

## Conferências Internacionais

- " **Distribution of Photons and Mesons from Nuclear Interactions Observed by Chacaltaya Emulsion Chamber** "

Grupo de colaboração Brasil - Japão

Proceedings of the 15th International Cosmic Ray Conference IUPAP - Plovdiv - Bulgária, agosto 1977, Conference Papers, HE 50, abstract, Vol. 7, 207

- " **Further Study on New Type of Nuclear Interactions Centauro** "

Grupo da colaboração Brasil - Japão

Proceedings of the 15th International Cosmic Ray

Conference IUPAP - Plovdiv - Bulgária, agosto 1977, Conference Papers, HE 51, Vol. 7, 208 - 213

14

- " **Multiple Meson Production in 10 eV Region** "

Grupo da colaboração Brasil - Japão

Proceedings da 19th Conferência Internacional sobre Física de Altas Energias, Tóquio - Japão, agosto 1978, Conference Papers

15

- " **A New Type of Nuclear Interactions in 10 eV Region** "

Grupo da colaboração Brasil - Japão

Proceedings da 19th Conferência Internacional sobre Física de Altas Energias, Tóquio - Japão, agosto 1978, Conference Papers

- " **Centauro** "

Grupo da colaboração Brasil - Japão

Proceedings da 19th Conferência Internacional sobre Física de Altas Energias, Tóquio - Japão, agosto 1978, Conference Papers

13

- " **Multiple Meson Production in the SEy > 2 x 10 eV Region** "

Grupo da colaboração Brasil - Japão

Conferência sobre tópicos de Raios Cósmicos e Física de Partículas acima de 10 TeV. Newark-Delaware - E.U.A., outubro 1978, Conference Papers nº 49. Particles and Fields subseries, nº 16

publicado pela American Institute of Physics, 94 - 110, e também publicado na Separata S- 129/78 - IFGW - UNICAMP.

- " A New Type of Nuclear Interactions in the SEy >

<sup>14</sup>  
10 eV Region "

Grupo da colaboração Brasil - Japão  
Idem, 317 - 332, também publicado na Separata  
S - 130/78 - IFGW - UNICAMP.

- " Baryon Pair Production with large decay Q-value "

Grupo da colaboração Brasil - Japão  
Idem, 145 - 151, publicado Separata S-131/78 - IFGW  
UNICAMP

- " Baryon Pair Production with large decay Q-value "

Versão atualizada  
Grupo da colaboração Brasil - Japão  
Proceedings of the 16th International Cosmic Ray  
Conference IUPAP - Quioto - Japão, agosto 1979,  
Conference Papers HE 3 - 46, Vol. 6, 350 - 355

- " A New Type of Nuclear Interactions in the SEy >

<sup>14</sup>  
10 eV Region "

Versão atualizada  
Grupo da colaboração Brasil - Japão  
Proceedings of the 16th International Cosmic Ray  
Conference IUPAP - Quioto - Japão, agosto 1979,  
Conference Papers HE 3 - 47, Vol. 6, 356- 361

13

- " Multiple Mesons Production in SEy > 2 x 10<sup>14</sup>  
Region "

Versão atualizada  
Grupo da colaboração Brasil - Japão  
Proceedings of the 16th International Cosmic Ray  
Conference IUPAP - Quioto - Japão, agosto 1979,  
Conference Papers H 3 - 48, Vol. 6, 362 - 367

- "Study on target interactions in emulsion chamber "

Grupo da colaboração Brasil - Japão  
Proceedings of the 17th International Cosmic Ray  
Conference IUPAP - Paris - França, julho 1981,  
Conference Papers, HE 3.2-21, Vol. 11, 82-85

- " Centauro and Related Phenomena "

Grupo da colaboração Brasil-Japão Proceedings of the 17th International Cosmic Ray  
Conference IUPAP - Paris - França, julho 1981,  
Conference Papers, HE 3.2.-28, Vol. 11, 100 - 103

- " **Hadrons in Cosmic Ray Families** "

Grupo da colaboração Brasil - Japão  
Proceedings of the 17th International Cosmic Ray  
Conference IUPAP - Paris - França, julho 1981,  
Conference Papers, HE 5.1-14, Vol. 11, 159 - 162

