0.1 Global mean budget

Left column shows global mean fluxes by dcpam, and right column shows those by Trenberth et al. (2009).

```
PRCP   :    91.7010084359527 W m-2,      80
EvapU  :    91.76525108405677 W m-2,     80
SensA  :    22.395844840807776 W m-2,    17
SLRA   :    64.9701264380924 W m-2,     63
SSRA   : -175.92117853304936 W m-2,     -161
OLRA   :  237.63906707336776 W m-2,     239
OSRA   : -237.15371373626797 W m-2,   -239
Heating: 2.7246904823186036 W m-2
Water  : -4.358607636921181e-09 kg m-2 s-1
```

0.2 Figures

Data from 1988 to 2007 are used for NCEP reanalysis, NOAA Interpolated OLR, and GPCP, and those from 1982 to 2001 are used for ECMWF reanalysis.

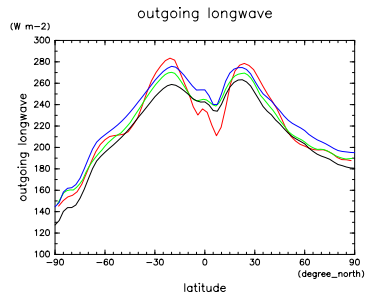### 0.2.1 Annual and zonal mean latitudinal distribution

Figure 1: Annual average OLRA by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
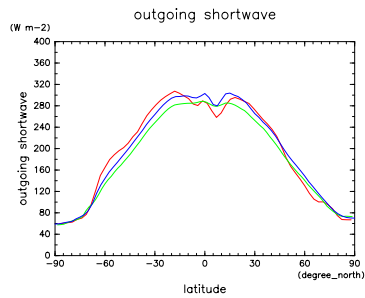

Figure 2: Annual average OSRA by dcpam (red), NCEP (green), and ECMWF (blue)
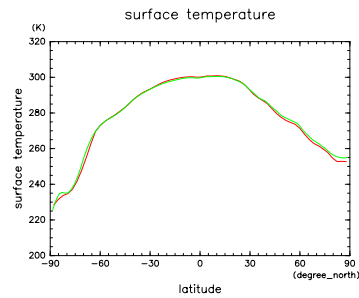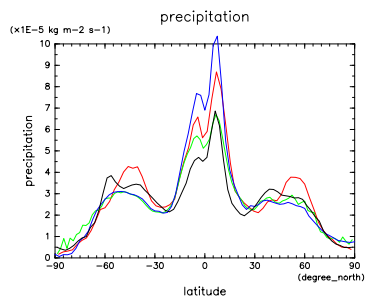

Figure 4: Annual average SurfTemp by dcpam (red), NCEP (skt) (green)

Figure 3: Annual average PRCP by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)

3

0.2.2 Annual mean longitude-latitude distribution
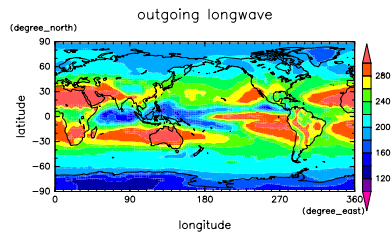
Figure 5: Annual mean OLR by dc-pam
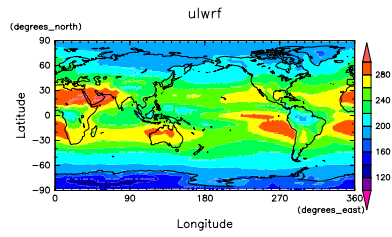
Figure 6: Annual mean OLR by NCEP
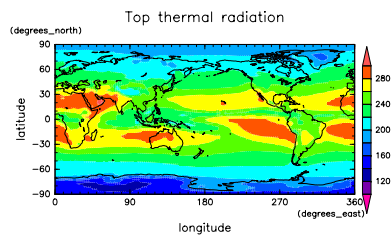
Figure 7: Annual mean OLR by ECMWF
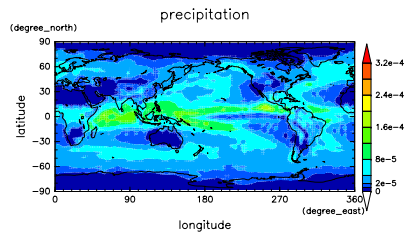
Figure 8: Annual mean Rain by dc-pam
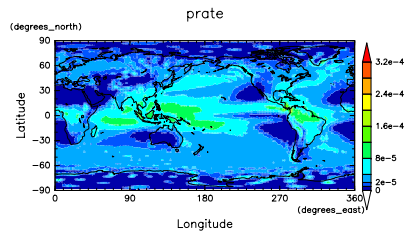
Figure 9: Annual mean Rain by NCEP
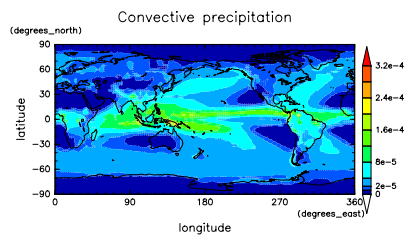
Figure 10: Annual mean Rain by ECMWF
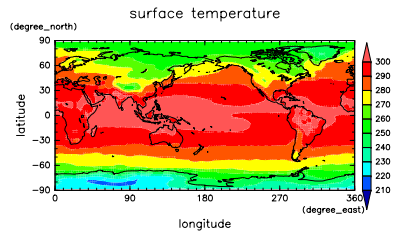
Figure 11: Annual mean SurfTemp by dcpam
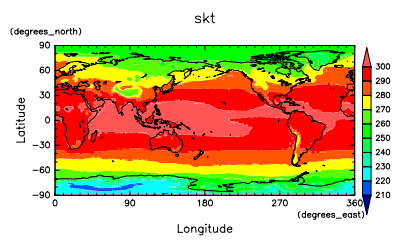
Figure 12: Annual mean skt by NCEP

