I just want to

01:13:09,559 --> 01:13:14,000
teach you for sharing your expertise

01:13:12,289 --> 01:13:15,889
your passion you can feel the passion

01:13:14,000 --> 01:13:18,649
and answering the questions and talking

01:13:15,889 --> 01:13:20,659
about your stories and to support the

01:13:18,649 --> 01:13:22,549
Latino stem up I know that I'm inspired

01:13:20,658 --> 01:13:24,618
by your accomplishments I came from Las

01:13:22,550 --> 01:13:29,630
Cruces New Mexico and I made it to NASA

01:13:24,618 --> 01:13:31,609
- let me just say that and I think

01:13:29,630 --> 01:13:33,800
you're making a difference for the

01:13:31,609 --> 01:13:36,439
future you know for our country for the

01:13:33,800 --> 01:13:38,480
earth for future scientists

01:13:36,439 --> 01:13:41,868
technologists engineers and
mathematicians so again please join me

in another round of applause for these

distinguished panel members moderator

I also like to acknowledge the support

for many others that helped us make this

event possible our old a champion who

couldn't be with us today acting

associate deputy administrator Christian

Paquin our olla sponsor J Han the

executive director for headquarters

operation crystal Moulton our director

for equal opportunity and diversity

management division and her staff the

media teams from headquarters and from
Goddard the Office of Communications the graphics team and many other volunteers that stepped up to help us and I'd be remiss if I wouldn't thank Maria Santos our Ola chair for her vision and leadership and for all the other birds that were here to support us so next I like to bring Krystal she is going to present to the moderator and our panel members a token of our appreciation good morning everyone again my name is crystal Milton and I'm the director of the equal opportunity and diversity management division here at
NASA headquarters and I just like to say

1754
01:14:58,429 --> 01:15:05,480
I was truly inspired today fantastic

1755
01:15:02,059 --> 01:15:08,329
panel fantastic discussion you all

1756
01:15:05,479 --> 01:15:11,109
touched on so many areas that we can all

1757
01:15:08,328 --> 01:15:14,299
glean some knowledge and insight

1758
01:15:11,109 --> 01:15:16,670
inspiration to take us forward to engage

1759
01:15:14,300 --> 01:15:18,199
our young people so thank you very very

1760
01:15:16,670 --> 01:15:19,940
much for your presence we really

1761
01:15:18,198 --> 01:15:23,928
appreciate you today thank you so much

1762
01:15:19,939 --> 01:15:28,669
and so I had the pleasure of presenting

1763
01:15:23,929 --> 01:15:33,399
a token of our appreciation I'm going to

1764
01:15:28,670 --> 01:15:35,929
read the the Mont the inscription and

1765
01:15:33,399 --> 01:15:37,698
we'll be presenting them to you all and

1766
01:15:35,929 --> 01:15:41,920
I understand I'm going to present and

1767
01:15:37,698 --> 01:15:45,219
then the panel will step from the the
stage so it reads for your exceptional

contribution and participation in the

Hispanic outreach and leadership

Alliance celebration of Hispanic

Heritage Month at NASA headquarters

October 12 2017 it's signed by our

executive director mr. J M hen office of

headquarters operations NASA so and Jay

could not be here today

again we appreciate you and we just want

to give you a token of our appreciation

so you all receive one of these

yes thank you so much and we have
carrying cases for these fantastic
phenomenal montages for you as well
he said wow they're pretty they're
pretty impressive if I do say thank you
again okay next I'm honored to introduce
our next presenter Tori Johnson Tori is
an activity manager in the office of
education minority university research
and education project he is coming to us
from Goddard Space Flight Center thank
you all very much good morning and I
appreciate the kind introduction today
I'll be bringing some remarks on behalf
of mr. Mike Kincaid the acting associate
administrator for the office of education and Mr. Letta Patrick the director for minority university research and education project.

