200 courses in 10 years, a success for NASE

NASE was constituted at the IAU General Assembly in Rio de Janeiro in August 2009 and, except for a couple of pilot courses with UNESCO that took place during the International Year of Astronomy 2009 (IYA-2009), the first NASE courses were established in 2010. Since NASE courses are given in the local language of the country, they began in America, since with two languages (Spanish and English) teachers could be trained throughout the continent, and not much later that they began to spread throughout the planet. In order to achieve the "globalization" of the program, it was necessary to translate its contents into each new language and this involved intense work. The course is currently taught in 14 languages (English, Spanish, Portuguese, Mandarin Chinese, Indonesian, Romanian, Persian, Catalan, French, Japanese, Russian, Mongolian, Armenian and Swahili).

The COVID19 pandemic has represented an opportunity for NASE, which had to convert its courses, until then always presential, into online courses, together with the creation of the NASE boxes, thanks to a help from the European Union through the European Social Fund. These circumstances have allowed us to extend the courses so that we can better adapt to the connotations of each country. Virtuality has allowed us to reach teachers who, in a face-to-face course, would have serious travel problems. Thus, even with the mobile phone, they have been able to follow us from the most unsuspected places. With this new modality, it is possible to give courses with more than 150 participants while maintaining quality and effectiveness, because online courses are "1 to 1" courses, i. e. "1 teacher to 1 participant". As an instructor, the NASE trainer enters the participant's virtual dining room or living room, which can be repeated step-by-step with the activities being shown, and in a sense, is more personalized instruction. It is sufficient to advise them in advance of the materials they must have ready for use.

NASE PLANET

Because the structure and methodology of NASE is to use very simple, easily available and inexpensive materials, "interactive" teaching is made possible online. This facility is also positive for Local Working Groups (LWGs), which are starting online courses for the first time. If these LNGs cannot receive the NASE boxes, they can very easily replicate them with the support of NASE members. However, not everything is an advantage. Online teaching also has its drawbacks. For example, when making observations, when it is necessary to show somewhat large models or mock-ups, or when it is necessary to carry out experiments in the dark, because the light from the computer screen interferes with teaching the desired phenomena.

The solution that NASE has found has consisted in the elaboration of videos of the phenomena that cannot be shown in a clear way, reproducing them during the course. These videos, usually a few minutes long, are shown by the instructor, who is the one who gives them a voice, since they are all silent. Handling 14 languages, it has turned out to be the most practical thing to edit them without explanations, and that the instructor does them in the language in which the course is given. Thus, 80 videos have been prepared, corresponding to almost all the practical activities of the course, which had the extra difficulty of being carried out during the pandemic period, with the participation of very few people. In fact, some videos have not yet been developed or recorded for this reason.

The work developed in 2020 has been very extensive and complete: 5 more countries have joined the great family of NASE (Egypt, Togo, Philippines, Dominican Republic and Puerto Rico); more than 6000 teachers have been trained in 50 countries; and 12 new NASE working groups have been formed in different countries.

Since 2018 NASE launches annual observation campaigns associated with simple experiments taken from NASE courses, in which teachers and groups of students from all over the world participate. In 2018 the "Herschel Experiment" campaign was launched, linked to the Day of Light (IDL), in 2019 on the occasion of the IAU's centenary, the "Power of the Sun" campaign was carried out, which also joined the IDL, and finally in 2020 the proposed campaign focused on "The Parallel Earth and the Seasons" linked to the International Day of Light as on previous occasions.

Whenever possible, special groups, such as older adults, people with disabilities and discriminated populations, are invited to these experiences within the framework of the proposal of Astronomy for Equality, Inclusion and Diversity.