0.2.3   Annual mean latitude-pressure (linear) distribution
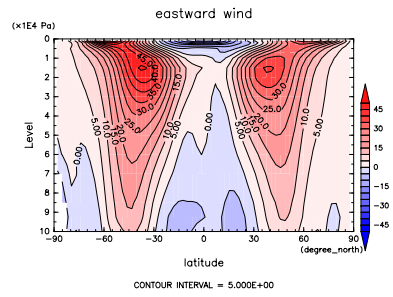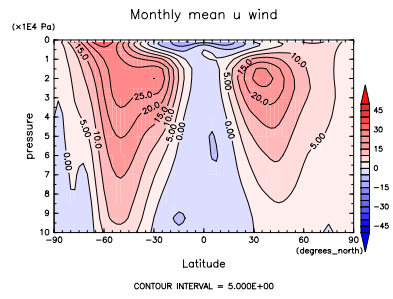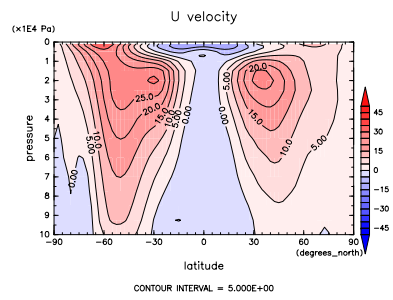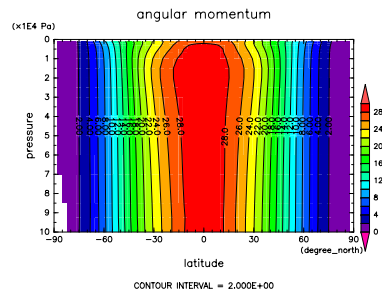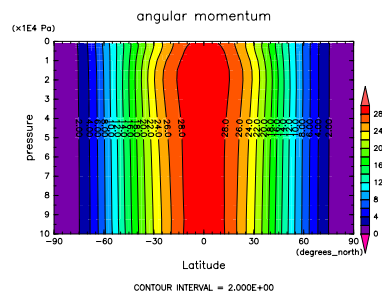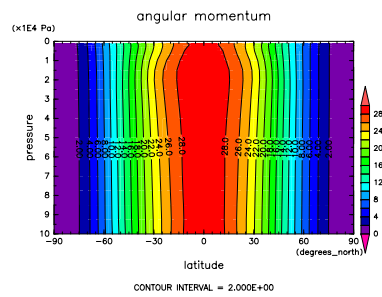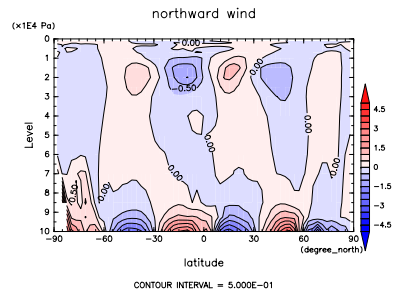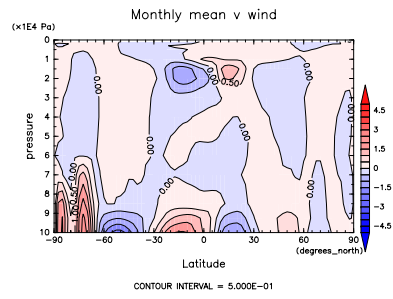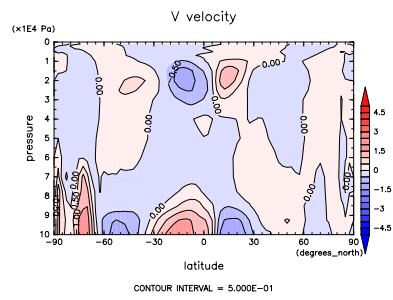