Saturday, May 19, 2012
POSTER SESSION II: PHOTOMETRY, LIGHTCURVE, OCCULTATION, AND SIZE/SHAPE OF SMALL BODIES
3:50 p.m. Rooms 301, 302, Foyer

Das H. S.
Study of Polarization Properties of Comets Using a Mixture of Compact and Porous Particles **[#6002]**
In the present work,a model is presented which considers cometary dust as a mixture of compact spheroidal grains and porous aggregates with some suitable mixing ratio.Using the above model,the observed polarization properties of comets are analyzed.

Savanevich V. E. Kozhukhov A. M. Bryukhovetskiy A. B. Vlasenko V. P. Dikov E. N. Ivashchenko Yu. N. Elenin L. Tkachov V. N.
Intraframe Images' Processing in Automatically Asteroids Search Program CoLiTec **[#6003]**
The report focuses on algorithms for intra-frame processing, which uses in software for detection of solar system small bodies . The recent results of using this program presents.

Rondón E.
A Thermal Model for the Secular Light Curve of the Comets 1P/Halley, C/1996 B2 (Hyakutake) and 67P/Churyumov-Gerasimenko **[#6018]**
We have developed a model that allows the prediction of the secular light curve for different comets, from which we derive parameters like the orientation of the rotation axis (I;Φ Phy), the suraface and internal layers temperature.

Tanigawa M. T. Taniguchi T. T. Terao M. T. Fukui J. F. Ueda R. U. Sakamoto H. S.
Photometric Observations of Comet C/2009 P1 (Garradd) **[#6075]**
We performed multi-color photometric observations of the C/2009 P1 with 0.2 m-reflector attached with cooled CCD camera.We report V-band magnitudes and color indices of C/2009 P1 in 2011.

Hamanowa H, H. Hamanowa H, H.
Photometric Observations of a Trojan Asteroid 624 Hektor **[#6053]**
Photometric Observations for 624 Hektor were obtained in the period from 2008 December to 2012 January at the Hamanowa Astronomical Observatory using a 0.4-m Pellow reflector. The derived synodic real rotation period for lightcurves was 0.2883520(±0.0000003) day.

Souami D. Yoshida F. Anderson J. Nakamura T. Dermawan D. Souchay J.
Sub-Km Main Belt Asteroids: SUBARU (Suprime-Cam) Observations of the Deep Ecliptic Field **[#6061]**
Within the Framework of the SMBAS (Sub-km Main Belt Asteroid Survey), we analyse data collected with the SUBARU telescope over two nights in 2002, with a purpose of taxonomical classification and to determine the size of the identified asteroids.

Eguchi N. Gonda K. Goto T. Teraoka C. Oyama S.
Inspection of Asteroid's Shape with the Clay Model **[#6079]**
We compared the asteroid's lightcurve with that of its clay model, in order to know what kind of geographical feature of the asteroid was related to the complicated structures of the observed lightcurve.

Matsuoka Y. Okamoto R. Sugimoto S. Shibata M. Watanabe D.
Analysis from Stellar Occultation and Lightcurve Observation of 582 Olympia **[#6215]**
Our aim is to estimate 3D shape of an asteroid. We tried to find the shape of 582 Olympia. We conducted two observations: stellar occulation and lightcurve of an asteroid. We have observed lightcurves and occultations of several asteroid.

Pursiainen S. Kaasalainen M.
Three-Dimensional Radio Tomography for an Asteroid with a Hierarchical Bayesian Inverse Approach **[#6128]**
This study investigates 3D radio tomography in which the target is an asteroid. In the present experiment scenario an orbiter measures the phase shift of a radio frequency signal between the orbiter and one or more transponders on the asteroid.

Yoshida F. Nozawa Y. Ito T. Takahashi S. Okita K. Ibrahimov M. Ehgamberdiev S. Marshalkina A. Karimov R. Burhonov O. Tillayev Y. Hafizov B. Yanagisawa T. Kurosaki H. Yoshikawa M. Urakawa S. Ohtani H.
Photometric Observation of Young Asteroid Family in 2006–2010 at Maidanak Observatory, Uzbekistan **[#6418]**
We observed 43 young family asteroids (Karin, Iannini, Veritas) and 7 old family asteroids (Koronis, Themis) at Maidanak Observatory, then determined their rotation period, lightcurve amplitude, B-V, V-R, V-I colors.

Melita M. D. Yoshida F. Abe S. Duffard R.
Lightcurves of two Jupiter Trojan Asteroids with long Period **[#6150]**
We determined the light curves of two Jupiter Trojans. For (16070) 1999 RB101 we found periods of 52.80hs and for (1867) a value of 51.70hs, which does not match the value found in 1994. The amplitudes found were 0.3 and 0.4 mag respectively.