- " **Gama Ray Families observed by Chacaltaya Emulsion Chamber** "

Grupo de colaboração Brasil - Japão  
Proceedings of the 17th International Cosmic Ray  
Conference IUPAP - Paris - França, julho 1981,  
Conference Papers, HE 1-15, Vol. 11, 163 - 166

- " **Chirons and Geminions** "

Grupo da colaboração Brasil - Japão  
Proceedings of the 18th International Cosmic Ray  
Conference IUPAP - Bangalore - India, agosto 1983,  
Conference Papers, HE 5 - 1 abstract, Vol.5, 388 e  
publicado vol. 11, 77 - 80

- " **Systematic study on large families above 1000 TeV** "

Grupo da colaboração Brasil - Japão  
Proceedings of the 18th International Cosmic Ray  
Conference IUPAP - Bangalore - India, agosto 1983,  
Conference Papers, HE 5-2, abstract Vol.5, 389

- " **Centauro and Mini - Centauro** "

Grupo da colaboração Brasil - Japão  
Proceedings of the 18th International Cosmic Ray  
Conference IUPAP - Bangalore - India, agosto 1983,  
Conference Papers, HE 5-3 abstract, Vol. 5, 390

- " **Phenomenology on exotic families** "

Grupo da colaboração Brasil - Japão  
Proceedings of the 18th International Cosmic Ray  
Conference - IUPAP - Bangalore - India, agosto  
1983, Conference Papers, HE 5-4 abstract, Vol. 5,  
391

- " **Exotic Interactions among C-jets and Pb-jets** "

Grupo da colaboração Brasil - Japão  
Proceedings of the 19th International Cosmic Ray  
Conference La Jolla, E.U.A., agosto 1985,  
Conference Papers, HE 3.2 - 6, Vol. 6, 250 - 253

**- " Japan - URSS Emulsion Chamber Experiment at Pamir "**

Japan - URSS Joint Experiment (I) and E.H. Shibuya  
Proceedings of the 19th International Cosmic Ray  
Conference La Jolla, E.U.A., agosto 1985,  
Conference Papers, HE 3.1 - 1, Vol. 6, 200

**- " Super - family P2 c-96-125 observed by Japan URSSS Joint Emulsion Chamber Experiment "**

Japan - URSS Joint Emulsion Chamber Experiment e  
E.H. Shibuya Proceedings of the 19th Internacional  
Cosmic Ray Conference La Jolla, E.U.A., agosto  
1985, Conference Papers, HE 3.48, Vol. 6, 332 -  
335

**- " A Search for Mini-Clusters in Japan - URSS Joint Chamber at Pamir "**

Japan - URSS Joint Experiment (II) and E.H. Shibuya  
Proceedings of the 19th International Cosmic Ray  
Conference La Jolla, E.U.A., agosto 1985,  
Conference Papers, HE 3.5-2, Vol. 6, 352 - 355

**- " Mini - Clusters "**

Grupo da colaboração Brasil - Japão  
Proceedings of the 19th International Cosmic Ray  
Conference La Jolla, E.U.A., agosto 1985,  
Conference Papers, HE 3.5-3, Vol. 6, 356 - 359

**- " Giant Mini-Clusters as a Possible Origin of " Halo " Phenomena Observed in Super - Families "**

Grupo da colaboração Brasil - Japão  
Proceedings of the 19th International Cosmic Ray  
Conference La Jolla, E.U.A., agosto 1985,  
Conference Papers, HE 3.5-4, Vol. 6, 360 - 363

**- " Observation of Genetic Relation among new phenomena Geminion, Chiron and Mini - Centauro "**

Grupo da colaboração Brasil - Japão  
Proceedings of the 19th International Cosmic Ray  
Conference La Jolla, E.U.A., agosto 1985,  
Conference Papers, HE 6.2-16, Vol. 8, 310 - 313

**- " A Systematic survey of exotic type interactions in Chacaltaya tow - storey chamber n° 19 "**

S. Hasegawa and colaboração Brasil - Japão  
Proceedings of International Symposium on Cosmic  
Ray Super High Energy Interactions, october,29  
November 3, 1986, Beijing - China, page 5-1 to 5-6  
15 16