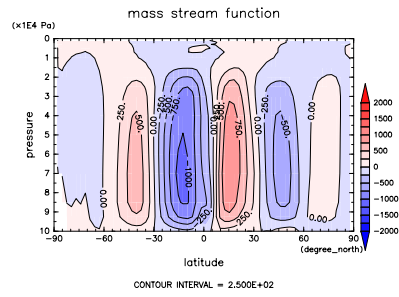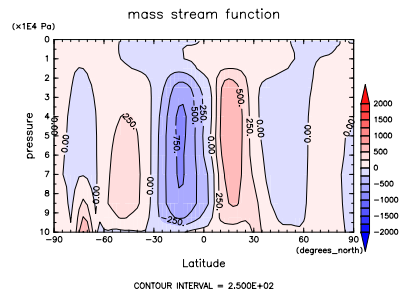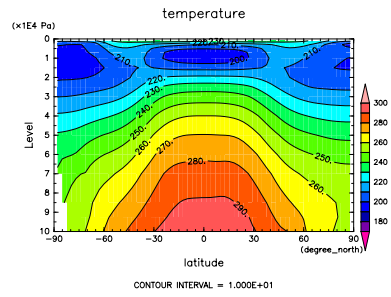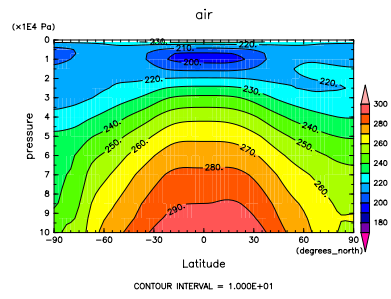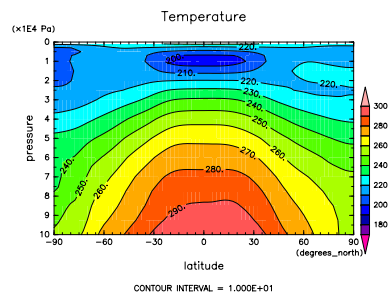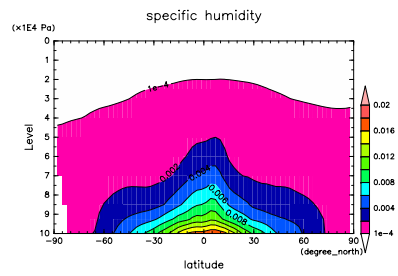
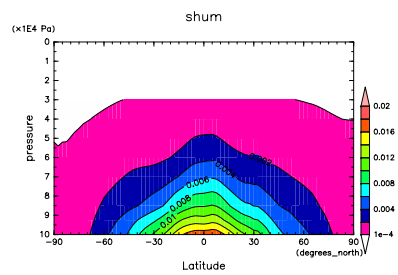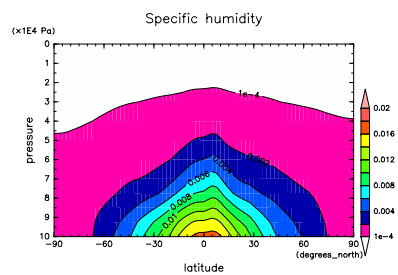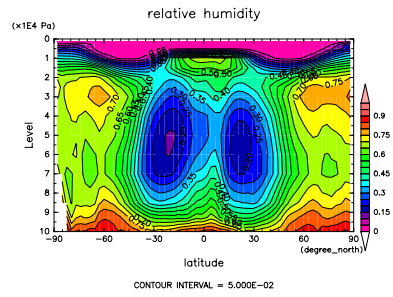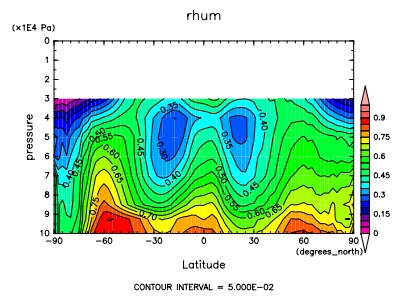Figure 13: Annual mean U by dcpam

