



INTERNATIONAL SPACE STATION

BENEFITS **FOR**

HUMANITY

3RD EDITION

1
00:00:00,633 --> 00:00:01,634
>> ONE OF THE GREAT POWERS OF

2
00:00:01,634 --> 00:00:02,736
THE INTERNATIONAL SPACE STATION

3
00:00:02,736 --> 00:00:04,871
IS ITS DURATION-- THE ABILITY

4
00:00:04,871 --> 00:00:06,506
TO DO AND EXPERIMENT,

5
00:00:06,506 --> 00:00:07,807
TAKE THAT KNOWLEDGE, DESIGN

6
00:00:07,807 --> 00:00:09,442
A NEW EXPERIMENT, FOLLOW ON

7
00:00:09,442 --> 00:00:10,477
WITH THAT KNOWLEDGE, AND THEN

8
00:00:10,477 --> 00:00:11,344
DO THE NEXT GENERATION

9
00:00:11,344 --> 00:00:12,212
AFTER THAT.

10
00:00:12,212 --> 00:00:12,946
>> NASA'S BEEN LAUNCHING

11
00:00:12,946 --> 00:00:14,180
VEHICLES FOR DECADES,

12
00:00:14,180 --> 00:00:15,515
AND EACH ONE OF THOSE VEHICLES

13
00:00:15,515 --> 00:00:17,150

HAS AN EXPERIMENT ON THEM.

14

00:00:17,150 --> 00:00:18,518

BUT NEVER BEFORE HAVE WE HAD

15

00:00:18,518 --> 00:00:20,387

A LABORATORY TOTALLY DEDICATED

16

00:00:20,387 --> 00:00:22,021

TO THESE KIND OF EXPERIMENTS.

17

00:00:22,021 --> 00:00:22,756

>> ONE OF THE THINGS THAT'S

18

00:00:22,756 --> 00:00:23,757

MOST PROMISING IS THAT

19

00:00:23,757 --> 00:00:25,191

THE SCIENTIFIC VALUE

20

00:00:25,191 --> 00:00:26,393

AND THE ECONOMIC VALUE

21

00:00:26,393 --> 00:00:27,494

THAT WILL COME FROM

22

00:00:27,494 --> 00:00:29,028

THE SPACE STATION RESEARCH

23

00:00:29,028 --> 00:00:30,730

IS JUST STARTING TO SHOW UP.

24

00:00:35,235 --> 00:00:36,069

>> THE DEVELOPMENTS THAT

25

00:00:36,069 --> 00:00:37,837

WE'RE MAKING NOW ARE REALLY

26
00:00:37,837 --> 00:00:39,672
SETTING THE STAGE FOR

27
00:00:39,672 --> 00:00:40,740
THIS COMMERCIAL MARKET

28
00:00:40,740 --> 00:00:42,041
INTO SPACE.

29
00:00:42,041 --> 00:00:44,344
THE EFFORTS THAT HAVE LED

30
00:00:44,344 --> 00:00:45,478
UP TO THIS, THROUGH

31
00:00:45,478 --> 00:00:47,180
THE PERFORMANCE OF ALL OF THESE

32
00:00:47,180 --> 00:00:48,848
RESEARCH INVESTIGATIONS THAT

33
00:00:48,848 --> 00:00:50,517
WE'VE ALREADY HAD ON BOARD,

34
00:00:50,517 --> 00:00:52,118
DOING FOUNDATIONAL RESEARCH,

35
00:00:52,118 --> 00:00:53,253
AND TESTING OUT NEW

36
00:00:53,253 --> 00:00:54,854
TECHNOLOGIES AND METHODS

37
00:00:54,854 --> 00:00:57,190
FEED THIS MARKET, AND FEED

38
00:00:57,190 --> 00:00:59,659

THE CAPABILITY OF-OF DOING

39

00:00:59,659 --> 00:01:01,261
FUTURE RESEARCH IN SPACE,

40

00:01:01,261 --> 00:01:02,429
AND ALSO IN HAVING

41

00:01:02,429 --> 00:01:03,596
NEW COMMERCIAL ENTITIES

42

00:01:03,596 --> 00:01:05,598
OPERATE IN THAT SPACE.

43

00:01:09,969 --> 00:01:10,937
>> WE PUT TOGETHER

44

00:01:10,937 --> 00:01:12,472
THE "ISS BENEFITS FOR HUMANITY"

45

00:01:12,472 --> 00:01:14,441
BOOK TO REALLY COMPILE

46

00:01:14,441 --> 00:01:16,643
THE STORIES THAT WE KNEW

47

00:01:16,643 --> 00:01:17,877
OF THE AMAZING THINGS THAT

48

00:01:17,877 --> 00:01:19,179
HAD BEEN ACCOMPLISHED.

