LIST OF SYMBOLS

SYMBOL

p_h	The Hydrostatic Pressure
p_{ht}	The Hydrostatic Pressure at the Top of the Model
p_{hs}	The Hydrostatic Pressure at the Model Surface
μ	Hydrostatic Pressure Difference Between Surface and Top of the Model
μ_d	The Dry Hydrostatic Pressure Difference Between Surface and Top of the Model
p_{dh}	The Hydrostatic Pressure
p_{dht}	The Hydrostatic Pressure at the Top of the Model
u	The Horizontal Velocity in x Direction
v	The Horizontal Velocity in y Direction
w	The Vertical Velocity in η Direction
$x, y,$ and η	The East, North, and Upward Direction, respectively
t	Time
m_x and m_y	The Ratio of the Distance in Computational Space to the Corresponding Distance on the Earth's Surface
Θ	The Potential Temperature
ϕ	The Geopotential
p	The Pressure
ρ	The Density
α	The Inverse Density

LIST OF SYMBOLS (Cont.)

SYMBOL	
γ	The Ratio of the Heat Capacities for Dry Air
R_d	The Gas Constant for Dry Air
q_m	The Gain and Loss of Water through phase changes
q_v	The Mixing Ratios for Water Vapor
q_c	The Mixing Ratios for Cloud
q_r	The Mixing Ratios for Rain
p_0	The Reference Sea-Level Pressure
F_u	Forcing Terms for u
F_v	Forcing Terms for v
F_w	Forcing Terms for w
F_Θ	Forcing Terms for Θ
q_{cw}	The Mixing Ratios for Water Vapor
q_{ci}	The Mixing Ratios for Cloud Ice
q_s	The Mixing Ratios for Snow
q_r	The Mixing Ratios for Rain
F_{evapr}	The Evaporation of Rain Drops
$F_{acccwbyr}$	The Accretion of Cloud-Water Droplets by Rain Drops
F_{cwtor}	The Growth of Cloud-Water Droplets to Rain Drops by Cold-Cloud (Bergeron – Findeisen) Process

LIST OF SYMBOLS (Cont.)

SYMBOL	
F_{citos}	Growth of Cloud Ice to Snow
$F_{acccibys}$	Accretion of Cloud Ice by Snow
$F_{acccwbys}$	Accretion of Cloud Water by Snow
F_{deps}	Growth of Snow by Vapor Deposition
$F_{freezcw}$	Freezing of Cloud Water to Produce Cloud Ice
F_{depci}	Growth of Cloud Ice by Vapor Deposition
$F_{vcondtocw}$	Condensation of Vapor to Form Cloud-Water Droplets