Confirmed ISSS-12 Symposium talks as of May 27th, 2015:

Simulations down to electron scales:

Amaya, J., (Belgium), Fully kinetic simulations of the solar wind-magnetosphere interaction and the EU eHeroes computing network

Bhattacharjee, A. (USA), Integrating Kinetic Effects in Global Space and Astrophysical Fluid Simulations

Horiuchi, R. (Japan), Macro-Micro Interlocked Simulation for multiscale plasma phenomena like magnetic reconnection

Jain, N. (India/Germany), Electron-MHD simulations of electron scale phenomena

Muñoz, P.A. (Chile/Germany), Gyrokinetic and kinetic particle-in-cell simulations of guide-field reconnection

Solar wind, Earth magnetosphere and space weather

Ashour-Abdalla, M. (USA), Multiscale kinetic-MHD simulations: Applications to the tail of magnetospheres

Cai, D.S. (Japan), <u>Large scale PIC simulations and their application to satellite data focusing</u> <u>on</u> 3D vortices related to the Kelvin-Helmotz instability at the magnetopause

Escoubet, P. (ESA), Dynamics and structures observed by Cluster: open questions for simulations.

Kuznetsova, M. (USA), Advancing space weather research and forecasting - the Community Coordinated Modeling Center (CCMC)

Poedts, S. (Belgium) Evolution of magnetized CMEs in the inner heliosphere

Safrankova, J. (Czech Republic), Fast measurements of turbulence and interplanetary shocks in the solar wind.

Samsonov, A., Russia, MHD simulation of the response of magnetosheath/magnetosphere to interplanetary shocks and other discontinuities in the solar wind

Toffeletto, F. (USA), Global modeling of magnetospheric convection

Travnicek, P. (USA/ Czech Republic) Global Hybrid Simulations of Space Plasmas

Planetary and lunar:

Chanteur, G. (France), Global hybrid simulations of planetary magnetospheres

Deca, J. (USA) PIC Simulations of the Solar Wind Interaction with Lunar Magn. Anomalies: Ion and Electron dynamics

Dyadechkin, S. (Finnland) New fully kinetic model for the study of electric potential, plasma and dust above lunar landscapes

Mazelle, C. (France), Comparative analysis of unmagnetized and magnetized planets : an experimental survey from space mission – what are the challenges for plasma simulations?

Walker, R. (USA), Global simulation of planetary magnetospheres

Space agencies, spacecraft technologies

Colangeli, L., ESA, ESAs space plasma related plans

Paterson, W., NASA Heliophysics Missions: Current and Future Plans

Zelenyi, L.M., Russia, Russian plans for plasma related space missions

Usui, H. (Japan), Simulation of spacecraft charging

Turbulence:

Hellinger, P., Czech Republic, Plasma turbulence at ion scales: Hybrid simulations

Particle acceleration, shocks and reconnection:

Ono, Y. Japan reconnection experiments - challenges for simulations

Hoshino, M., Japan, Kinetic Simulation of Transport and Particle Acceleration due to a magnetorotational Instability of an Accretion Disk

Spanier, F. South Africa, Kinetic simulations of shock formation and particle acceleration in non-relativistic shocks

Nishikawa, K.-I. (USA), Radiation from accelerated particles in relativistic jets with shocks and shear-flow