

Lou You-Qing

Position: Professor

Tsinghua University - Beijing

Period covered: 2002 - present



I Scientific Work:

Scientific collaboration and discussion.

To participate the two-week workshop on supernova and neutron star which is informal but technical, and to present the work "Rebound Shocks in Stellar Collapse" and other relevant topics.

Presented a colloquium on "Formation of Supermassive Black Holes in Galactic Bulges".

II Conferences and educational activities

Work With Students

He participated in the annual interview of potential PhD students of ICRANet

III 2007-2008 List of Publications

"Magnetohydrodynamic Rebound Shocks of Supernovae", Lou Y.-Q., Wang W. G., *Monthly Notices of the Royal Astronomical Society Letters*, 378, L54-L58, 2007 (astro-ph/0704.0223).

"Self-Similar Dynamics of a Magnetized Polytropic Gas", Wang W. G., Lou Y.-Q., *Astrophysics and Space Science*, 311, 363-400, 2007 (eprint 2007arXiv:0706.3959W).

"Moon shadow by cosmic rays under the influence of geomagnetic field and search for antiprotons at multi-TeV energies", Lou Y-Q et al., (The Tibet AS^o Collaboration), *Astroparticle Physics*, 28, 137-142, 2007.

"An Imaging and Spectral Study of Ten X-Ray Filaments around the Galactic Center", Lu F.J., Yuan T. T., Lou Y.-Q., *The Astrophysical Journal*, 673, 915-927, 2008

\Self-Similar Dynamics of a Relativistically Hot Gas", Lou Y.-Q., Cao Y., *Monthly Notices of the Royal Astronomical Society*, 384, 611-629, 2008

\New estimation of the spectral index of high-energy cosmic rays as determined by the Compton-Getting anisotropy", Lou Y-Q et al., (The Tibet ASgamma Collaboration), *The Astrophysical Journal Letters*, 672, L53-L56, 2008

\Collisional Interaction Limits Between Dark Matters and Baryons in 'Cooling Flow' Clusters", Hu J., Lou Y.-Q., *Monthly Notices of the Royal Astronomical Society*, 384, 814-820, 2008 (arXiv:0711.3555).

\Self-Similar Shocks and Winds in Galaxy Clusters", Lou Y.-Q., Jiang Y. F., Jin C. C., *Monthly Notices of the Royal Astronomical Society*, 386, 835-858, 2008

\Optical and Near-Infrared Observations of the Highly Reddened, Rapidly Expanding Type Ia Supernova 2006X in M100", Lou Y-Q et al., *The Astrophysical Journal*, 675, 626-643, 2008 (arXiv:0708.0140).

\The All-Particle Spectrum of Primary Cosmic Rays in the Wide Energy Range from 1014 to 1017 eV Observed with the Tibet-III Air-Shower Array", Lou Y-Q et al. (The Tibet ASgamma Collaboration), *The Astrophysical Journal*, 678, 1165-1179, 2008

\Dynamic Evolution of a Quasi-Spherical General Polytrropic Magnetofluid with Self-Gravity", Wang W. G., Lou Y.-Q., *Astrophysics and Space Science*, 315, 135-156, 2008

\The Energy Spectrum of All-Particle Cosmic Rays around in the Knee Region Observed with the Tibet-III Air-Shower Array", Lou Y-Q et al., *Advances in Space Research*, 42, 467-472, 2008

\An Updated Search of Steady TeV γ Ray Point Sources in Northern Hemisphere Using the Tibet Air Shower Array", Lou Y-Q et al., *High Energy Physics and Nuclear Physics*, in press, 2008

\Self-Similar Polytrropic Champagne Flows in H II Regions", Hu R.Y., Lou Y.-Q., *Monthly Notices of the Royal Astronomical Society*, 2008 in press

\Supermassive Black Holes in Galactic Bulges", Lou Y.-Q., Jiang Y.F., *Monthly Notices of the Royal Astronomical Society Letters*, 2008, in press

Future plan for observation of cosmic gamma rays in the 100 TeV energy region with the Tibet air shower array: simulation and sensitivity", Lou Y.-Q et al. (The Tibet AS $^{\circ}$ Collaboration), *30th International Cosmic Ray Conference*, 2007 in press, (2007arXiv0710.2752A).

\Future plan for observation of cosmic gamma rays in the 100 TeV energy region with the Tibet air shower array: physics goal and overview", Lou Y.-Q et al. (The Tibet AS $^{\circ}$ Collaboration), *30th International Cosmic Ray Conference*, 2007 in press

\Intra-day Optical Variability of BL Lacertae", Bian F. Y.; Zhang Y. H.; Li J. Z.; Shang R. C.; Li T. P.; Lou Y.-Q.; Wang X. F.; Yang Y.; Zhang S. N.; Zhou J. F., in *The Central Engine of Active Galactic Nuclei*, ASP Conference Series, Vol. 373, Proceedings of the Conference held 16-21 October, 2006 at Xi'an Jiaotong University, Xi'an, China. Edited by Luis C. Ho and Jian-Min Wang, p.187, October 2007.

\Homologous Core Collapse in a Massive Star and Self-Similar Evolution of Rebound Shocks", Cao Y., Lou Y.-Q., in the Proceedings of 2008 Nanjing Gamma-Ray Bursts Conference, eds. Y. F. Huang, Z. G. Dai, B. Zhang, Nanjing University, June 22-27, 2008, JiangSu Province, China, in press

\Rebound Shock Breakouts of Exploding Massive Stars: A MHD Void Model", Hu R.Y., Lou Y.-Q., in the Proceedings of 2008 Nanjing Gamma-Ray Bursts Conference, eds. Y. F. Huang, Z. G. Dai, B. Zhang, Nanjing University, June 22-27, 2008, JiangSu Province, China, in press

\Mass and Mean Velocity Dispersion Relations for Supermassive Black Holes in Galactic Bulges", Lou Y.-Q., Jiang Y. F., in the Proceedings of Science, VII Microquasar Workshop: Microquasars and Beyond, eds. Emrah Kalemci et al., Sabanci University, September 1-5, 2008, Foca, Izmir, Turkey, in press