**- " Air Shower Cores of 10 - 10 eV observed by Chacaltaya Emulsion Chambers "**

Grupo da colaboração Brasil - Japão  
Proceedings of the 15th International Cosmic Ray  
Conference IUPAP - Plovdiv - Bulgária, agosto 1977,  
Conference Papers, EA 61 abstract - Vol. 8, 226

- " **High Energy showers in Chiron Families** "

S. Hasegawa and colaboração Brasil - Japão  
Proceedings of International Symposium on Cosmic  
Ray Super High Energy Interactions, Oct.29 - Nov.3,  
1986, Beijing - China, page 5-7 to 5-12

- " **A systematic survey of exotic - type target  
interactions in Chacaltaya two - storey chambers** "

Colaboração Brasil - Japão  
Proceedings of the 20th International Cosmic Ray  
Conference IUPAP, agosto 1987 - Moscou - URSS, Vol.  
5, 214 - 217

- " **Study on huge shower clusters in high-energy  
cosmic-ray families** "

Colaboração Brasil - Japão  
Proceeding of the 20th International Cosmic Ray  
Conference IUPAP, agosto 1987, Moscou - URSS, Vol.  
5, 330 - 333

- " **Cosmic - ray nuclear events of 1000-2000 TeV  
observed in Chacaltaya Emulsion Chambers** "

Colaboração Brasil - Japão  
Proceedings of the 20th International Cosmic Ray  
Conference IUPAP, agosto 1987, Moscou - URSS, Vol.  
5, 359 - 361

- " **Mini-clusters observed in high-energy cosmic-ray  
families** "

Colaboração Brasil - Japão  
Proceedings of the 20th International Cosmic Ray  
Conference IUPAP, agosto 1987, Moscour - URSS, Vol.  
5, 326 - 329

- " **Super - families with huge halo observed in Pamir  
joint experiment** "

Colaboração Pamir e Brasil - Japão  
Proceedings of the 20th International Cosmic Ray  
Conference IUPAP, agosto 1987, Moscou - URSS, Vol.  
5, 383 - 386

- " **A systematic search of a high-energy cosmic-ray  
families of exotic nature in joint chamber  
at Pamir** "

Colaboração Pamir e Brasil - Japão  
Proceedings of the 20th International Cosmic Ray  
Conference IUPAP, agosto 1987, Moscou - URSS, Vol.  
5, 334 - 337

**About a recently detected hadron-rich event "**

Grupo da colaboração Brasil - Japão  
Proceedings of the 20th International Cosmic Ray  
Conference IUPAP, agosto 1987, Moscou- URSS, Vol.  
5, 325 abstract

**- " One more Centauro ? "**

Colaboração Brasil - Japão  
Proceedings of the 5th International Symposium  
on very high cosmic ray interactions, agosto  
1988, Lodz - Polónia, pag. 309 - 313

**- " Observation on cosmic ray induced nuclear  
interactions "**

Colaboração Brasil - Japão  
1989 International Nuclear Physics Conference -  
IUPAP, São Paulo - Brasil, agosto 1989, Vol. 1,  
pag. 448

**- " A Centauro event with a surviving nucleon "**

E.H. Shibuya - colaboração Brasil - Japão  
Rio de Janeiro International Workshop on  
relativistic aspects of nuclear physics - Rio de  
Janeiro - Brasil, agosto 1989, pag. 411 - 413

**- " Two examples of Centauro observed in two  
different energy domains "**

Colaboração Brasil - Japão  
Proceedings of the 21th International Cosmic Ray  
Conference IUPAP, janeiro 1990, Adelaide-  
Australia, Vol. 8, 263 - 266

**- " High energy shower clusters observed in  
Chacaltaya two - storey chambers "**

Colaboração Brasil - Japão  
Proceedings of the 21th International Cosmic Ray  
Conference IUPAP, janeiro 1990, Adelaide -  
Australia, Vol. 8, 267 - 270

**- " High energy showers in cosmic ray families  
observed in Pamir joint chambers "**

Colaboração Pamir e Brasil - Japão  
Proceedings of the 21th International Cosmic Ray  
Conference IUPAP, janeiro 1990, Adelaide -  
Australia, Vol. 8, 157 - 160

