quartz fiber detectors to record the positions of backscattered photons and edge electrons as well as the beam downstream of the magnet by means of a cavity BPM provides a feasible and promising scheme to access the incident beam energy. Relative precision of the energy of 10^{-4} or better is achievable on a bunch-to-bunch basis while the electron and positron beams are in collision.

T 71.8 Fr 15:45 KGI-HS 1019

Direct Detection of the Electron Cloud at ANKA — •Sara Casalbuoni[1], Ralf Weigel[2], Michael Hagelstein[1], Ubaldo Iriso[3], Elena Mashkina[4], and Anke Susanne Müller[1] — [1]Institute for Synchrotron Radiation, Research Center Karlsruhe, Germany — [2]Max-Planck Institute for Metal Research, Stuttgart, Germany — [3]Consortium for the Exploitation of the Synchrotron Light Laboratory, Bellaterra, Spain — [4]Physics Institute II, Friedrich Alexander University Erlangen - Nürnberg, Germany

Low energy electrons generated by the interaction of high energy particles with the beam pipe surface can be detrimental for accelerators performances increasing the vacuum pressure, the heat load and eventually producing beam instabilities. The low energy electrons accumulating in the beam pipe are often referred to as electron cloud. In this presentation we report on the direct evidence of the electron cloud in the electron storage ring of the synchrotron light source ANKA (ANgstrom source KArlsruhe).

T 72: Gammaastronomie I

Zeit: Montag 16:45–19:00 Raum: KGII-HS 2006

T 72.1 Mo 16:45 KGII-HS 2006

PG 1553+113: Ergebnisse aus drei Jahren MAGIC Beobachtungen — •Daniela Dorner[1], Daniela Hadasch[2], Thomas Bretz[1] und Igor Oya[3] für die MAGIC-Kollaboration — [1]Universität Würzburg, Würzburg, Deutschland — [2]Technische Universität Dortmund, Dortmund, Deutschland — [3]Universidad Complutense de Madrid, Madrid, Spanien

Der Aktive Galaktische Kern PG 1553+113 wurde zwischen April 2005 und April 2007 für insgesamt knapp 80 Stunden mit dem Major Atmopspheric Gamma-ray Imaging Cherenkov (MAGIC) Teleskop beobachtet. Die Daten von April 2005 bis April 2006 wurden mit verbesserten Analyse-Methoden, welche die Ankunftszeiten der Signale berücksichtigen, neu analysiert. Hinzu kommt eine Analyse der Daten von April 2006 bis April 2007. Im gesamten Zeitraum wurde keine signifikante Variablität im Fluss und im spektralen Verhalten gemessen.

T 72.2 Mo 17:00 KGII-HS 2006

Discovery of Very High Energy Gamma Rays from the Flat Spectrum Radio Quasar 3C279 with the MAGIC Telescope — •Pratik Majumdar[1], Rudolf Bock[1], Daniel Kranich[2], Eckart Lorenz[2,1], Masahiro Teshima[1], and Robert Wagner[1] — [1]Max Planck Institut fur Physik, Muenchen — [2]ETH, Zurich, Switzerland

The quasar 3C279 is one of the best studied flat spectrum radio quasars (FSRQ). It is located at a comparatively large redshift of z=0.536. Observations of such distant sources were until recently impossible owing to the expected steep energy spectrum and the attenuation of gamma rays by extragalactic background light (EBL). We report the detection of significant very high energy gamma ray signal from 3C279 in early 2006 in the E>75 GeV energy range and discuss the implication of these results.

T 72.3 Mo 17:15 KGII-HS 2006

PG 1553+113: Ergebnisse einer Multiwellenlängen Kampagne — •Daniela Dorner[1], Anita Reimer[2], Olaf Reimer[2], Luigi Costamante[2] und Greg Madejski[2,3] — [1]Universität Würzburg, Würzburg, Deutschland — [2]KIPAC, Stanford, USA — [3]SLAC, Menlo Park, USA

Im Rahmen einer Multiwellenlängen-Kampagne wurde im Juli 2006 der Aktive Galaktische Kern PG 1553+113 im optischen, Röntgen- und Gamma-Bereich beobachtet. Da dieser Blazar möglicherweise zu den am weitesten entfernten Objekten zählt, die bisher mit einem Cherenkov-Teleskop detektiert wurden, können mit den simultanen Messungen in verschiedenen Wellenlängen Rückschlüsse auf das Extragalaktische Hintergrundlicht gezogen werden.