Figure 14: Annual mean U by NCEP

Figure 15: Annual mean U by ECMWF

Figure 16: Annual mean ANGMOM by dcpam

Figure 17: Annual mean ANGMOM by NCEP

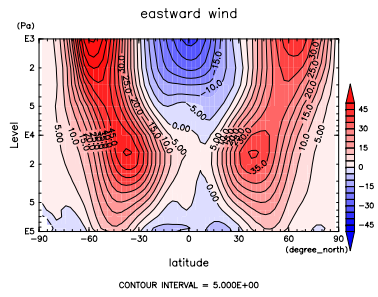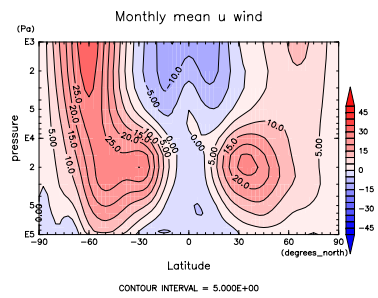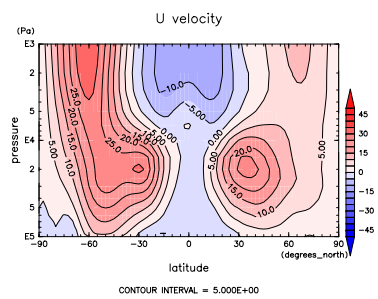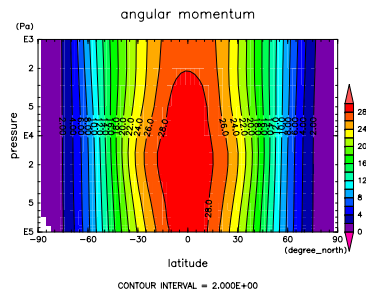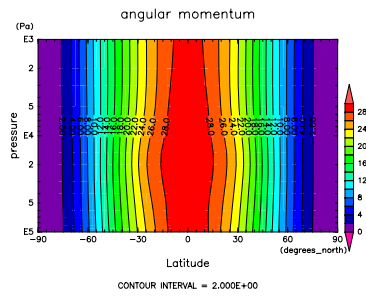

Figure 18: Annual mean ANGMOM by ECMWF

Figure 19: Annual mean V by dcpam

Figure 20: Annual mean V by NCEP

Figure 21: Annual mean V by ECMWF

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Figure 22: Annual mean MSF by dc-pam
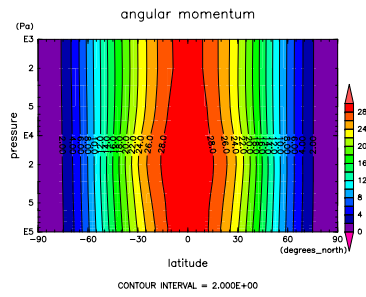