Pan S. Abe S. Kinoshita D.
Rotation Period and Lightcurve Analysis of Asteroid (3200) Phaethon **[#6294]**
Apollo asteroid (3200) Phaethon classified as F/B-type is thought to be a dormant or an extinct cometary nuclei. Phaethon is one of the most important target for the future space missions in order to explore a cometary object in the near Earth space.

Williams G. V.
Correcting the Astrophotometry: A Status Report **[#6168]**
A brief report is presented on an on-going project at the IAU Minor Planet Center to improve the absolute magnitudes of the minor planets.

Hanus J. Marchis F. Durech J.
Asteroid Sizes by Combining Shape Models and Adaptive Optic Images **[#6265]**
By combining resolved direct images of asteroids collected with Adaptive optics systems with the shape models derived by the lightcurve inversion method we infer the sizes of asteroids (15) Eunomia, (40) Harmonia and (45) Eugenia.

Sato I. Hamanowa H.
3-D Shape Analysis of (704) Interamnia by its Occultation and Lightcurves **[#6062]**
3-D shape models of (704) Intermnia is derived from their stellar occultation observations and lightcurves. The size is $(360.2 \pm 4.4\text{km}) \times (319.9 \pm 4.8\text{km}) \times (298.0 \pm 2.7\text{km})$, and the spin axis is ($\lambda=259 \pm 6°$, $\beta=-46 \pm 4°$).

Churyumov K. I. Baransky O. R. Ponomarenko V. O.
Observations and Photometry of Asteroids in Kyiv National Shevchenko University **[#6394]**
We present some results of astrometric and photometric observations of asteroids obtained on the observational station of Kyiv national Taras Shevchenko university since 2010. Basic objects of exploration are asteroids which approach to Earth.

Wilkman O. W. Muinonen K. O. Penttilä A. I.
Asteroid Lightcurves Simulated with a Realistic Rough-Surface Scattering Model **[#6440]**
We apply a realistic light-scattering model to produce simulated lightcurves, comparing with tradionally used Lambertian and Lommel-Seeliger scattering laws.

Shevchenko V. G. Tungalag N. Chiorny V. G. Gaftonyuk N. M. Krugly Y. N. Harris A. W. Young J. W.
CCD-Photometry and Pole Coordinates for Eight Asteroids **[#6020]**
The long time photometric observations were carried out for eight asteroids: (122) Gerda, (153) Hilda, (190) Ismene, (221) Eos, (411) Xanthe, (679) Pax, (700) Auravictrix, (787) Moskva. For the observed asteroids were determined new pole coordinates.

Kaasalainen M. Viikinkoski M. Carry B. Ďurech J.
Shape Reconstruction of Irregular Bodies with Multiple Complementary Data Sources **[#6208]**
We consider inversion methods for shape reconstruction with complementary data sources. We present a generally applicable shape support for non-starlike shapes. New models of Kleopatra and Hermione are presented.

Tungalag N. Bayarbat T.
Pole Determination of Asteroids **[#6029]**
By the combined method rotation parameters and shapes of 4 asteroids were determined. The calculation program is developed in MATLAB and shows the 3D shapes of asteroids and their parameters at the same time.

Urakawa S. Okumura S. Nishiyama K. Sakamoto T. Takahashi N. Abe S. Ishiguro M. Kitazato K. Kuroda D. Hasegawa S. Ohta K. Kawai N. Shimizu Y. Nagayama S. Yanagisawa K. Yoshida M. Yoshikawa M.
Photometric Observations of Comet-Asteroid Transition Object 107P/Wilson-Harrington **[#6088]**
We observed 107P/Wilson–Harrington. The lightcurve has shown a periodicity of 0.2979 day and 0.0993 day. We suggest four interpretations: tumbling motion, shape effects, binary asteroid's eclipse and shade of topography.

Fernandez Y. R. Lowry S. C. Meech K. J. Laird R. Fitzsimmons A. Snodgrass C. Weissman P. R. Pittichova J. Bauer J. M. Weaver H. A. Lisse C. M. A'Hearn M. F. Campins H. Groussin O. Kelley M. S. Lamy P. L. Licandro J. Toth I. Reach W. T.
Visible-wavelength Survey of Jupiter-Family Cometary Nuclei as Part of SEPPCoN **[#6488]**
We present observations of a statistically-significant number of Jupiter-family cometary nuclei as part of SEPPCoN (Survey of the Ensemble Physical Properties of Cometary Nuclei). We present preliminary results on distributions of albedos and shapes.