**- " Penetrative characteristics of extremely high  
energy halos and shower clusters in Pamir joint  
chambers "**

Colaboração Pamir e Brasil - Japão  
Proceedings of the 21th International Cosmic Ray  
Conference IUPAP, janeiro 1990, Adelaide -  
Austrália, Vol. 8, 243 - 246

- " **Analysis of highest energy events observed by  
Chacaltaya emulsion chambers** "

Colaboração Brasil - Japão  
Proceedings of the 21th International Cosmic Ray  
Conference IUPAP, janeiro 1990, Adelaide -  
Australia, Vol. 8, 255 - 258

- " **Ultra-high energy cosmic ray families of Centauro  
characteristics** "

Colaboração Brasil - Japão  
Proceedings of the 21th International Cosmic Ray  
Conference IUPAP, janeiro 1990, Adelaide-Australia,  
Vol. 8, 259 - 262

- " **Altitude variation of high energy cosmic rays and  
exotic phenomena** "

Colaboração Brasil - Japão  
Proceedings of the 21th International Cosmic Ray  
Conference IUPAP, janeiro 1990, Adelaide -  
Australia, Vol. 10, 126 - 129

- " **High energy cosmic-ray families and simulation  
calculations (I)** "

Colaboração Brasil - Japão e Pamir  
Proceedings of the 6th International Symposium on  
very high energy cosmic ray interactions, Tarbes -  
França, julho 1990, 40 43

- " **High energy cosmic-ray families and simulation  
calculations (II)** "

Colaboração Brasil - Japão e Pamir  
Proceedings of the 6th International Symposium on  
very high energy cosmic ray interactions, Tarbes -  
França, julho 1990, 44 - 47

- " **Nature of high energy showers in cosmic-ray  
families** "

Colaboração Brasil - Japão  
Proceedings of the 6th International Symposium on  
very high energy cosmic ray interactions, Tarbes -  
França, julho 1990, 272 - 275

- "Large shower clusters and halos in cosmic-ray families "

Colaboração Brasil - Japão  
Proceedings of the 6th International Symposium on very high energy cosmic ray interactions, Tarbes - França, julho 1990, 276 - 279

- "Observations of Centauro species in cosmic-ray families and physical significances "

Colaboração Brasil - Japão  
Proceedings of the 6th International Symposium on very high energy cosmic ray interactions, Tarbes - França, julho 1990, 221 - 230

- " Characteristics of hadronic interactions over 15

10 eV observed in High Energy Cosmic Ray Families in Chacaltaya and Pamir emulsion Chamber I "

Colaboração Brasil - Japão e Pamir  
Proceedings of the XXII International Cosmic Ray Conference, agosto 1991, Dublin - Ireland, Vol. 4, HE 1.2.10, pg. 93 - 96

- " Characteristics of hadronic interactions over 15

10 eV observed in High Energy Cosmic Ray Families in Chacaltaya and Pamir Emulsion Chamber II "

Colaboração Brasil - Japão e Pamir  
Proceedings of the XXII International Cosmic Ray Conference, agosto 1991, Dublin - Ireland, Vol. 4, HE 1.2.11, pg. 97 - 100

- " Scaling Violation and Cosmic-ray Exotic Events "

Colaboração Brasil - Japão e Pamir  
Proceedings of the XXII International Cosmic Ray Conference, agosto 1991, Dublin - Ireland, Vol. 4, HE 1.4.7, pg 185 - 188

- " Primary Cosmic Ray intensity inferred by scale breaking model "

Colaboração Brasil - Japão e Pamir  
Proceedings of the XXII International Cosmic Ray Conference, agosto 1991, Dublin - Ireland, Vol. 2, OG 6.1.16, pg. 43 - 44



- " **Small pt Characteristics of Particle Production  
seen in High Energy Shower - Clusters in Emulsion  
Chambers at Chacaltaya and Pamirs "**

Colaboração Brasil - Japão e Pamir

Proceedings of the XXII International Cosmic Ray  
Conference, agosto 1991, Dublin - Ireland, Vol.  
4, HE 1.2.12, pg. 101 - 104