1 Salinas (Ecuador)
June 18-20, 2009

2 Lima (Perú)
June 25-27, 2009

3 Barranquilla (Colombia)
July 6-9, 2010

4 Managua (Nicaragua)
July 12-15, 2010

5 Lima (Perú)
July 17-20, 2010

6 Rosario (Argentina)
October 12-15, 2010

7 Cañada de Gómez (Argentina)
October 13-15, 2010

8 Venado Tuerto (Argentina)
May 26-28, 2011

9 Rafaela (Argentina)
June 22-25, 2011

10 Tegucigalpa (Honduras)
July 11-14, 2011

11 Managua (Nicaragua)
July 11-14, 2011

12 Panamá (Panamá)
July 18-22, 2011

13 Barranquilla (Colombia)
July 21-24, 2011

14 Asunción (Paraguay)
July 27-30, 2011

15 Reconquista (Argentina)
November 2-5, 2011

16 Lima (Perú)
January 18-21, 2012

17 Managua (Nicaragua)
July 2-6, 2012

18 Tegucigalpa (Honduras)
July 9-12, 2012

19 Guatemala (Guatemala)
July 10-13, 2012

20 Quito (Ecuador)
October 23-26, 2012

21 La Paz (Bolivia)
October 29 - November 1, 2012

22 Barranquilla (Colombia)
November 14-16, 2012

23 Santa Fe (Argentina)
November 19-21, 2012

24 Asunción (Paraguay)
November 21-24, 2012

25 Montevideo (Uruguay)
November 26-29, 2012

26 Accra (Ghana)
January 8-11, 2013

27 Cañada de Gómez (Argentina)
March 12-15, 2013

28 Mendoza (Argentina)
March 18-20, 2013

29 Cochabamba (Bolivia)
July 16-18, 2013

30 Uberlandia (Brasil)
July 29 August 1, 2013

31 Foz de Iguaçu (Brasil)
August 5-8, 2013

32 Bauru (Brasil)
August 12-15, 2013

33 Managua (Nicaragua)
August 5-7, 2013

34 Beijing (China)
August 19-21, 2013

35 Medellín (Colombia)
September 2-5, 2013

36 Bogota (Colombia)
September 2-5, 2013

37 Quito (Ecuador)
September 23-26, 2013

38 Barraquilla (Colombia)
October 8-10, 2013

39 Nairobi (Kenya)
October 24-26, 2013

40 Tegucigalpa (Honduras)
November 4-7, 2013

41 Guatemala (Guatemala)
November 11-13, 2013

42 San Luis Potosí (México)
November 19-22, 2013

43 Montevideo (Uruguay)
December 2-5, 2013

44 Huancayo (Perú)
March 17-20, 2014

45 Ica (Perú)
March 24-27, 2014

46 Mendoza (Argentina)
April 24-26, 2014

47 Cluj (Rumania)
April 24-26, 2014

48 La Habana (Cuba)
June 9-12, 2014

49 Bogotá (Colombia)
June 16-19, 2014

50 Quito (Ecuador)
June 16-19, 2014

51 Medellín (Colombia)
June 25-28, 2014

52 Accra (Ghana)
July 28-31, 2014

53 Asunción (Paraguay)
July 30 August 1, 2014

54 Barranquilla (Colombia)
July 31 August 1, 2014

55 Salta (Argentina)
August 12-14, 2014

56 Tegucigalpa (Honduras)
October 23-24, 2014

57 Cochabamba (Bolivia)
October 27-28, 2014

58 Guatemala (Guatemala)
November 3-5, 2014

59 Oruro (Bolivia)
November 4-7, 2014

60 Managua (Nicaragua)
December 10-12, 2014

61 Lima (Perú)
February 9-13, 2015

62 Barranquilla (Colombia)
March 19-21, 2015

63 Tucuman (Argentina)
March 25-27, 2015

64 Cuenca (Ecuador)
March 25-27, 2015

65 Jujuy (Argentina)
May 11-13, 2015

66 Medellín (Colombia)
June 24-27, 2015

67 Guatemala (Guatemala)
June 25-27, 2015