49

00:01:19,179 --> 00:01:20,513
THE CHALLENGE WITH SCIENCE

50

00:01:20,513 --> 00:01:21,915
IS THAT IT TAKES TIME.

51
00:01:21,915 --> 00:01:23,183
SO EVEN A NEW DISCOVERY

52
00:01:23,183 --> 00:01:25,785
THAT IS CLEARLY RELEVANT TO

53
00:01:25,785 --> 00:01:27,353
TREATING A MEDICAL CONDITION

54
00:01:27,353 --> 00:01:28,455
COULD TAKE DECADES

55
00:01:28,455 --> 00:01:29,956
FOR THAT TREATMENT TO ACTUALLY

56
00:01:29,956 --> 00:01:31,357
COME TO MARKET.

57
00:01:31,357 --> 00:01:32,592
AND SO WE WANTED TO CAPTURE

58
00:01:32,592 --> 00:01:34,260
THE STATE OF THOSE DIFFERENT

59
00:01:34,260 --> 00:01:35,762
NEW DISCOVERIES AND HOW

60
00:01:35,762 --> 00:01:37,063
THEY WERE PROCEEDING INTO

61
00:01:37,063 --> 00:01:38,498
BENEFITS FOR HUMANITY,

62
00:01:38,498 --> 00:01:39,532
BUT WE ALSO WANTED TO

63
00:01:39,532 --> 00:01:40,767

TELL THE STORIES OF THE PEOPLE

64

00:01:40,767 --> 00:01:41,801
WHOSE LIVES HAD ALREADY

65

00:01:41,801 --> 00:01:43,436
BEEN CHANGED.

66

00:01:45,004 --> 00:01:46,206
>> WE'VE PUT IN SPECIALIZED

67

00:01:46,206 --> 00:01:47,574
SECTIONS TO BOTH ECONOMIC

68

00:01:47,574 --> 00:01:49,509
VALUE AND SCIENTIFIC VALUE

69

00:01:49,509 --> 00:01:51,377
IN ORDER TO TRY AND DEMONSTRATE

70

00:01:51,377 --> 00:01:53,546
TO FOLKS WHAT SORT OF VALUE

71

00:01:53,546 --> 00:01:55,682
SPACE STATION RESEARCH HAS.

72

00:01:57,684 --> 00:01:58,751
>> THE SCIENTIFIC VALUATION

73

00:01:58,751 --> 00:02:00,386
SECTION, WE WERE INTERESTED IN

74

00:02:00,386 --> 00:02:01,421
JUST SAYING, "HEY, WE HAVE

75

00:02:01,421 --> 00:02:02,355
"ALL THESE PUBLICATIONS,

76

00:02:02,355 --> 00:02:03,456

"THESE SCIENTIFIC PUBLICATIONS

77

00:02:03,456 --> 00:02:04,724

"THAT COME FROM ISS.

78

00:02:04,724 --> 00:02:06,159

"WHAT SHOULD WE DO WITH THEM?

79

00:02:06,159 --> 00:02:07,460

"HOW SHOULD WE COMMUNICATE

80

00:02:07,460 --> 00:02:08,761

"WHY THEY'RE IMPORTANT?"

81

00:02:08,761 --> 00:02:09,796

YEAH, WE'VE GOT THOUSANDS

82

00:02:09,796 --> 00:02:11,397

OF PUBLICATIONS, BUT

83

00:02:11,397 --> 00:02:12,398

WHAT DOES IT MEAN?

84

00:02:12,398 --> 00:02:13,800

AND HOW HAS IT ADVANCED

85

00:02:13,800 --> 00:02:16,269

SCIENCE AS A WHOLE FOR EARTH,

86

00:02:16,269 --> 00:02:18,538

AND ALSO FOR SPACE FLIGHT?

87

00:02:18,538 --> 00:02:19,706

SO WHAT WAS SHOCKING TO ME

88

00:02:19,706 --> 00:02:20,740

IS, WOW, LOOK AT

89

00:02:20,740 --> 00:02:22,041

ALL THE PUBLICATIONS THAT

90

00:02:22,041 --> 00:02:23,109

HAVE COME FROM SPACE STATION

91

00:02:23,109 --> 00:02:24,978

RESEARCH, AND OTHER PEOPLE

92

00:02:24,978 --> 00:02:27,080

IN NON-SPACE DISCIPLINES

93

00:02:27,080 --> 00:02:28,948

ARE FINDING THOSE PUBLICATIONS

94

00:02:28,948 --> 00:02:29,916

AND USING THEM

95

00:02:29,916 --> 00:02:31,184

IN THEIR OWN RESEARCH.