- " **Gamma - Ray Inelasticity by in Emulsion Chamber  
Experiment "**

Colaboração Brasil - Japão e Pamir

Proceedings of XXII International Cosmic Ray  
Conference, agosto 1991, Dublin - Ireland, Vol.4,  
HE 1.2.9, pg 89 - 92



# ATAS Conferência Internacional

## ~~19 . Colaboração Brasil-Japão~~

Faltam os atos

- \* Investigation of extremely high energy nuclear interaction with large emulsion chambers.
- \* Proceedings of the V- Interamerican Seminar on Cosmic Rays, La Paz, Bolívia, 1962; 2: pp 33-1 a 33-7

## ~~20 . Colaboração Brasil-Japão~~

- \* Emulsion chamber project of Japan-Brasil Collaboration.
- \* International Cosmic-Ray Conference, Jaipur, 1963 Dec: pp 326-345

## ~~24 . Colaboração Brasil-Japão~~

- \* Observation of extremely high energy events oy emulsion chamber.
- \* Proc. Int. Conf. Cosmic Rays, 1965; pp 835-839

## ~~26 . Colaboração Brasil-Japão~~

- \* Nuclear interactions produced in the emulsion chamber.
- \* Proceedings of the IX International Conference on Cosmic Rays, London, Sept. 1965; 2: EAS 42, pp 878-882

## ~~27 . Colaboração Brasil-Japão~~

- \* Extensive air showers observed in the emulsion chamber.
- \* Proceedings of the IX International Conference on Cosmic Rays, London, Sept. 1965; 2: EAS 43, pp 744-840

**31 . Colaboração Brasil-Japão** *U-3 UVV*

\* Análise das interações nucleares ocorridas na atmosfera a uma altura menor que 1.000m em Chacaltaya.

\* XXII Reunião Anual da S.B.P.C., Salvador, Bahia, 1970 *Ref. ?*

**32 . Colaboração Brasil-Japão** *+++ / Ray*

\* Fireball masses.

\* Proceedings of the VI Interamerican Seminar on Cosmic Rays, La Paz, Jul 1970; (40), pp 619-622

**33 . C.M.G. Lattes; M.S. <sup>maria</sup> Mantovani**

\* Analysis of Bristol-Bombaim data on nuclear interaction produced by primary c.r. of  $Se\ y > 1$  TeV.

\* Proceedings of the VI Interamerican Seminar on Cosmic Rays, La Paz, Jul 1970; (40), pp 623-626

**35 . Colaboração Brasil-Japão**

\* Chacaltaya emulsion chamber experiment. Part I: nuclear interactions in emulsion chamber.

\* Conference Papers, 1971; 7: HE-44, pp 2786.  
XII - International Cosmic-Ray Conference, Hobart, Tasmania, August 1971; 7: HE.44, pp 2786

**36 . Colaboração Brasil-Japão** *A. uter,*

\* Chacaltaya emulsion chamber experiment. Part II: atmospheric interactions.

\* XII - International Cosmic-Ray Conference, Hobart, Tasmania, 1971; 7: HE.43, pp 2781

**37 . Colaboração Brasil-Japão** *A. uter,*

\* Chacaltaya emulsion chamber experiment. Part III: large air shower event "Andromeda".

\* XII - International Cosmic-Ray Conference, Hobart, Tasmania, 1971; 7: HE.42, pp 2775

**38 . Colaboração Brasil-Japão** *A. uter,*

\* Atmospheric phenomena of extremely high energy cosmic-ray components.

\* XIII - International Cosmic-Ray Conference, Denver, U.S.A., 1973; 4: AS-6B, pp 2671

### 39 . Colaboração Brasil-Japão

\* Multiple production of mesons in cosmic-ray high energy nuclear interactions

\* XIII - International Cosmic-Ray Conference, Denver, 1973; 3: HE-4, pp 2210

### 40 . Colaboração Brasil-Japão

\* Characteristics of multiple production of mesons around 100 TeV from Chacaltaya cosmic-ray experiment.