Figure 23: Annual mean MSF by NCEP
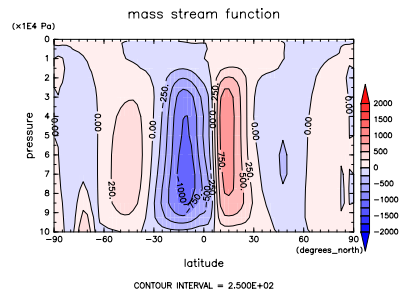
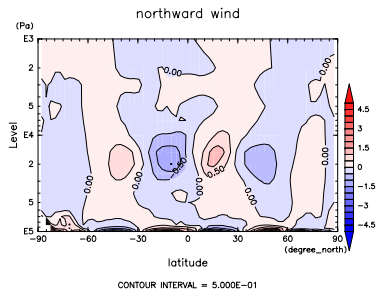Figure 24: Annual mean MSF by ECMWF
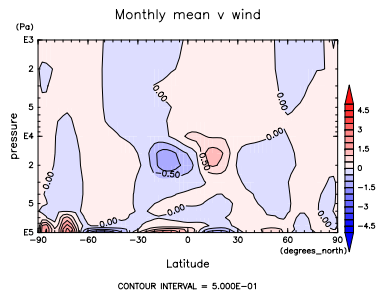
Figure 25: Annual mean T by dcpam
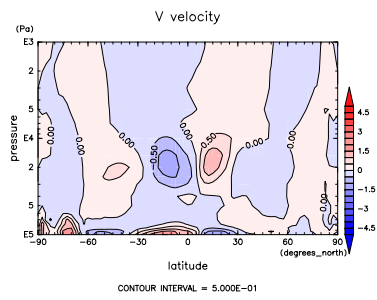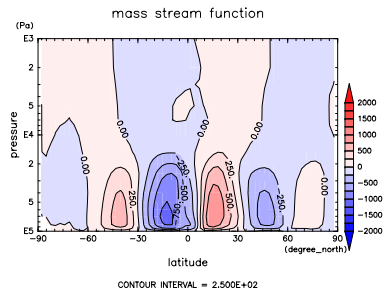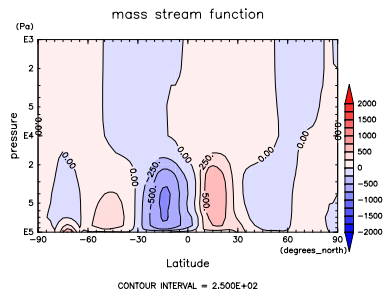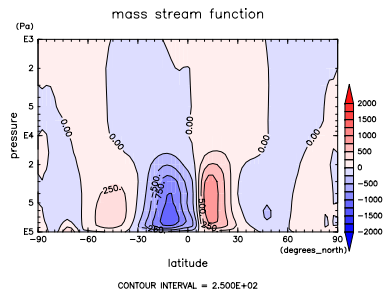

Figure 26: Annual mean T by NCEP

Figure 27: Annual mean T by ECMWF

13

Figure 28: Annual mean q by dcpam

Figure 29: Annual mean q by NCEP

Figure 30: Annual mean q by ECMWF

14

Figure 31: Annual mean RH by dc-pam

Figure 32: Annual mean RH by NCEP
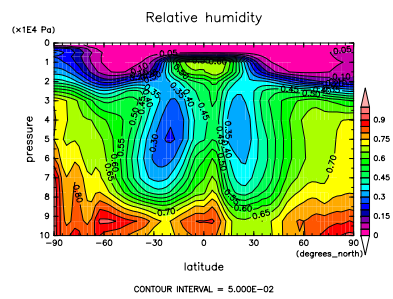
Figure 33: Annual mean RH by ECMWF

15
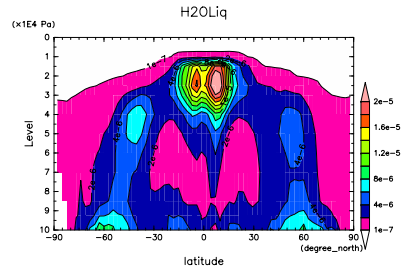
Figure 34: Annual mean q_l by dcpam
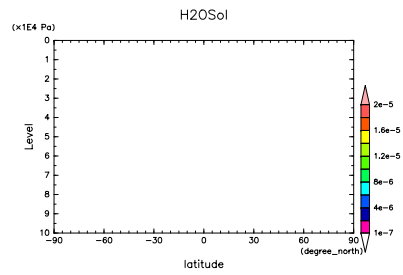
Figure 35: Annual mean q_i by dcpam

17
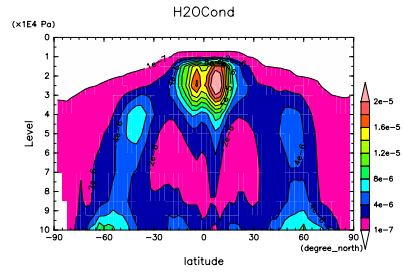
Figure 36: Annual mean $q_l + q_i$ by dc-pam