96

00:02:31,184 --> 00:02:32,552

AND WHERE YOU CAN INTEGRATE

97

00:02:32,552 --> 00:02:33,920

SPACE RESEARCH INTO

98

00:02:33,920 --> 00:02:35,755

EVERYDAY RESEARCH ON EARTH,

99

00:02:35,755 --> 00:02:36,789

YOU KNOW YOU'RE HAVING

100

00:02:36,789 --> 00:02:38,458

THE MOST IMPACT ON SCIENCE.

101
00:02:43,363 --> 00:02:44,664
>> ONE THING WE'RE ADDING IS

102
00:02:44,664 --> 00:02:46,466
A LOT MORE INFORMATION ABOUT

103
00:02:46,466 --> 00:02:47,667
COMMERCIAL DEVELOPMENT

104
00:02:47,667 --> 00:02:48,835
IN LOW EARTH ORBIT THAT IS

105
00:02:48,835 --> 00:02:50,737
LEVERAGING THE SPACE STATION.

106
00:02:50,737 --> 00:02:51,771
>> THE SPACE ECONOMY TODAY

107
00:02:51,771 --> 00:02:53,006
IS STILL EMERGING.

108
00:02:53,006 --> 00:02:54,407
BUT ITS VALUATION HAS DOUBLED

109
00:02:54,407 --> 00:02:55,875
IN THE LAST TEN YEARS.

110
00:02:55,875 --> 00:02:56,943
AND THERE ARE MORE ACTIVE

111
00:02:56,943 --> 00:02:58,511
PARTICIPANTS IN LOW EARTH ORBIT

112
00:02:58,511 --> 00:02:59,846
THAN THERE HAVE EVER BEEN.

113
00:02:59,846 --> 00:03:01,281

THE INTERNATIONAL SPACE STATION

114

00:03:01,281 --> 00:03:02,615

HAS CONTRIBUTED TO

115

00:03:02,615 --> 00:03:03,716

THE COMMERCIALIZATION

116

00:03:03,716 --> 00:03:05,118

IN A COUPLE OF DIFFERENT WAYS.

117

00:03:05,118 --> 00:03:06,185

FIRST, WITH COMMERCIAL

118

00:03:06,185 --> 00:03:08,788

RESUPPLY, ENCOURAGING COMPANIES

119

00:03:08,788 --> 00:03:10,056

TO DEVELOP THEIR OWN

120

00:03:10,056 --> 00:03:11,491

CAPABILITIES, AND THEN

121

00:03:11,491 --> 00:03:12,625

THOSE CAPABILITIES CAN BE USED

122

00:03:12,625 --> 00:03:13,660

NOT JUST BY THE INTERNATIONAL

123

00:03:13,660 --> 00:03:15,662

SPACE STATION.

124

00:03:15,662 --> 00:03:16,763

IN TERMS OF RESEARCH, THERE ARE

125

00:03:16,763 --> 00:03:17,864

12 COMMERCIAL FACILITIES

126
00:03:17,864 --> 00:03:19,799
THAT ARE OPERATING RIGHT NOW,

127
00:03:19,799 --> 00:03:21,200
AND THEY'VE GREATLY EXPANDED

128
00:03:21,200 --> 00:03:22,502
THE KINDS OF RESEARCH THAT

129
00:03:22,502 --> 00:03:24,470
CAN BE ACCOMPLISHED ON ISS.

130
00:03:24,470 --> 00:03:26,172
AND THEY'RE REALLY BRINGING

131
00:03:26,172 --> 00:03:28,007
BOTH NEW CUSTOMERS INTO

132
00:03:28,007 --> 00:03:29,876
THE SPACE MARKET, BUT ALSO

133
00:03:29,876 --> 00:03:32,879
THEY ARE ALLOWING NEW ENTITIES

134
00:03:32,879 --> 00:03:34,747
TO FORM THAT ARE LEARNING

135
00:03:34,747 --> 00:03:35,982
THE PROCESSES BY WHICH

136
00:03:35,982 --> 00:03:39,052
YOU CONDUCT BUSINESS IN SPACE.

