

MEA 714 Fall 2008, Reading Assignments

Doswell = Severe Convective Storms monograph, edited by C. A. Doswell III

Houze = Cloud Dynamics textbook, by R. A. Houze Jr.

JAS=Journal of the Atmospheric Sciences[†]

MWR=Monthly Weather Review[†]

BAMS=Bulletin of the Amer. Meteor. Soc.[†]

JAM=Journal of Applied Meteorology[†]

WAF=Weather and Forecasting[†]

QJ=Quarterly Journal of the Royal Meteorological Society

[†]AMS publications are available online from NCSU computers

*Articles not found in AMS journals will be provided via the class website

Tu= Tuesday class, Th=Thursday class

Week 1 – 8/18

Th: Introduction and radar

Doswell Ch 1: Severe Convective Storms- An Overview: [section 1.1 only](#)*

Yuter (2003, Encyc. Atmos. Sci.)*

Week 2-8/25

Tu: Modeling as a tool

Lilly (1990, QJ)*

Bryan et al. (2003, MWR)

Th: Cloud physics review

Cotton and Yuter review chapter*

Week 3-9/1

Tu: Dynamics review

Houze Ch 7: Cumulus Dynamics*

Th: Latent heat release

Houze (1997, BAMS)

Pandya and Durran (1996, JAS)

Week 4-9/8

Tu: Convective mixing

Blyth et al. (1988, JAS)

Bretherton (1997, review article)*

Th: Sample article presentations

Yuter and Houze (1997, JAM)

Parker and Johnson (2004, JAS, “Quasi-2D”)

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Week 5-9/15 – student presentations start

Tu: Drizzle and Stratocumuli I

Atkinson and Zhang (1996, Rev. Geophys.)*

Wood and Hartmann (2006, J. Climate)

Th: Drizzle and Stratocumuli II

Comstock et al. (2007, MWR)

Savic-Jovicic and Stevens (2008, JAS)

Week 6-9/22

Tu: Cumuli

Blyth et al. (2005, QJ)*

Damiani et al. (2006, JAS)

Th: Convection initiation

Weckwerth et al. (2008, MWR)

Markowski et al. (2006, MWR)

Week 7-9/29

Tu: Cumulonimbi I

Kingsmill and Wakimoto (1991, MWR)

Zeng et al. (2001, MWR)

Th: Cumulonimbi II

Fovell and Tan (1998, MWR)

assign/explain semester project

Week 8-10/6

Tu: Sample controversy: RKW Theory

Weisman and Rotunno (2004, JAS)

comment: Stensrud et al. (2005, JAS)

reply: Weisman and Rotunno (2005, JAS)

Coniglio et al. (2006, JAS)

Bryan et al. (2006, MWR)

Th: Fall break

Week 9-10/13

Tu: Severe convective storms I

Bluestein (2007, Rep. Prog. Phys.)*

Th: Severe convective storms II

Weisman and Rotunno (2000, JAS)

McCaul and Weisman (2001, MWR)

Weeks 10 through 16 will be distributed later in the semester!