

1. Record Nr.	UNISA996466821903316
Titolo	Structure and Dynamics of the Interstellar Medium [[electronic resource] ] : Proceedings of IAU Colloquium No. 120 Held on the Occasion of Guido's Jubilee in Granada, Spain, April 17-21, 1989 // edited by Guillermo Tenorio-Tagle, Mariano Moles, Jorge Melnick
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1989
ISBN	3-540-46865-X
Edizione	[1st ed. 1989.]
Descrizione fisica	1 online resource (XXI, 537 p.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 350
Disciplina	520
Soggetti	Observations, Astronomical Astronomy—Observations Astrophysics Astronomy, Observations and Techniques Astrophysics and Astroparticles
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chemistry of molecular clouds -- CO distributions towards the southern dark cloud of DC 303.6+0.9 -- Extensive molecular line survey for dark clouds -- Molecular hydrogen emission from photodissociation regions -- Cosmic ray induced photodestruction of interstellar molecules -- The nature of shocks in molecular clouds -- Fragmentation and the initial mass function -- Star formation -- Turbulence in interstellar clouds -- Turbulent and ordered motions in HII regions -- Expansion of HII regions in density gradients -- Variable HII regions -- The sharpless 187 gas complex: A study of the molecular, atomic, ionized and dust components -- Turbulent mixing in wind-blown HII regions -- Accretion flows in high-mass star formation -- An optical study of the star formation region NGC 7129 -- Star formation in the NGC 2071 molecular cloud -- A theory on the slope of the IMF -- S266: A distant HII region in the Galaxy -- Silicon bearing molecules in molecular clouds -- Dense clumps in NGC 2024 — Protostellar condensations? -- Radio maps of the regions RCW 57 and W 49 -- Ionization of the galactic center arched filaments -- The

chamaeleon dark clouds complex: Preliminary analysis of the colour excesses  $E(b-y)$  towards the selected Area 203 -- Interstellar wind-blown bubbles -- Stellar winds in a-type supergiants -- Supernova remnants -- Dust condensation in the ejecta of SN 1987A -- Observations of the progenitor wind of SN 1987A -- The dynamical evolution of a clumpy medium -- Infrared environment of the be star 6 cephei: Interaction of stellar and interstellar winds -- Carbon monoxide emission from young planetary nebulae -- Interaction between a stellar wind and the ionized gas in N120 (LMC) -- Disks and outflows -- The structure of dense cloud cores -- Molecular disks around young stars -- On the nature of the beta pictoris circumstellar nebula -- Near-infrared images of the serpens molecular cloud core -- Molecular outflows -- Submillimetre mapping and photometry of bipolar flows -- Evidence for compact disks -- AFGL 2591 and monoceros R2: Cavities in the molecular cloud -- Aperture synthesis observations of CS, NH<sub>3</sub> and continuum in the bipolar flow source NGC2071-IRS -- A swept-up molecular bubble in L1551 -- On the formation and propagation of interstellar jets -- The collimation of nonadiabatic winds from young stars -- Herbig-Haro objects -- A CO search for molecular gas in high mass post-main-sequence nebulae -- A remarkable bipolar flow in the center of the Rho ophiuchi cloud -- Massive dust disks surrounding herbig Ae/Be stars -- New young objects from the iras point source catalogue -- IUE observations of herbig-haro objects 7, 11 & 29 -- H<sub>2</sub> 2.12  $\mu$ m spectroscopy and imaging of HH objects -- New OVRO results show disks are not necessary for focussing bipolar outflows -- The spectrum of a partially ionized jet -- Sodium ionization in T-tauri stars -- Inverting the position-velocity diagrams of molecular discs -- Identification of outflow exciting sources through ammonia observations -- The molecular envelope of mira -- Narrowband photometry of photometrically peculiar objects -- The structure of molecular clouds from large scale surveys of CO and CS -- The radio continuum morphology of the Orion Nebula -- Highly excited molecular hydrogen in orion -- Aperture synthesis observations of NH<sub>3</sub> and CS in Orion-KL -- The trapezium radio cluster of the Orion Nebula -- Turbulence in the Orion Nebula -- High-resolution molecular line observations of the core and outflow in orion B -- Star formation in galactic nuclei -- Ionized gas and stellar content in a sample of HII galaxies -- The shaping of the optical jet of the galaxy NGC 4258 -- A plasmon driven bowshock model for the narrow line region of NGC5929 -- Age effects in Giant Extragalactic HII Regions -- Evolution of clumpy gas in galaxies -- H $\alpha$ -emission in directions toward high velocity 21cm clouds -- High-velocity absorption components toward the LMC -- Distance and chemical composition of high-velocity clouds -- Inflow of neutral gas toward the galactic disk -- Ultraviolet observations of halo clouds -- Analysis of low- and high-resolution observations of high-velocity clouds -- Molecules at the interface of an HVC and a high-z HI filament -- Observations of the galactic halo -- A new high-resolution optical study of halo gas -- Galactic winds -- Cycling of dust grains through the galactic halo -- The intermediate velocity cloud IVC86+38.5-45, related to high velocity clouds? -- The NaI interstellar spectrum of HVC 287.5+225+240 -- Collisions between high latitude clouds: Theory meets observations -- Multiple-supernova remnants -- Galactic fountains -- Clustered supernovae vs. the gaseous disk and halo A rematch -- Gamma rays from violent interstellar events -- Structure of the diffuse interstellar medium -- The mass spectrum of interstellar clouds -- Deterministic self-propagating star formation -- The violent interstellar medium in messier 31 -- Contributions of supernovae to the chemical and

dynamical evolution of the ism -- 1/4 Ke V diffuse background and the local interstellar medium -- Large-scale irregularities in the interstellar medium -- The milky way disk warp.

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Sommario/riassunto

Here for the first time is a book that treats practically all aspects of modern research in interstellar matter astrophysics. 20 review articles and 40 carefully selected and refereed papers give a thorough overview of the field and convey the flavor of enthusiastic colloquium discussions to the reader. The book includes sections on: - Molecular clouds, star formation and HII regions - Mechanical energy sources - Discs, outflows, jets and HH objects - The Orion Nebula - The extragalactic interstellar medium - Interstellar matter at high galactic latitudes - The structure of the interstellar medium.

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