\* International Conference on High Energy Physics - Imperial College - Londres, 1974 Jul; " Invited Papers "; also in International Symposium on High Energy Phenomena in Cosmic Rays, Tokyo, 1974 Nov

### 41 . Colaboração Brasil-Japão

\* Atmospheric phenomena of high energy cosmic-rays at mt. Chacaltaya.

\* XIV - International Cosmic-Ray Conference, Munique, 1975; 7: HE 3.24, pp 2387

### 42 . Colaboração Brasil-Japão

\* Fire-balls and new particles.

\* XIV - International Cosmic-Ray Conference, Munique, August 1975, 7: HE 5.5, pp 2426

### 43 . Colaboração Brasil-Japão

\* Further evidences for new type of nuclear interactions at extremely high energy.

\* XIV - International Cosmic-Ray Conference, Munique, August 1975, 3: pp 2392

### 45 . Colaboração Brasil-Japão

\* Baryon pair production with large decay q-value.

\* Proceedings of the Topical Conference on Cosmic Rays and Particle Physics above 10 TeV, Delaware, Ed. American Institute of Physics Conference Paper n° 49, Particle and Field Subseries, 1978 Oct;

16: pp 145; Versão atualizada em: XVI - International Cosmic-Ray Conference, Kyoto, Japan, 1979; 6: HE 3-46, pp 350

### 46 . Colaboração Brasil-Japan

13

\* Multiple meson production in  $e\gamma > 2 \times 10^6$  eV region.

\* Proceeding of the Topical Conference on Cosmic Rays and Particle Physics above 10 TeV, Delaware, Ed. American Institute of Physics, 1978;

Conference Paper 49, Sect. Particles and Fields Subseries, 16: pp 94; also in XVI -

International Cosmic-Ray Conference, Kyoto, Japan, 1979; 6: HE 3.48 pp 362

\* Proceeding of the Topical Conference on Cosmic Rays and Particle Physics above 10 TeV, Delaware,

Ed. American Institute of Physics, 1978 Oct;  
Conference Paper 49, Section Particles and Fields,  
Subseries, 16: pp 317; also in XVI -  
International Cosmic-Ray Conference, Kyoto, Japan,  
1979; 6: HE 3.47, pp 356

**48. Colaboração Brasil-Japão** (A)

15

\* A new type of nuclear interaction in a 10 eV region.

\* International Conference on High Energy Physics,  
Tokyo, Japan, August 1978

**52. Colaboração Brasil-Japão**

\* Centauro and related phenomena.

\* XVII - International Cosmic-Ray Conference, Paris,  
1981; 11: pp 100

**53. Colaboração Brasil-Japão**

\* Gamma ray families observed by Chacaltaya emulsion chambers.

\* Proceedings of the XVII - International Cosmic-Ray Conference, Paris, 1981; 11: pp 163

**54. Colaboração Brasil-Japão**

\* Hadrons in cosmic-ray families.

\* XVII - International Cosmic-Ray Conference, Paris,  
1981; 11: 159

**56. Colaboração Brasil-Japão**

\* Study on target interactions in emulsion Chamber.

\* XVII - International Cosmic-Ray Conference, Paris,  
1981; 11: pp. 82

**57. Colaboração Brasil-Japão**

\* Centauros.

\* Report of Science and Engineering Research  
Laboratory.

Waseda University, Tokyo, 1982; also in Proceedings  
of the Workshop on Cosmic Rays Interactions and High  
Energy Results, CBPF, 1982; pp 42

**58 . Colaboração Brasil-Japão**

\* Chirons.

\* Proceedings of the Workshop on Proton-Antiproton Collider Physics, patrocinado pelo American Institute of Physics, Madison, 1982; 85: pp 500; also in Proceedings of the Workshop on Cosmic Rays Interactions and High Energy. CBPF, Rio, 1982; pp 102

**60 . Colaboração Brasil-Japão**

\* Chirons and geminions.

\* Proceedings of the XVII - International Cosmic-Ray Conference, Bangalore, India, 1983; 11 HE 5-1: pp 77

**61 . Colaboração Brasil-Japão**

\* " Chirons ".

