Preface

Cosmology and astrophysics, a leading science and science of precision in the 21st Century, has culminated with the discovery of dark energy and dark matter and the first detection of gravitational waves from binary black holes. The future perspective of cosmology may be very promising and optimistic in that one may explore the origin of the Universe through the gravitational wave observatories and understand the nature of dark energy and matter through either terrestrial experiments or celestial observations. Cosmology will become an arena, in which general relativity, particle physics, nuclear physics, and plasma physics play the complementary role, and will complete a unified picture.

Some cosmologists and particle astrophysicists in Australia, China, Hawaii, Japan, Korea, New Zealand, and Taiwan have organized the International Symposium on Cosmology and Particle Astrophysics (CosPA), a series of annual symposia since the first one in 2002 in Taiwan, and have finally constituted the AP CosPA Organization in 2010. CosPA2002 was followed by CosPA2003, CosPA2006 and CosPA2007 at National Taiwan University, Taiwan, CosPA2008 at Asia Pacific Center for Theoretical Physics (APCTP), Korea. CosPA2009 at the University of Melbourne, Australia, CosPA2010 at the University of Tokyo, Japan. CosPA Symposia since then have been organized under the auspice of APCosPA Org and hosted by institutes in the AP region: CosPA 2011 at Peking University, China, CosPA 2012 at National Chiao-Tung University, CosPA 2013 at the University of Hawaii, CosPA 2014 at the University of Auckland, New Zealand.

CosPA 2015 is the 12th International Symposium on Cosmology and Particle Astrophysics. It was held from 12 to 16 of October, 2015 at the Center for Theoretical Physics of the Universe (CTPU) of Institute for Basic Science (IBS), located at the KAIST Munji Campus in Daejeon City. CosPA 2015 brought together theorists, experimentalists and observers working in the field of cosmology, astrophysics and particle physics to discuss the latest results and ideas and the prospects for progress. The local organizers would like to thank professor Doo-Chul Kim, president of IBS for financial supporting CosPA 2015. They also would like to express sincere thanks to speakers as well as participants for colorful talks and discussions.

CosPA 2016 will be hosted by the University of Sydney for the period of November 28 and December 2, 2016.

Sanghyeon Chang, Kiwoon Choi and Sang Pyo Kim
Editors