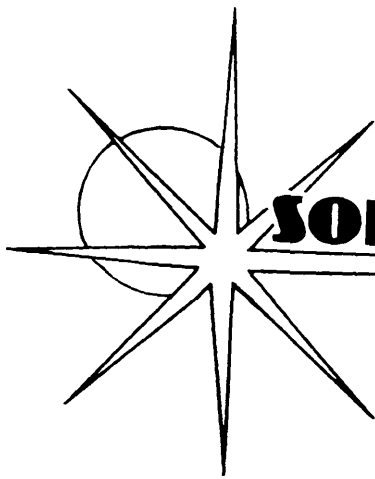


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SOLAR and STELLAR FLARES



I.A.U. COLLOQUIUM No. 104

15-19 August 1988
Stanford University, California, USA

POSTER PAPERS

³¹⁹⁶³ Edited by ³¹⁹⁶⁴
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A number of people collaborated in editing the present volume. In particular, we should like to thank **Ms. Santa Del Popolo** and **Ms. Gaetana Tringale** (Catania Astrophysical Observatory), who very efficiently carried out many editing duties, and **Ms. Cinzia Spampinato** (Astronomy Institute of Catania University), who carefully put in camera ready form some of the manuscripts. We also acknowledge the excellent cooperation of the Printing Company, in the person of Mr. Coniglione.

Preface

For almost three decades following the first flare detection on a dMe star in 1948, solar and stellar flare research continued to be carried out in remarkable isolation from each other. Solar flares were observed in $H\alpha$, and their radio, X-ray and energetic particle outputs were studied, but until the recent initiation of a white light flare patrol program, only a few dozen solar white light flares were logged in over a hundred years of observation; while on the stellar side an almost exactly opposite situation prevailed: optical flaring was virtually the only observable phenomenon.

Things changed dramatically in the mid-1970's with the first X-ray detections of flares on UV Ceti, YZ CMi and Proxima Centauri. By the time of the 1982 Catania IAU Colloquium No. 71, *Activity in Red Dwarf Stars*, space observations of flare stars was an exciting topic. Nonetheless, participation at that meeting was mainly limited to the stellar community. The Palo Alto IAU Colloquium No. 104, *Solar and Stellar Flares*, is the successor to the Catania meeting, and is the first major IAU conference to bring together solar and stellar topics and investigators on an even footing. More and more, solar and stellar researchers are speaking the same language, and there has been an increase in the number of investigators who actually do research on both sides; the Solar Maximum Mission, especially, seems to have spurred quite a bit of research activity on the stellar side, such as in the application of solar flare magnetohydrodynamic loop models to stellar observations.

This conference was four years in the planning, and thus it was with a considerable measure of relief that we finally welcomed 200 scientists from 29 countries to Stanford University on 15–19 August 1988. To bring this about required support of many sorts from many sources. The conference was co-hosted by three institutes: the Lockheed Palo Alto Research Laboratory, the University of Catania and Stanford University. We were fortunate in obtaining generous funding from the NASA Solar Maximum Mission project to organize the meeting, and for this we owe special gratitude to SMM XRP Principal Investigator, Dr. Keith Strong, and SMM Project Scientist, Dr. Joseph B. Gurman. As a result we were able to hire the outstanding logistical support of the SLW Associates, local meeting organization specialists. Extensive additional funding for travel was also provided by NASA, and by the IAU, ESA and COSPAR; this allowed us to support approximately half of the participants! The all important meeting bags were generously provided by Lockheed, and well supplied coffee breaks were paid for by the Stanford Solar Observatory, Lockheed and Kluwer Academic Publishers. The Scientific Organizing Committee was chaired by us with much invaluable support from SOC member Peter Sturrock. Other members of the SOC were R. Bonnet, J. Butler, L. Cram, R. Gershberg, M. Giampapa, D. Gibson, D. deJager, C. Jordan, M. Machado, M. Oda, E. Priest, and H. Zirin.

As promised, the skies were clear and the temperatures balmy every single day. Social events included a Sunday night reception, a Tuesday night wine and cheese in the Stanford Rodin Garden and a Thursday night banquet at the Stanford Faculty Club. Most

memorable perhaps was the Monday night concert at Dinkelspiel Auditorium "An Evening of Songs and Arias" hosted by Dr. Kip Cranna of San Francisco Opera, produced and directed by E. Tucker, and featuring soprano Ellie Holt Murray, mezzo-soprano Marsha Sims, tenor Richard Walker, and baritone David Taft Kekuewa, with piano accompaniment by Marl Haffner, staff coach for San Francisco Opera.