### 0.2.4 Annual mean latitude-pressure (logarithmic) distribution
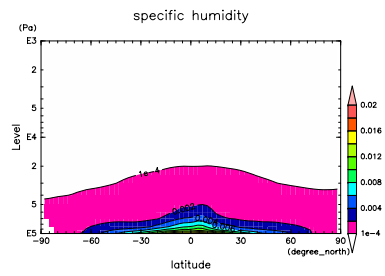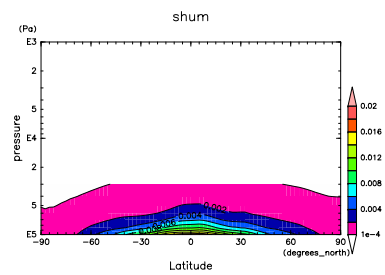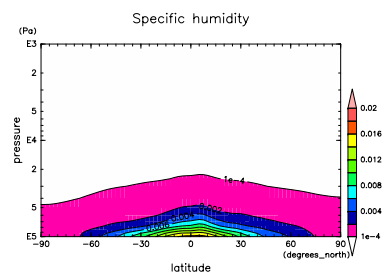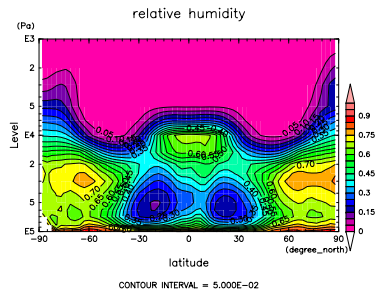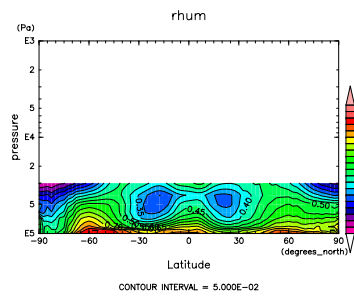
Figure 37: Annual mean U by dcpam

Figure 38: Annual mean U by NCEP

Figure 39: Annual mean U by ECMWF

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Figure 40: Annual mean ANGMOM by dcpam

Figure 41: Annual mean ANGMOM by NCEP

Figure 42: Annual mean ANGMOM by ECMWF

21

Figure 43: Annual mean V by dcpam

Figure 44: Annual mean V by NCEP

Figure 45: Annual mean V by ECMWF

22

Figure 46: Annual mean MSF by dc-pam
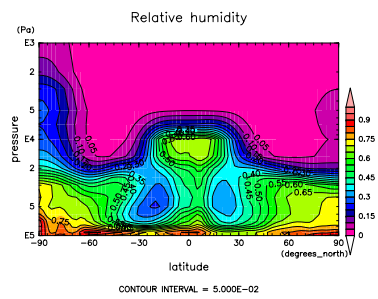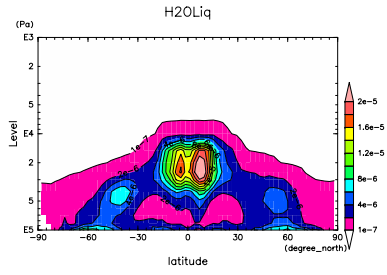

Figure 47: Annual mean MSF by NCEP

Figure 48: Annual mean MSF by ECMWF
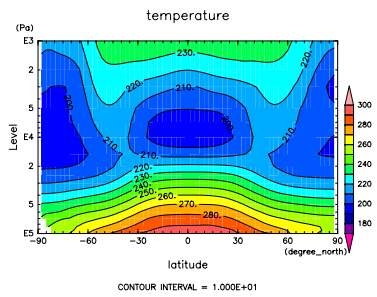
Figure 49: Annual mean T by dcpam
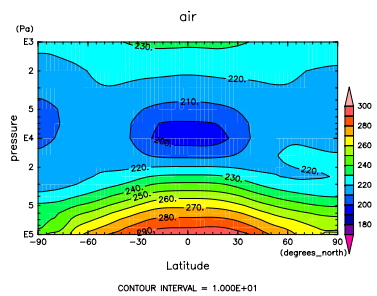
Figure 50: Annual mean T by NCEP
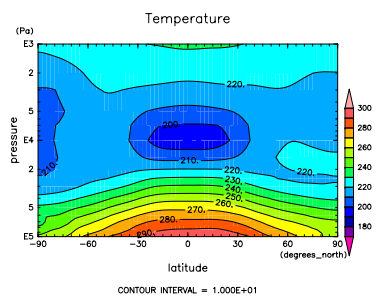
Figure 51: Annual mean T by ECMWF

