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Nota di contenuto	Solar flares -- Flares: The solar-stellar connection -- Radio emission from flares in single late-type stars -- High-resolution dynamic spectrum of a spectacular radio burst from AD Leonis -- VLBI observations of flares in RS CVn binary systems -- Coherent radio bursts from RS CVn binaries -- Systematic radio-observations of UX Arietis: Analysis of its variability -- Radio flares in HR 1099 (V711 Tau) -- Sunspot proper motion and flare frequency -- Optical flares: Observations and interpretations -- The red dwarf star population in the galaxy -- Kinematics and ages of UV Ceti stars -- Flare activity among nearby stars -- Young and old subsystems of flare stars -- Flare activity and cluster membership probability of flare stars -- New EUV selected flare stars -- Flare stars in a field near the North Galactic Pole: ROSAT and optical observations -- Some results of the coordinated observations of the red dwarf flare star EV Lac in 1986–1994 -- A possible discovery of a flaring 1012 eV gamma-ray source near the red dwarf EV Lac -- Short-time flare events of EV Lac -- Observations of high-frequency activity of EV Lacertae -- Spectral and photometrical investigation of EV Lac in different states with high time

resolution -- Photoelectric observations of AD Leo: 1989–1994 -- Multifrequency analysis of a UV Ceti flare on 1991 December 31 -- A large amplitude flaring dMe star in the 1978 October 6B  $\gamma$ -ray burst error box -- A major optical flare on the recently discovered X-ray active dMe star G102-21 -- Flares detected on some late giants: Are they real? -- BD+47°819, an A-type flare star with peculiar spectroscopic variations -- The long-term behaviour of BY Dra -- CN Com: a typical RS Canum Venaticorum star -- A long-duration pre-flare dip in the light curve of V1054 Oph -- Photometric research of pre-flare and extra-flare activity of flare stars -- Stream parameters in the neighbourhood of the L 1 point in W serpentis-type binaries -- Monitoring of flare stars at nainital observatory -- CCD monitoring of flare stars in stellar aggregates -- Automated search for flare stars continued -- Flare stars database: Present status -- Flare star observations with a single-photon counting imaging detector -- Optical observations on milli-, micro-, and nanosecond timescales -- MANIA complex — hardware and software for the investigation of optical variability on time scales 10<sup>7</sup>-10<sup>2</sup>s -- A new technique for precise stellar photometry: Application to small-scale activity of EV lacertae -- Flare in late-type stars: UV -- Post-flare coronal activity on AU Mic detected by EUVE -- Flares in late-type stars: X-ray -- Short-duration X-ray transients observed with WATCH on Granat: Are some of them related to stellar flares? -- ROSAT observation of a giant X-ray flare on the active binary Algol -- ASCA X-ray spectra of quiescent and flaring emission from AB Doradus -- X-ray variability of the flare star CC Eri -- X-ray observations of the dMe star EQ1839.6+8002 in 1980–1993 -- Physical processes during impulsive solar and stellar flares -- The role of flare stars in cosmic-ray origin -- Flare activity in Algol-type binaries -- Influence of coronal mass ejections from the red dwarf component on the accretion pattern in CVs and LMXBs -- Magnetic field reconnection as a possible source of nonthermal processes in accreting relativistic systems -- Flares in T Tauri stars -- Properties of X-ray flares on young stars -- X-ray flare rate of T Tauri stars in Taurus -- Middleterm flares in T Tau stars of the Tau — aur complex -- Activity on T Tauri stars -- A very active T Tauri star in NGC 7129 -- Polarimetric outbursts in young herbig Ae/Be stars and in peculiar B[e] stars -- Photometric behaviour of the EXors V1118 Orionis and V1143 Orionis -- Observations of short-term dips in the Orion variables DD Serpentis and AB Aurigae -- Hydrogen and helium flashes in cataclysmic variables -- PU Vul: 15 years of studies, important findings and remaining mysteries -- Spectral variability and photometric behaviour of the symbiotic nova PU Vul in 1985–1994 -- Photometry of CH Cygni during 1991–1994 -- Long-term photometry of the symbiotic star AG Draconis -- Space densities of cataclysmic variables and nova recurrence times -- Extension of the radio spectrum of AE Aqr to the sub-millimetric range -- The origin of flaring activity in AE Aquarii -- UBVRI photometry of AE Aquarii in July–August 1994 -- Flares and flickering in the cataclysmic variable AE Aquarii -- Time dependence of the UV resonance lines in the cataclysmic variable star VW Hyi -- The benefit of archival research in investigating dwarf novae -- Do we see magnetic effects in dwarf nova outbursts? -- Flares in dwarf novae -- Flickering in cataclysmic variables: Inventory and perspectives -- Resolved shot noise in the AM Her system V834 Cen -- Eclipse mapping the flickering in HT Cas -- Multiple time scales in cataclysmic variables: The examples -- X-ray bursts -- Strong X-ray bursts with expansion: Oscillations due to sound waves in atmospheres -- Quasi-periodic oscillations and noise in accreting black holes and low-magnetic field neutron stars -- Detection of nonthermal optical

flashes with 10<sup>2</sup>-10<sup>3</sup> s duration from some LMXBs -- TTM observations of X1755-338 -- Irregular X-ray variation of LMC X-3 -- Gamma-ray bursts: Observational overview, searches for counterparts, and BACODINE -- Observations of  $\gamma$ -ray bursts and solar flares with Granat -- Observations of high-energy gamma-ray bursts with EGRET -- Population of short  $\gamma$ -ray bursters — result of gravitational lensing of “quiet”  $\gamma$ -ray sources in remote galaxies -- Multi-wavelength flashes from GRBs -- Optical transients -- Simultaneous optical/gamma-ray observations of GRBs -- ETC observations of the gamma-ray burst GRB 941014 -- Deep search for optical counterparts of gamma-ray bursters -- CCD sky monitoring and burst alert -- The plate collection at the Harvard College Observatory -- Optical sky monitoring: Past and future -- The Odessa Sky Patrol plate collection -- Nova Patrol at Abastumani -- Wide-field plate database: A progress report -- GCVS problems with flare stars -- Detections of neutron stars in the extreme ultraviolet -- Time variability studies with ROSAT -- Wide-field cameras for GRB observations in X-rays and EUV -- Wide-field X-ray optics -- Flares and flashes: The future -- After dinner address -- Resolution.

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### Sommario/riassunto

The contributions to the 151st IAU Colloquium cover different fields of recent research, observational as well as theoretical, on solar and stellar flares ranging from radio up to gamma-ray wavelengths. A special chapter is devoted to all-sky monitoring and, finally, the excerpts of a round-table discussion present the reader with an interesting outlook on future developments. This book is therefore a unique source for those who want to get a complete picture of this fascinating part of modern astrophysics.

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