Two scientific themes clearly emerged from this conference: (1) the key to progress in flare research lies in a multispectral approach with as much temporal resolution as the photon fluxes allow; and (2) the key to understanding the physics lies in a dynamic interaction between solar and stellar investigations and investigators. During the eight sessions solar and stellar topics were balanced and intermixed in 33 invited and oral presentations. The proceedings of these presentations will be published as a special edition of *Solar Physics* and will be the springboard to publication of solar-stellar articles in that journal. However 115 very exciting posters were also displayed. This companion volume contains many of these and will be of considerable interest in a different way; for here we have a wide ranging sampler of current research topics and this presents an excellent overview picture of who is doing what and where in this exciting interdisciplinary field.

Bernhard M. Haisch

Marcello Rodono

30 January 1989

IAU COLLOQUIUM No. 104

POSTER PAPERS

I N D E X

SESSION I: STELLAR FLARES

THE SOLAR-STELLAR CONNECTION: THE RELATIONSHIP BETWEEN FLARING RATES, FLARE POWER AND QUIESCENT X-RAY BACKGROUND R.A.Harrison, G.Pearce, A.Skumanich	13
X-RAY EMISSION FROM STELLAR FLARES: EXOSAT RESULTS R.Pallavicini, G.Tagliaferri	17
A CORRELATION BETWEEN BALMER AND SOFT X-RAY EMISSION FROM STELLAR AND SOLAR FLARES C.J.Butler, M.Rodonò, B.H.Foing	21
INDEPENDENCE OF CHROMOSPHERIC ACTIVITY AND SOFT X-RAY FLARING ON THE FLARE STAR EV LACERTAE C.W.Ambruster, B.R.Pettersen, S.L.Hawley, L.A.Coleman, S.Sciortino	27
SOLAR AND STELLAR FLARE OBSERVATIONS USING "WATCH" S.Brandt, N.Lund, A.R.Rao	33
NON-THERMAL ELECTRONS AND STELLAR RADIO EMISSION S.M.White, M.R.Kundu	37
VLA OBSERVATIONS OF STELLAR FLARES: A 3-HOUR FLARE OF THE RS CVn STAR λ , ANDROMEDAE AND A 5-MINUTE FLARE OF THE BP STAR HR 5942 A.S.Drake, J.L.Linsky	41
THE ULTRAVIOLET CONTINUUM IN SOLAR AND STELLAR FLARES K.J.H.Phillips	45
STELLAR FLARES: OBSERVATIONS AND THEORY S.L.Hawley	49
SIMULTANEOUS MULTI-WAVELENGTH OBSERVATIONS OF AN INTENSE FLARE ON AD LEONIS M.Rodonò, E.R.Houdebine, S.Catalano, B.H.Foing, C.J. Butler, F.Scaltriti, G.Cutispoto, D.E.Gary, D.M.Gibson, B.M.Haisch	53
ELECTRON TEMPERATURES OF FLARE PLASMAS FROM EMISSION LINE FLUXES E.R.Houdebine, C.J.Butler, M.Rodonò, P.M.Panagi, B.H.Foing	59
A FLARE ON AD Leo OBSERVED IN OPTICAL, UV AND MICROWAVES P.B.Byrne, D.E.Gary	63