68 Managua (Nicaragua)
July 13-15, 2015

69 Honolulu (Hawaii)
August 1-2, 2015

70 Tegucigalpa (Honduras)
August 24-27, 2015

71 Bogota (Colombia)
October 5-7, 2015

72 Bucaramanga (Colombia)
October 11-14, 2015r

73 Salta (Argentina)
November 2-5, 2015

74 Concordia (Argentina)
November 18-20, 2015

75 Rosario (Uruguay)
December 1-3, 2015

76 Tegucigalpa (Honduras)
Febr. 24 May 3, 2016

77 Macas (Ecuador)
April 4-8, 2016

78 San Luis Potosí (México)
May 31 - June 3, 2016

79 Matehuala (México)
June 6-9, 2016

80 Guatemala (Guatemala)
June 23-25, 2016

81 Estelí (Nicaragua)
July 12-15, 2016

82 Malang (Indonesia)
July 25-28, 2016

83 Pamplona (España)
July 26-29, 2016

84 Mendoza (Argentina)
August 10-12, 2016

85 Villarrica (Paraguay)
August 13-27, 2016

86 Tegucigalpa (Honduras)
August 22-25, 2016

87 Cluj (Rumania)
September 5-8, 2016

88 Jujuy (Argentina)
September 5-7, 2016

89 Concordia (Argentina)
September 12-14, 2016

90 Habana (Cuba)
September 27-30, 2016

91 Bogotá (Colombia)
October 12-14, 2016

92 Medellín (Colombia)
October 13-14, 2016

93 San Luis Potosí (México)
October 28-30, 2016

94 Tena (Ecuador)
March 6-10, 2017

95 Salta (Argentina)
April 24-27, 2017

96 Foz de Iguaçu (Brasil)
May 21-26, 2017

97 Jujuy (Argentina)
June 8-9, 2017

98 Guatemala (Guatemala)
June 22-24, 2017

99 Managua (Nicaragua)
July 24-26, 2017

100 Guizhou (China)
October 16-20, 2017

101 Cluj (Rumania)
October 30-4, 2017

102 Shizuishan (China)
November 2-3, 2017

103 Tunis (Tunisia)
November 14-17, 2017

104 Santiago de Chile (Chile)
January 8-11, 2018

105 Panamá (Panamá)
February 19-22, 2018

106 Pedro V. Maldonado (Ecuador)
March 5-7,2018

107 Bogotá (Colombia)
March 26-28, 2018

108 Guatemala (Guatemala)
April 13-May 18, 2018

109 Mendoza (Argentina)
May 23-June 1, 2018

110 Jujuy (Argentina)
June 7-8, 2018

111 Medellin (Colombia)
June 20-21, 2018

112 Guatemala (Guatemala)
June 20-22, 2018

113 Caacupé (Paraguay)
August 3-24, 2018

114 Marcala, (Honduras)
Sept 22- Oct 27, 2018

115 Foz de Iguaçu (Brasil)
October 3-6, 2018

116 Addis Abeba (Etiopia)
October 11-14, 2018

117 Shantou (China)
October 14-18, 2018

118 Bandar Lampung (Indonesia)
October 22-25, 2018

119 Chiriquí (Panamá)
November 12-15, 2018

120 S. Antonio de los Cobres
(Argentina) Nov 14-16, 2018

121 Medellin (Colombia)
November 16-17, 2018

122 Cluj (Rumania)
September 2-November 18, 2018

123 San Luis Potosí (México)
November 21-23, 2018

124 Lima (Perú)
November 28-29, 2018

125 Managua (Nicaragua)
December 11-13, 2018

126 Loulé (Portugal)
December 18-22, 2018

127 Medellin (Colombia)
January 25-26, 2019

128 Barcelona (España)
January 30-June 5, 2019
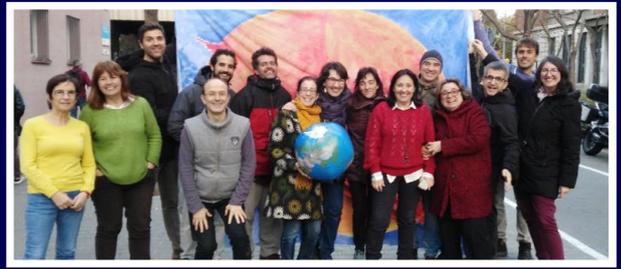
129 Panamá (Panamá)
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130 San Juan (Puerto Rico)
February 15-18, 2019