I've really enjoyed this rich STEM discussion today during our Hispanic Heritage Month celebration here at NASA. As an organization, we are excited that STEM is indeed far-reaching and through the efforts of the Office of Education, we have been able to effect positive results across the country through our various initiatives. I'm going to spend a little time talking about a few of them.
but I won't belabor your lunch we'd like

to share some exciting information with

respect to some of the current office of

education efforts the first is regarding

our NASA internships fellowships and

scholarships or NIF's

NASA internships are available for

educators high school undergraduate and

graduate students and support education

opportunities that provide unique NASA

related research and operational

experiences NASA fellowships are

competitive Awards to support

independently conceived or design

design research or senior design
projects by highly qualified faculty

undergraduate and graduate students and

disciplinary needed to advance NASA's missions we also have scholarships that

are designed to provide financial assistance as well as internship

opportunities which are posted at intern

NASA.gov internship applications for the spring session for 2018 or due next week and the open session for Summer 2018 begins on the 18th of October so please share these opportunities with your friends and family and apply again at

intern.nasa.gov a second critical
component of the office of education is the minority university research and education project or Mura through mere up activities NASA supports historically black colleges and universities Hispanic serving institutions Asian American and Native American Pacific Islander serving institutions tribal colleges and universities and other minority serving institutions through multi-year research grants additionally Meerut provides internships scholarships fellowships mentoring as you all discussed on the
panel and tutoring for underserved and underrepresented learners in K-12 informal and higher education settings

Hispanic serving institutions RHS is of which there are about 350 or more in total account for approximately 42% of all MSI's in the country in 2016 NASA spent over 59 million dollars across these institutions Europe also provides support and sponsorship for conferences that promote STEM awareness across multiple demographic groups such as great minds in STEM the Society of Hispanic Professional Engineers women of
color and stem and the Society for

1868
01:21:10,720 --> 01:21:16,350
Advancement of Chicanos and Hispanic

1869
01:21:13,750 --> 01:21:19,359
the Native Americans in science an

1870
01:21:16,350 --> 01:21:22,000
example of a dynamic NASA activity

1871
01:21:19,359 --> 01:21:24,250
intersecting with the largest are one

1872
01:21:22,000 --> 01:21:26,470
institution serving a predominantly

1873
01:21:24,250 --> 01:21:29,310
Hispanic student population can be found

1874
01:21:26,470 --> 01:21:31,570
in the University of Texas El Paso and

1875
01:21:29,310 --> 01:21:34,780
Merope institutional research

1876
01:21:31,569 --> 01:21:38,409
Opportunity Center for Space Exploration

1877
01:21:34,779 --> 01:21:41,170
and Technology Research say that again a

1878
01:21:38,409 --> 01:21:44,800
couple of times fast sorry for the

1879
01:21:41,170 --> 01:21:46,739
acronyms but this group out of UTEP

1880
01:21:44,800 --> 01:21:49,750
that's working with our Mira program

1881
01:21:46,739 --> 01:21:52,840
continued sits mission of creating an
aerospace and energy research facility within a 21st century demographic and lastly I want to share a little bit about a really special activity a year of Education on station this year crews aboard the International Space Station or ISS will inspire more students and teachers than ever before the year of Education on station takes advantage of the unique capability of the space station to stimulate the interest of students from kindergarteners to Bost graduates alike as a dream realized through innovation
hard work and perseverance and dedicated
to the pursuit of knowledge the station is a literal beacon for the entire education community of what can be achieved through learning among crew members aboard the station this year our two US astronauts who were teachers Joe acaba and Ricky Arnold and you will actually see in here from Joe shortly via message from the International Space Station these two former teachers will bring their experience in the classroom and passion for teaching during the year of Education year of Education
activities include opportunities for hundreds of students and educators across the nation to speak directly with astronauts in space thousands more will participate through NASA partnerships with companies Learning Center's associations universities media organizations and institutions a whole lot of folks and new educational demonstrations film in orbit and linked to life in space and human exploration will be unveiled and available to hopefully millions throughout the year the ultimate
objective is to inspire students and