THE FINE TEMPORAL STRUCTURE OF THE EV LACERTAE FLARE ON FEBRUARY 6, 1986 AT THE C IV (λ 1550 Å) RESONANCE LINE. I. OBSERVATIONS B.A.Burnasheva, R.E.Gershberg, A.M.Zvereva, I.V.Ilyin, N.I.Shakhovskaya, A.I.Sheikhet	67
THE FINE TEMPORAL STRUCTURE OF THE EV LACERTAE FLARE ON FEBRUARY 6, 1986 AT THE C IV (λ 1550 Å) RESONANCE LINE. II. INTERPRETATION M.M.Katsova, M.A.Livshits	71
OPTICAL CHROMOSPHERIC SPECTRAL LINES IN K AND M DWARF STARS R.D.Robinson, L.E.Cram	75
BALMER LINES AND CONTINUUM EMISSION FOR TWO FLARES OF THE dMe STAR GLIESE 729 A.Falchi, R.Falciani, L.A.Smaldone, G.P.Tozzi	79
SPECTRAL OBSERVATIONS OF A LARGE STELLAR FLARE R.D.Robinson	83
A GAS-DYNAMIC MODEL FOR A FLARE ON YZ CMi: INTERPRETATION OF SPECTROSCOPIC OBSERVATIONS WITH HIGH TEMPORAL RESOLUTION M.M.Katsova, M.A.Livshits, C.J.Butler, J.G.Doyle	87
AN ANALYSIS OF THE CONTINUUM LIGHT IN THE 3500-8500 Å REGION FROM A FLARE OBSERVED ON THE DWARF M STAR GLIESE 234 AB (= V 577 Mon) J.G.Doyle, G.H.J.van den Oord, C.J.Butler	91
HIGH TIME RESOLUTION PHOTOMETRY OF RED DWARF FLARE STARS. I. A SEARCH FOR FINE STRUCTURES ON THE OPTICAL LIGHT CURVES OF FLARES G.M.Beskin, S.N.Mitronova, S.I.Neizvestnyi, V.L. Plakhotnichenko, L.A.Pustil'nik, V.F.Shvartsman, R.E.Gershberg ..	95
HIGH TIME RESOLUTION PHOTOMETRY OF RED DWARF FLARE STARS. II. THE SHORTEST FLARE RISE TIME G.M.Beskin, V.L.Plakhotnichenko, L.A.Pustil'nik, V.F.Shvartsman, R.E.Gershberg	99
HIGH TIME RESOLUTION PHOTOMETRY OF RED DWARF FLARE STARS. III. THE MOST RAPID AND FAINTEST OBSERVED STELLAR FLARES: THEIR PHYSICS AND STATISTICS G.M.Beskin, S.I.Neizvestnyj, V.L.Plakhotnichenko, L.A.Pustil'nik, V.F.Shvartsman, R.E.Gershberg	103
THE FLARE ACTIVITY OF TWO INTERESTING RED DWARFS I.V.Ilyin, N.I.Shakhovskaya	107
GENERAL PROPERTIES OF ULTRAVIOLET FLARES IN RS CVn SYSTEMS J.E.Neff, A.Brown, J.L.Linsky	111
ENERGETIC FLARES ON RS CVn STARS J.G.Doyle, P.B.Byrne, G.H.J.van den Oord	115
THE RADIO LIGHT CURVE OF V 471 TAURI J.-P.Caillault, J.Patterson, D.Skillman	119

A STUDY OF THE DECAY PHASE OF AN X-RAY FLARE ON ALGOL R.Mewe, G.H.J.van den Oord, J.Jakimiec	123
THE X-RAY FLARE OF π^1 UMa: TEMPERATURE AND EMISSION MEASURE M.Landini, B.C.Monsignori Fossi	127
A GIANT X-RAY FLARE FROM A B9+POST-T-TAURI SYSTEM DETECTED BY EXOSAT G.Tagliaferri, P.Giommi, L.Angelini, J.P.Osborne, R.Pallavicini	131
LONG-TERM EVOLUTION OF STARSPOT AND CHROMOSPHERIC ACTIVITY, AND SHORT-TERM LIGHT VARIABILITY OF HK LACERTAE K.Olah	135
FLARE-LIKE EVENTS ON THE T-TAURI STAR RU LUPI F.Giovannelli, D.Castaldo, E.Covino, A.A.Vittone, C.Rossi	139
FLARE STARS IN THE ETA TAURI FIELDS. SIGNIFICANT LONG-TERM VARIATIONS OF THEIR FLARING ACTIVITY G.Szécsényi-Nagy	143
ANALYSIS OF THE MACHINE-READABLE VERSION OF THE TONANTZINTLA CATALOGUE OF THE PLEIADES FLARE STARS M.K.Tsvetkov, K.Y.Stavrev, K.P.Tsvetkova	147
FLARE STARS INVESTIGATIONS AT THE DEPARTMENT OF ASTRONOMY AND THE ROZHEN NATIONAL ASTRONOMICAL OBSERVATORY M.K.Tsvetkov, B.Zh.Kovachev	151
SKY SURVEY OF FLARE STARS AND VARIABLE STARS - A SUMMARY OF TWELVE YEARS' COOPERATIVE OBSERVATION Sun Yili, Tong Jianhua	155
 SESSION II: SOLAR FLARES	
THE SUN AS A FLARE STAR: X-RAY SPATIAL AND PLASMA PROPERTIES DERIVED FROM A SOLAR ECLIPSE OBSERVED BY GOES P.L.Bornman	157
A STATISTICAL ANALYSIS OF THE SOFT X-RAY PROFILES OF SOLAR FLARES G.Pearce, R.A.Harrison	161
PLASMA PARAMETERS AND STRUCTURES OF THE X4 FLARE OF 19 MAY 1984 AS OBSERVED BY SMM-XRP J.T.Schmelz, J.L.R.Saba, K.T.Strong	165
NONTHERMAL AND THERMAL EMISSIONS IN SOLAR FLARES N.Nitta	169
SOLAR NEUTRON OBSERVATIONS DURING THE COMING SOLAR MAXIMUM: A PLAN ON THE JAPAN-CHINA COLLABORATIVE PROJECT K.Sakurai	173