131 San Salvador (El Salvador)
February 20-22, 2019

132 Bushehr (Iran)
March 9-12, 2019

133 Quetzaltenango (Guatemala)
March 14-16, 2019

134 Guadalajara (México)
April 2-5, 2019

135 Mbarara (Uganda)
April 5-10, 2019

136 Dakar (Senegal)
April 22-25, 2019

137 Yerevan (Armenia)
May 6-8, 2019

138 Mbarara (Uganda)
May 13-14, 2019

139 Chiang Mai (Tailandia)
May 21-24, 2019

140 Tsetserleg (Mongolia)
June 19-21, 2019

141 Guatemala (Guatemala)
June 19-21, 2019

142 Mendoza (Argentina)
August 16-22, 2019

143 Lampung (Indonesia)
August 19-22, 2019

144 Moscú (Rusia)
August 26-29, 2019

145 Coaque-Manabí (Ecuador)
September 2-6, 2019

146 Tegucigalpa (Honduras)
September 23-26, 2019

147 Adis Abeba (Etiopía)
October 12-13, 2019

148 Neuquén (Argentina)
October 16-19, 2019

149 Xi'an, Shanxi (China)
October 21-25, 2019

150 Faro (Portugal)
Oct 23, 2019-January 20, 2020

151 Encarnación (Paraguay)
Nov. 2-Dec. 14, 2019

152 Osaka (Japan)
November 9-10, 2019

153 Santiago (Panamá)
November 14-17, 2019

154 Barcelona (España)
Nov. 20, 2019-March 11, 2020

155 El Salvador (El Salvador)
November 25-29, 2019

156 Cluj (Rumania)
Dec. 4,2019- January 29, 2020

157 Lusaka (Zambia)
December 9-13, 2019
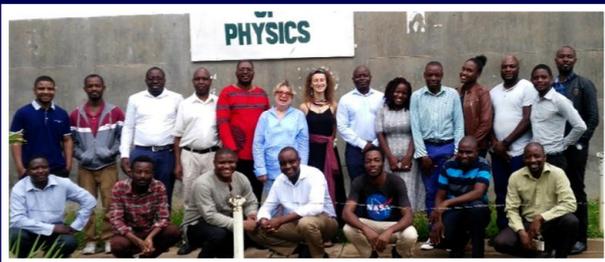
158 Turda (Rumania)
Dec 10, 2019-February 4, 2020

159 Ciudad de Rioverde (México)
December 13-14, 2019

160 Der es-Salam (Tanzania)
December 16-18, 2019

161 Meru (Kenia)
January 20-22, 2020

162 Ciudad de Panamá (Panamá)
January 21-24, 2020

163 Teustepe (Nicaragua)
January 20-21, Feb 2, 2020

164 Madrid (España)
February 1-2, 2020

165 Ciudad de Rioverde (México)
Feb 21, 22, 2020

166 Busher (Irán)
December 5-March 22, 2020

167 Busher (Irán)
May 17-18, 2020

168 Lleida (España)
May 18 - June 15, 2020
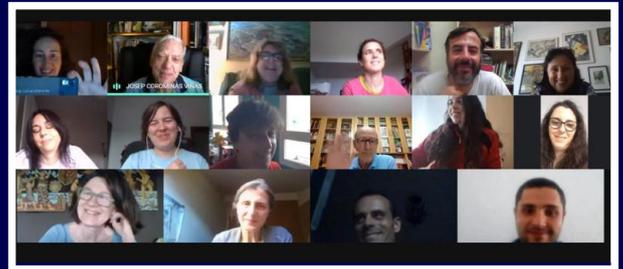
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May 19 - June 9, 2020

170 Tarragona (España)
May 20 - June 10, 2020

171 Girona (España)
May 21 - June 11, 2020

172 Wakayama (Japón)
May 22 - July 10, 2020

173 Busher (Irán)
May 28-29, 2020

174 Cluj (Rumanía)
June 2-4, 2020

175 Dar es Salaam (Tanzania)
June 15, 2020

176 El Cairo (Egipto)
June 16-17, 2020

177 Ciudad de Panamá (Panamá)
June 12-26, 2020

178 Rasht (Irán)
June 25-26, 2020

179 Mendoza (Argentina)
June 25 - July 10, 2020

180 Ciudad de Panamá (Panamá)
July 17- August 7, 2020

181 Lomé (Togo)
July 22-23, 2020

182 Quezon City (Filipinas)
July 28-31, 2020

183 Fernando de la Mora (Paraguay)
August 3-5, 2020

184 Dakar (Senegal)
August 5-6, 2020

185 Ciudad de Guatemala (Guatemala)
August 10-21, 2020

186 Neuquen (Argentina)
August 14 - September 14, 2020

187 Tabriz (Irán)
August 17-18, 2020

188 Bandung (Indonesia)
August 21-23, 2020

189 Lomé (Togo)
September 3-4, 2020

190 Ekaterimburgo (Rusia)
September 22-23, 2020

191 Ekaterimburgo (Rusia)
September 29- October 2, 2020

192 Guadalajara (México)
October 3-10, 2020
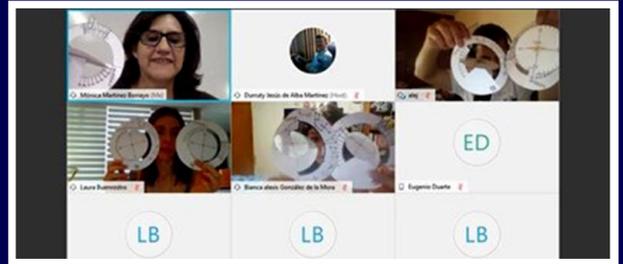
193 Ekaterimburgo (Rusia)
October 6-9, 2020

194 Ekaterimburgo (Rusia)
October 13-16, 2020

195 Chiang Mai (Tailandia)
October 17-18, 2020

196 Tena (Ecuador)
October 21-23, 2020

197 Santiago (República Dominicana)
October 24 - November 15, 2020

198 Moscow (Rusia)
November 2 - 3, 2020

199 Bogotá (Colombia)
November 3 – 26, 2020

200 Barcelona (España)
November 25, 2020 – 12 May, 2021