\* Proceedings of the International Symposium on Cosmic Rays and Particle Physics, Tokyo, 1984 Mar; pp 319

**62 . Colaboração Brasil-Japão**

\* Preliminary results on observation of genetic relations among new phenomena, geminion, chiron and mini-centauro.

\* Proceedings of the International Symposium on Cosmic Rays and Particle Physics, Tokyo, 1984 Mar; pp 718

**63 . Colaboração Brasil-Japão**

\* Exotic interactions among C-jets and Pb-jets.

\* Proceedings of the XIX - International Cosmic-Ray Conference, La Jolla, 1985; 6: pp 250

**64 . Colaboração Brasil-Japão**

\* Giant mini-clusters as possible origin of halo phenomena observed in super-families.

\* Proceedings of the XIX - International Cosmic-Ray Conference, La Jolla, 1985; 6: pp 360

**65 . Colaboração Brasil-Japão**

\* Mini-cluster.

\* Proceedings of the XIX - International Cosmic-Ray Conference, La Jolla, 1985; 6: pp 356

**66 . Colaboração Brasil-Japão**

- \* Observation of genetic relation among new phenomena geminion, chiron and mini-centauro.
- \* Proceedings of the XIX - International Cosmic-Ray Conference, La Jolla, 1985; 8: pp 31

**67 . Colaboração Brasil-Japão-URSS**

- \* About a recently detected hadron - rich event.
- \* Proceedings of the XX - International Cosmic-Ray Conference, Moscow, 1987; 5: pp 325

**68 . Colaboração Brasil-Japão** A?

- \* Cosmic-ray nuclear events of 1000-2000 TeV observed in Chacaltaya emulsion chambers.
- \* Proceedings of the XX - International Cosmic-Ray Conference, Moscow, 1987; 5: pp 359

**69 . Colaboração Brasil-Japão** A?

- \* Mini-clusters observed in high energy cosmic-ray families
- \* Proceedings of the XX - International Cosmic-Ray Conference, Moscow, 1987; 6: pp 326

**70 . Colaboração Brasil-Japão** A?

- \* Study on huge shower clusters in high energy cosmic ray families.
- \* Proceedings of the XX - International Cosmic-Ray Conference, Moscow, 1987; 5: pp 330

**71 . Colaboração Brasil-Japão** A?

- \* A systematic survey of exotic type target interactions in Chacaltaya two-storey chambers.
- \* Proceedings of the XX - International Cosmic-Ray Conference, Moscow, 1987; 5: pp 214

**73 . Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

- \* Super families with huge halo observed in Pamir joint chamber.
- \* Proceedings of the XX - International Cosmic-Ray Conference, Moscow, 1987; 5: pp 383

**74 . Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

- \* A systematic search of a high energy cosmic-ray families of exotic nature in joint chamber at Pamir.
- \* Proceedings of the XX - International Cosmic-Ray Conference, Moscow, 1987; 5: pp 334

**75 . Colaboração Brasil-Japão** A 3

\* One more centauro?

\* Proceedings of the V - International Symposium on Very High Energy Cosmic-Ray Interactions, Lodz, 1988; pp 309

**76 . Colaboração Brasil-Japão** A 3

\* Altitude variation of high energy cosmic-ray and exotic phenomena.

\* Proceedings of the XXI - International Cosmic-Ray Conference, Adelaide, 1990; 10

**77 . Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

\* High energy cosmic ray families and simulation calculations (I).

\* Proceedings of the VI - International Symposium on Very High Energy Cosmic-Ray Interactions, Tarbes, 1990

**78. Colaboração Brasil-Japão**

\* Analysis of highest energy events observed by Chacaltaya emulsion chambers.

\* Proceedings of the XXI - International Cosmic-Ray Conference, Adelaide, 1990; 8: pp 255

**79. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

\* High energy cosmic-ray families and simulations calculations (II).

\* Proceedings of the VI - International Symposium on Very High Energy Cosmic-Ray Interactions, Tarbes, 1990

**80 . Colaboração Brasil-Japão-**

\* High energy shower clusters observed in Chacaltaya two-storey chambers.

\* Proceedings of the XXI - International Cosmic-Ray Conference, Adelaide, 1990; 8: pp 267

**81 . Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

\* High energy showers in cosmic-ray families observed in Pamir joint chambers.