TYPE III RADIO BURST PRODUCTIVITY OF SOLAR FLARES M.Poquerusse, P.S.McIntosh	177
CHROMOSPHERIC EJECTIONS ASSOCIATED WITH TYPE III RADIO BURST N.Mein, P.Mein	181
RECENT RESULTS OF METER-DECAMETER WAVE OBSERVATIONS OF SOLAR FLARES N.Gopalswamy, M.R.Kundu	185
SOLAR MILLIMETER WAVE BURSTS K.Kawabata, H.Ogawa	191
MODEL OF SLOWLY EVOLVING FLARE F.Chiuderi Drago, M.Landini, B.C.Monsignorini Fossi	195
SEPTEMBER 7, 1973 TWO-RIBBON FLARE J.G.Doyle, K.G.Widing	199
CHROMOSPHERIC DOWNFLOWS AS A DIAGNOSTIC OF SOLAR FLARE HEATING D.M.Zarro, R.C.Canfield	203
ON IMPULSIVE AND GRADUAL OPTICAL SOLAR FLARES A.Bhatnagar, A.Ambastha, R.M.Jain, N.Srivastava	207
H α IMPULSIVE PHASE FLARE OBSERVATIONS WITH HIGH TEMPORAL RESOLUTION J.P.Wülser, H.Marti, E.Schanda, A.Magun	211
SIMULTANEOUS OBSERVATIONAL STUDY OF FILTERGRAMS, VELOCITY AND VECTOR MAGNETIC FIELDS FOR A SOLAR FLARE ON 7 OCTOBER 1987 Yuanzhang Lin, Hongqi Zhang, Feng Han, Kening Liu	215
VIDEO MAGNETIC FIELD AND VELOCITY FIELDS OF SOLAR FLARES AND RELATIVE ACTIVE REGION Ai Guoxiang, Li Jing	219
A SURGE IN THE CHROMOSPHERE AND THE TRANSITION REGION: VELOCITIES AND MICROTURBULENCE P.Mein, B.Schmieder, E.Tandberg-Hanssen	223
FLARING ARCH STRUCTURE OF LARGE ERUPTIVE PHENOMENA AND RIGID ROTATION Z.Mouradian, I.Soru-Escout	227
ENHANCED TURBULENCE AND HEATING OBSERVED PRECEDING THE IMPULSIVE PHASE IN A SOLAR FLARE Chung-Chieh Cheng, K.G.Widing	231
SMM OBSERVATIONS OF THE VARIABILITY OF ACTIVE REGIONS IN THE UV: FLARES, BURSTS, AND OSCILLATIONS S.A.Drake, J.B.Gurman, L.E.Orwig	235
ON THE ASSOCIATION BETWEEN CORONAL MASS EJECTIONS AND CORONAL HOLES V.K.Verma, M.C.Pande	239

SOLAR IRRADIANCE VARIATIONS AND THEIR RELATION WITH SOLAR FLARES J.Pap, B.Vrsnak	243
SPECTRAL ANALYSIS OF A WHITE LIGHT FLARE R.Boyer, P.Sotirovski	247
DEPENDENCE OF SOLAR LINE BISECTORS ON EQUIVALENT WIDTHS A.Hanslmeier, W.Mattig, A.Nesis	251
VARIATION OF THE SOLAR FLARE ENERGY SPECTRUM OVER THE 11-YEAR ACTIVITY CYCLE V.V.Kasinsky, R.T.Sotnikova	255

