

11 : STAR FORMATION & STARBURST GALAXIES

(11.1) Introduction

(11.2) Definitions and Abbreviations

(11.3) Emission From Star Formation Regions

- (a) Relevant Observables
- (b) Empirical Relations

(11.4) Measurements of Current SFR

- (a) Synthesis Models to Calibrate SFR Relations
- (b) Conversion Relations to find SFR
 - (i) Near-UV (1500 - 2800) Luminosity
 - (ii) $H\alpha$ Luminosity
 - (iii) Equivalent Width : $EW(H\alpha)$
 - (iv) FIR Luminosity
 - (v) Radio Free-Free Luminosity
 - (vi) Radio Synchrotron Luminosity

(11.5) Factors Affecting the SFR

- (a) Preliminaries
- (b) Hubble Type
 - (i) Integrated SF
 - (ii) Disk SF
 - (iii) Circumnuclear SF
- (c) Arm Structure
- (d) Bars
 - (i) Disk SF
 - (ii) Circumnuclear SF
- (e) Interactions
 - (i) Disk SF
 - (ii) Circumnuclear SF
 - (iii) Physical Effects of Tidal Interaction
- (f) Gas Surface Density
 - (i) Disk SF
 - (ii) Circumnuclear SF
 - (iii) Schmidt Law
 - (iv) Consumption Timescales
- (g) Summary of Star Formation in Disks and Nuclei

(11.6) SF Threshold & Toomre's Q Parameter

(11.7) Starburst Galaxies

- (a) Overview**
- (b) Samples of SB galaxies**
- (c) Luminosity Function**
- (d) Spectral Energy Distributions (SEDs)**
- (e) Cause of Starbursts**
- (f) Compact Super-Star Clusters**
- (g) Galactic Scale Superwinds**
 - (i) Sketch of Physical Mechanisms**
 - (ii) Observational Signatures**
 - (iii) Global Characteristics**
- (h) Cosmological Implications of Starbursts**
 - (i) Possible Importance of Superwinds**
 - (ii) Starbursts at low and high z**
- (i) Starburst Relics**