Die Messungen des optischen Teleskops KVA, des Röntgen-Satellits Suzaku und der Cherenkov-Teleskope HESS und MAGIC wurden ausgewertet. Ergebnisse der einzelnen Messungen und Interpretation des kombinierten Datensatzes der Multiwellenlängen-Kampagne werden präsentiert.

T 72.4 Mo 17:30 KGII-HS 2006

Wide Range Multifrequency Observations of Northern TeV Blazars — •Stefan Rügamer[1], Masaaki Hayashida[2], Dieter Horns[3], Luigi Costamante[4], and Tadayuki Takahashi[5] for the MAGIC-Collaboration — [1]Institut für Theoretische Physik und Astrophysik, Universität Würzburg — [2]Max-Planck-Institut für Physik, München — [3]Institut für Astronomie und Astrophysik, Universität Tübingen — [4]Max-Planck-Institut für Kernphysik, Heidelberg — [5]Institute of Space and Astronautical Science, Kanagawa, Japan

Blazars are radio-loud active galactic nuclei (AGN) with a relativistic jet closely aligned to the line of sight. HBLs, a subclass of blazars, are characterized by an SED peaking in the UV to X-ray and VHE range.

Despite extensive observational efforts the knowledge on HBLs is rather limited. This is mainly due to the high flux variability spanning from minutes to month as well as an SED ranging from radio to TeV energies, making thorough investigations of the emission mechanisms only possible by simultaneous multifrequency campaigns (MFKs).

Former MFKs were suffering from the low sensitivity of the VHE instruments which rendered only detections in high flux states possible. With the advent of the next generation of gamma telescopes, such as MAGIC and H.E.S.S., detections also in low or quiescent flux states as well as the localization of the VHE peak become feasible.

We present the results of simultaneous observations in the optical (KVA), X-ray (Suzaku) as well as VHE range (MAGIC, H.E.S.S.) conducted in 2006 for Mrk421, Mrk501, 1ES1218+304 and 1ES1426+428.

T 72.5 Mo 17:45 KGII-HS 2006

Discovery of VHE gamma-rays from the BL Lac RGB J0152+017 — •Dalibor Nedbal[1], Sarah Kaufmann[2], Martin Raue[1], and Stefan Wagner[2] for the H.E.S.S.-Collaboration — [1]Max-Planck-Institut fuer Kernphysik, Heidelberg, Germany — [2]Landessternwarte, Heidelberg, Germany

The BL Lac RGB J0152+017 (z=0.08) was observed from October to December 2007 by the H.E.S.S. array of four atmospheric Cherenkov telescopes. A significant VHE (E>100GeV) gamma-ray signal from the direction of RGB J0152+017 was found in the on-site analysis, which showed an indication for variability on nightly bases. The discovery by H.E.S.S. triggered ToO X-ray observations by the SWIFT and RXTE satellites. The object was additionaly monitored by the optical telescope ATOM. The result from the HESS and MWL observations will be presented.

T 72.6 Mo 18:00 KGII-HS 2006

Discovery of Two New TeV Blazars with the H.E.S.S. Cherenkov Telescopes — •Martin Raue[1], Wystan Benbow[1,2], Luigi Costamante[1,3], and Dieter Horns[4] for the H.E.S.S.-Collaboration — [1]Max-Planck-Institut für Kernphysik, Heidelberg, Germany — [2]now at Harvard-Smithsonian Center for Astrophysics, USA — [3]now at HEPL/KIPAC, Stanford, USA — [4]Institut für Experimentalphysik, Universität Hamburg, Germany

Since the new generation of imaging atmospheric Cherenkov telescopes came online with the commissioning of the four telescopes of the H.E.S.S. experiment in 2004, the number of known extragalactic gamma- ray emitters in the very high energy (VHE) domain has more than doubled. All of the sources detected so far are active galactic nuclei and all but one belong to the class of BL Lac objects. The emission process for VHE gamma-rays in this class of objects is not fully understood and a large sample of sources and multi-wavelength data is needed to discriminate between different models. Furthermore, VHE photons from these distant sources are attenuated via pair production with the extragalactic photon field in the optical to infrared wavelength band (extragalactic background light, EBL), which contains cosmological information on the star and galaxy formation history. With assumptions about the source physics, limits on this photon field can be