\* Proceedings of the XXI - International Cosmic-Ray Conference, Adelaide, 1990; 8: pp 157



## **82 . Colaboração Brasil-Japão**

\* Large shower clusters and halos in cosmic-ray families.

\* Proceedings of the VI - International Symposium on Very High Energy Cosmic-Ray Interactions, Tarbes, 1990

## **83 . Colaboração Brasil-Japão**

\* Nature of high energy showers in cosmic-ray families.

\* Proceedings of the VI - International Symposium on Very High Energy Cosmic-Ray Interactions, Tarbes, 1990

## **84. Colaboração Brasil-Japão**

\* Observation of centauro species in cosmic-ray families.

\* Proceedings of the VI - International Symposium on Very High Energy Cosmic-Ray Interactions, Tarbes, 1990

## **85. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

\* Penetrative characteristics of extremely high energy halos and shower clusters in Pamir joint chambers.

\* Proceedings of the XXI - International Cosmic-Ray Conference, Adelaide, 1990; 8: pp 243

## **86. Colaboração Brasil-Japão**

\* Two examples of centauro observed in two different energy domains.

\* Proceedings of the XXI - International Cosmic-Ray Conference, Adelaide, 1990; 8: pp 263

## **87. Colaboração Brasil-Japão**

\* Ultra high energy cosmic-ray families of centauro characteristics.

\* Proceedings of the XXI - International Cosmic-Ray Conference, Adelaide, 1990; 8: pp 259

**88. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

15

- \* Characteristics of hadronic interactions over 10 eV observed in high energy cosmic-ray families in Chacaltaya and Pamir emulsion chambers-II.
- \* Proceedings of the XXII - International Cosmic-Ray Conference, Dublin, 1991; H.E. 1.2., pp 11

**89. Colaboração-Brasil-Japão**

- \* Detailed analysis of a superfamily of visible energy greater than 5000 TeV with centauro characteristics observed in Chacaltaya chamber.
- \* Proceedings of the XXII - International Cosmic-Ray Conference, Dublin, 1991; H.E. 1.2, 1.3

**90. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

15

- \* Characteristics of hadronic interactions over 10 eV observed in high energy cosmic-ray families in Chacaltaya and Pamir emulsion chambers-I.
- \* Proceedings of the XXII - International Cosmic-Ray Conference, Dublin, 1991; H.E. 1.2., pp 10

**91. Colaboração Brasil-Japão** ? NA

- \* Gamma - ray inelasticity  $k_y$  in emulsion chamber experiments.
- \* Proceedings of the XXII - International Cosmic-Ray Conference, Dublin, 1991; H.E. 1.2.9

**92. Colaboração Brasil-Japão**

- \* Scaling violation and cosmic-ray exotic events.
- \* Proceedings of the XXII - International Cosmic-Ray Conference, Dublin, 1991; H.E. 1.47

**93. Colaboração Brasil-Japão**

- \* Scaling violation in the forward region.
- \* Proceedings of the XXII - International Cosmic-Ray Conference, Dublin, 1991; H.E. 1.46

**94. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

- \* Small  $p - t$  characteristics of particle production seen in high energy shower clusters in emulsion chambers at Pamir and Chacaltaya.
- \* Proceedings of the XXII International Cosmic-Ray Conference, Dublin, 1991; I: H.E. 1.2, August 1991

**96. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

\* A study of very high energy hadron interactions through observations of cosmic-ray families of visible energy greater than 500 TeV (I).

\* Proceedings of the XXIII - International Cosmic-Ray Conference, Calgary, 1993; 4: pp 116

**97. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

\* A study of very high energy hadron interactions through observations of cosmic-ray families of visible energy greater than 500 TeV (II).

\* Proceedings of the XXIII - International Cosmic-Ray Conference, Calgary, 1993; 4: pp 120

**98. Colaboração Brasil-Japão-URSS-Polônia, Grupo de Pamir**

\* A study of very high energy hadron interactions through observations of cosmic-ray families of visible energy greater than 500 TeV (III).

\* Proceedings of the XXIII - International Cosmic-Ray Conference, Calgary, 1993; 4: pp 124