137
00:03:39,052 --> 00:03:40,887
>> COMMERCIALIZATION IS KEY

138
00:03:40,887 --> 00:03:42,155

TO THE FURTHER EXPLORATION

139

00:03:42,155 --> 00:03:43,690

MISSION THAT NASA HAS.

140

00:03:43,690 --> 00:03:45,425

WE INTEND TO USE SPACE STATION

141

00:03:45,425 --> 00:03:46,993

TO HELP COMMERCIAL ENTITIES

142

00:03:46,993 --> 00:03:48,661

ENTER THE MARKET IN

143

00:03:48,661 --> 00:03:50,863

LOW EARTH ORBIT, AND WE ALSO

144

00:03:50,863 --> 00:03:52,365

EXPECT THEM TO BE ABLE TO

145

00:03:52,365 --> 00:03:54,434

PROVIDE GOODS AND SERVICES

146

00:03:54,434 --> 00:03:56,336

THAT SOMEDAY WILL HELP US

147

00:03:56,336 --> 00:03:57,670

IN OUR EXPLORATION MISSION

148

00:03:57,670 --> 00:03:59,639

BEYOND LOW EARTH ORBIT.

149

00:04:03,376 --> 00:04:04,577

>> SCIENTISTS TEND TO ASK,

150

00:04:04,577 --> 00:04:06,312

"WHAT'S THE NEXT QUESTION?"

151
00:04:06,312 --> 00:04:07,413
SO THE NEXT QUESTION FOR

152
00:04:07,413 --> 00:04:08,448
SPACE STATION IS

153
00:04:08,448 --> 00:04:09,415
WHAT ARE WE GONNA DO NEXT

154
00:04:09,415 --> 00:04:10,583
WITH THIS PLATFORM?

155
00:04:10,583 --> 00:04:11,484
>> THIS IS THE GOLDEN AGE

156
00:04:11,484 --> 00:04:12,352
OF RESEARCH.

157
00:04:12,352 --> 00:04:14,220
WE WILL LIKELY NEVER SEE

158
00:04:14,220 --> 00:04:16,422
SUCH A STRONG MICROGRAVITY

159
00:04:16,422 --> 00:04:18,591
SCIENCE PROGRAM IN THE FUTURE.

160
00:04:18,591 --> 00:04:19,592
WE WILL HAVE LOTS OF

161
00:04:19,592 --> 00:04:20,927
HUMAN EXPLORATION, BUT

162
00:04:20,927 --> 00:04:22,195
TO HAVE A SUSTAINED LABORATORY

163
00:04:22,195 --> 00:04:23,863

IN THE WAY THAT WE HAVE NOW,

164

00:04:23,863 --> 00:04:25,098

NOW'S THE TIME.

165

00:04:25,098 --> 00:04:26,099

>> THIS RESEARCH IS FEEDING

166

00:04:26,099 --> 00:04:27,200

OUR EXPLORATION GOALS

167

00:04:27,200 --> 00:04:28,568

BEYOND LOW EARTH ORBIT,

168

00:04:28,568 --> 00:04:29,669

AND DEVELOPING THE COMPANIES

169

00:04:29,669 --> 00:04:30,603

THAT HOPE TO MAKE

170

00:04:30,603 --> 00:04:31,771

LOW EARTH ORBIT PART OF

171

00:04:31,771 --> 00:04:33,006

THEIR BUSINESS PLANS.

172

00:04:33,006 --> 00:04:34,741

THESE TWO GOALS GO HAND IN HAND,

173

00:04:34,741 --> 00:04:35,575

AND THE INTERNATIONAL

174

00:04:35,575 --> 00:04:36,576

SPACE STATION IS

175

00:04:36,576 --> 00:04:38,177

THE WAY TO GET THERE.

176

00:04:38,177 --> 00:04:38,911

>> WE REALLY WANNA

177

00:04:38,911 --> 00:04:40,046

TELL THE STORIES OF

178

00:04:40,046 --> 00:04:41,481

PEOPLE, AND PRODUCTS,

179

00:04:41,481 --> 00:04:43,282

AND ECONOMIC DEVELOPMENT--

180

00:04:43,282 --> 00:04:44,317

ALL OF THOSE THINGS

181

00:04:44,317 --> 00:04:45,151

THAT ARE MAKING THE WORLD

182

00:04:45,151 --> 00:04:46,419

A BETTER PLACE-- THROUGH

183

00:04:46,419 --> 00:04:47,887

OUR INTERNATIONAL COOPERATION