24

Figure 52: Annual mean q by dcpam

Figure 53: Annual mean q by NCEP

Figure 54: Annual mean q by ECMWF

relative humidity

CONTOUR INTERVAL = 5.000E−02

Figure 55: Annual mean RH by dc-pam

rhum

CONTOUR INTERVAL = 5.000E−02

Figure 56: Annual mean RH by NCEP

Relative humidity

CONTOUR INTERVAL = 5.000E−02

Figure 57: Annual mean RH by ECMWF

Figure 58: Annual mean q_l by dcpam
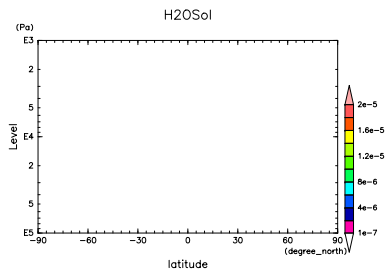
Figure 59: Annual mean q_i by dcpam
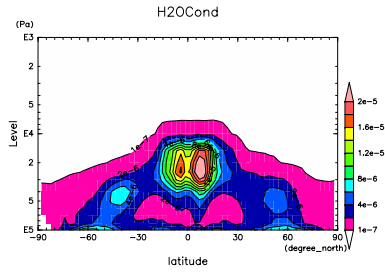
Figure 60: Annual mean $q_l + q_i$ by dc-pam

0.2.5   Monthly and zonal mean latitudinal distribution
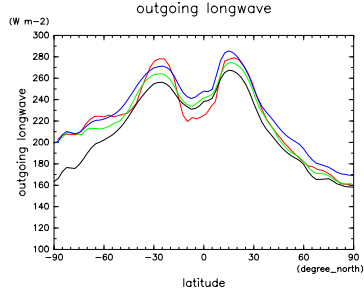
Figure 61: OLRA at Jan. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
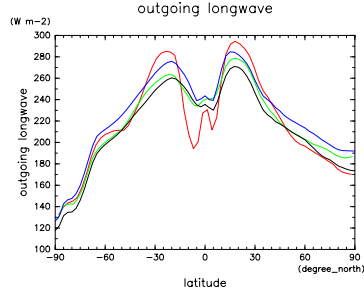
Figure 64: OLRA at Apr. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
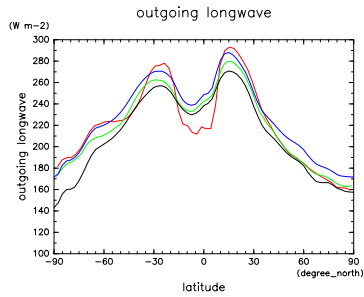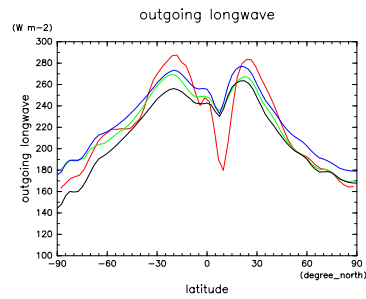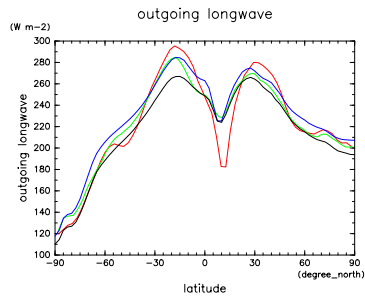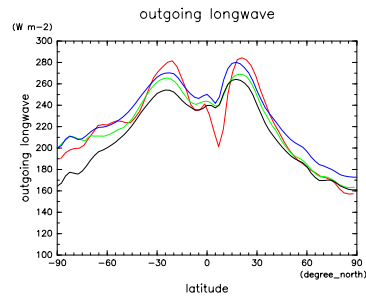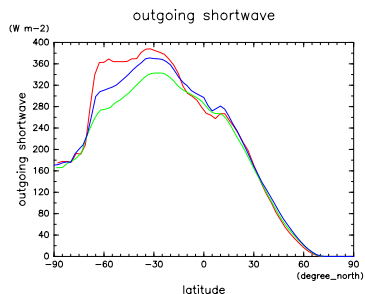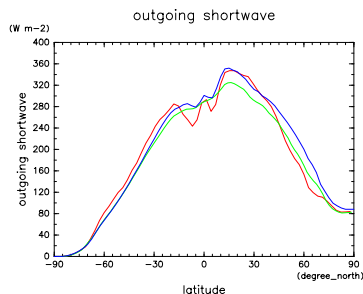