1925
01:23:39,039 --> 01:23:43,600
fields related to stem to help teachers

1926
01:23:41,560 --> 01:23:46,000
stimulate the interest of their classes

1927
01:23:43,600 --> 01:23:48,100
in these subjects and ultimately through

1928
01:23:46,000 --> 01:23:49,930
their students pursuit of dreams to

1929
01:23:48,100 --> 01:23:54,250
advance American achievement and

1930
01:23:49,930 --> 01:23:56,170
discovery invention and exploration you

1931
01:23:54,250 --> 01:23:58,270
can find out how you can be a part of

1932
01:23:56,170 --> 01:24:00,210
all of this and share NASA's year of

1933
01:23:58,270 --> 01:24:03,730
Education on station by visiting

1934
01:24:00,210 --> 01:24:07,449
nasa.gov backslash education backslash

1935
01:24:03,729 --> 01:24:09,639
on station now as promised we now have

1936
01:24:07,449 --> 01:24:11,590
some words directly from Joe acaba from

1937
01:24:09,640 --> 01:24:14,740
the International Space Station honoring

1938
01:24:11,590 --> 01:24:20,409
a spirit Hispanic Heritage Month thank
you very much leave it to Joe hi

everyone I'm NASA astronaut Joe acaba

currently living and working aboard the

International Space Station I want to

take a moment to honor National Hispanic

Heritage Month I am proud of my Puerto

Rican heritage and grateful for the

culture both on earth and now in space I

want to pay tribute to the generations

of Hispanic Americans who have reached

for the stars and made accomplishments

in many different fields including the

scientists and aerospace I also want to
recognize all the amazing and diverse members of the Hispanic community at NASA and elsewhere who have made it possible for me to fly in space and conduct experiments that could lead to innovations and breakthroughs that benefit everyone.

diversity is essential to our success and I encourage all of you to use this Hispanic Heritage Month to learn a little more about the accomplishments and contributions Hispanics have made to your careers field specifically and more broadly to improve the lives of every
one of us thank you

[Applause]

I just wanted to say again thank you so much for spending your morning with us.

our current acting administrator

unfortunately could not be here with us today but he did want to say a few

remarks so that being said please

welcome our by video our acting NASA Administrator mr. Robert Lightfoot

hello everyone I'm Robert Lightfoot

NASA's Acting Administrator I'm sorry I was not able to attend this event in person but I wanted to take a moment to
say thank you for attending our 2017

Hispanic Heritage Month event Latinos

stem up at NASA we welcome and celebrate

diversity it's essential to mission

success

Hispanics have been and will continue to

be an integral part of our work force

across every NASA Center the Hispanic

community is the fastest growing

population in our diverse nation

comprising almost 18 percent of our

population and growing their engagement

and contributions are essential to NASA

continue to aspire explore our solar

system and look beyond it and achieve
amazing things on behalf of the American

people and the world today you heard

from a stellar lineup of talent from

across our agency and the nation about

the importance of Hispanic

representation in STEM education and

STEM careers here at NASA stem is what

we do we hope to continue not only

inspire future scientists and engineers

but also to train and develop the future

leaders and decision-makers of this

great agency I encourage students to

continue to dream big and to one day

join us on our mission of exploration
and because we want to continue being a leading and cutting-edge organization as leaders we must prepare both our current and future diverse workforce for the jobs of tomorrow I look forward to us continuing this dialogue and working together to ensure we're breaking down barriers and reaching for new heights I want to give a big thank you to the Hispanic outreach and leadership Alliance also known as Ola at NASA headquarters for planning and hosting today's program also the equal opportunity and diversity management
division and J Han the executive director for headquarters operations and of course Olace champion as acting deputy administrator Krysta Paquin. The old leadership team is an example of how NASA employees go above and beyond to help us meet our missions and goals. They're all volunteers because they believe in the importance of diversity and inclusion. I thank Ola and the other employee research groups across our entire agency who worked tirelessly to plan events and special programs and serve as advisors.
to senior leaders like me

2039
01:28:09,750 --> 01:28:14,710
their efforts directly contribute to

2040
01:28:12,159 --> 01:28:17,639
NASA being a great place to work thank

2041
01:28:14,710 --> 01:28:17,640
you all for what you do

2042
01:28:22,510 --> 01:28:24,570
you