SESSION III: THEORY

QUASI-STATIC EVOLUTION OF A FORCE-FREE MAGNETIC FIELD AND CONDITIONS FOR THE ONSET OF A STELLAR FLARE J.J.Aly	259
QUASI-STATIC EVOLUTION OF A THREE-DIMENSIONAL FORCE-FREE MAGNETIC FIELD J.J.Aly	265
AN ANALYTICAL STUDY OF THE STRUCTURE OF TWO-DIMENSIONAL MAGNETO- STATIC EQUILIBRIA IN THE PRESENCE OF GRAVITY T.Amari, J.J.Aly	271
MAGNETIC TOPOLOGY AND CURRENT SHEET FORMATION S.K.Antiochos	277
NONLINEAR EVOLUTION OF PARKER INSTABILITY OF ISOLATED MAGNETIC FLUX SHEET AND ITS APPLICATION TO EMERGING MAGNETIC FLUX IN THE SOLAR ATMOSPHERE K.Shibata, T.Tajima, R.Steinolfson, R.Matsumoto	281
TOPOLOGICAL CATASTROPHE IN MASSIVE CURRENT SHEETS Ph.Peterle, J.Heyvaerts	285
HEAT FLUX IN A NON-MAXWELLIAN SOLAR CORONAL PLASMA N.N.Ljepojevic, P.MacNeice	289
DYNAMICAL MAGNETIC ENERGY RELEASE OF CURRENT LOOPS IN THE CORONA: EFFECTS OF TOROIDAL FORCES J.Chen	293
THE MODEL OF THE IMPULSIVE PHASE OF STELLAR FLARES V.P.Grinin, V.V.Sobolev	297
ERUPTIONS OF MAGNETOHYDROSTATIC STRUCTURES AND ONSETS OF FLARES Kai Sun	301
CAN RESISTIVE KINK INSTABILITIES DRIVE SIMPLE LOOP FLARES ? M.Velli, G.Einaudi, A.W.Hood	305

PLASMA WAVE GENERATION BY THICK TARGET ELECTRON BEAMS IN SOLAR FLARES K.G.McClements	309
RETURN CURRENT INSTABILITY IN FLARES D.Cromwell, P.McQuillan, J.C.Brown	313
PARTICLE ACCELERATION BY MAGNETOSONIC WAVES IN A CORONAL LOOP J.-F. de La Beaujardière, E.G.Zweibel	317
PARTICLES AND ENERGY TRANSPORT IN THE SOLAR ATMOSPHERE DURING SOLAR FLARES D.Heristchi, M.A.Raadu, J.-C.Vial, J.-M.Malherbe	321
PARTICLE ACCELERATION AND PLASMA HEATING AT COLLISIONLESS SHOCKS IN SOLAR FLARES P.J.Cargill, L.Vlahos	325
LINEAR AND NON LINEAR STUDY OF A POSSIBLE MECHANISM FOR THE GENERATION OF STELLAR RADIO BURSTS: THE SYNCHROTRON MASER INSTABILITY P.Louarn, D.Le Queau, A.Roux	329
PROPAGATION AND ABSORPTION OF ELECTRON CYCLOTRON MASER EMISSION DURING SOLAR FLARES M.E.McKean, R.M.Winglee, G.A.Dulk	333
COMPUTER SIMULATION OF A SOLAR MICROWAVE BURST G.Bruggman, E.Schanda, A.Magun	337
ON THE POSSIBILITY OF LOCAL MAGNETIC FIELD INTENSIFICATION IN EVAPORATING CHROMOSPHERIC SOLAR FLARE PLASMA V.N.Dermendjiev, G.T.Buyukliev, I.Ph.Panayotova	341
THE EVALUATION OF THE BALMER MERGING EFFECTS IN DIFFERENT CHROMOSPHERIC SOLAR FLARE MODELS A.Falchi, R.Falciani, L.A.Smaldone, G.P.Tozzi	345
PLASMA OSCILLATIONS INSIDE SMALL FLUXTUBES E.Wiehr, G.Lustig	349
A DYNAMIC SCALING LAW FOR SOLAR AND STELLAR FLARE LOOPS G.H.Fisher, S.L.Hawley	353
A NEW EXPLANATION FOR FLARES ON dMe STARS G.M.Simnett	357
CHROMOSPHERIC NLTE-RADIATIVE-TRANSFER MODELLING OF dMe STARS P.M.Panagi, E.R.Houdebine, C.J.Butler, M.Rodonò	361
ON THE INADEQUACIES OF THE MAGNETIC FLARE THEORIES AND THE RESOLUTION OF THESE PROBLEMS WITH THE CONVECTIVE FLARE THEORY A.Grandpierre	365
SOLAR MAGNETIC FIELDS AND DYNAMO PROCESS A.Brandenburg, I.Tuominen	369
ATTENDEE LIST AND ADDRESSES	373
AUTHOR INDEX	387