Figure 62: OLRA at Feb. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
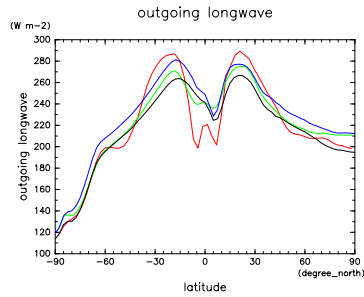
Figure 65: OLRA at May by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
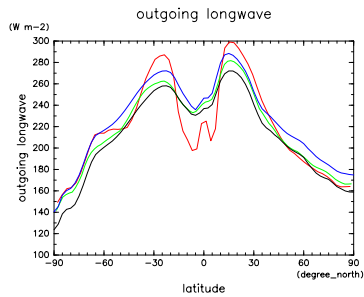
Figure 63: OLRA at Mar. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
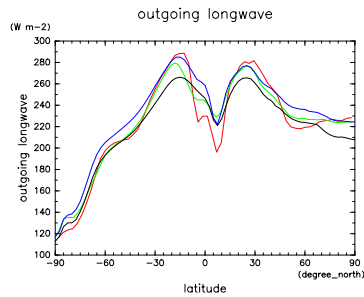
Figure 66: OLRA at Jun. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)

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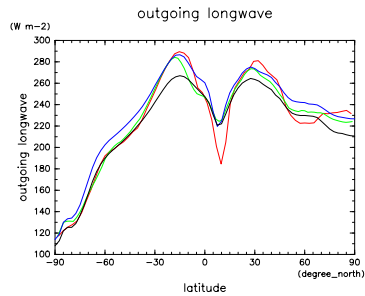
Figure 67: OLRA at Jul. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
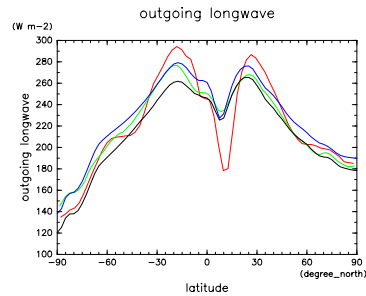
Figure 70: OLRA at Oct. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)
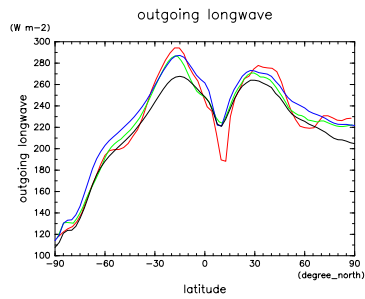
Figure 68: OLRA at Aug. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)

Figure 71: OLRA at Nov. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)

Figure 69: OLRA at Sep. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)

Figure 72: OLRA at Dec. by dcpam (red), NCEP (green), ECMWF (blue), and NOAA Interpolated OLR (black)

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Figure 73: OSRA at Jan. by dcpam (red), NCEP (green), and ECMWF (blue)

Figure 76: OSRA at Apr. by dcpam (red), NCEP (green), and ECMWF (blue)
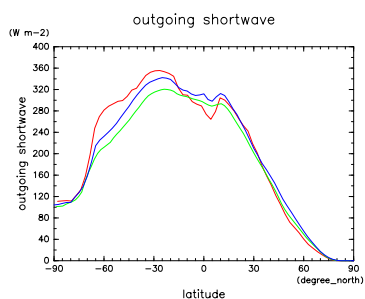
Figure 74: OSRA at Feb. by dcpam (red), NCEP (green), and ECMWF (blue)
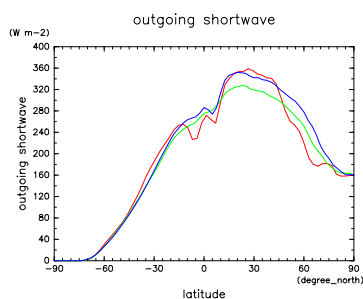
Figure 77: OSRA at May by dcpam (red), NCEP (green), and ECMWF (blue)
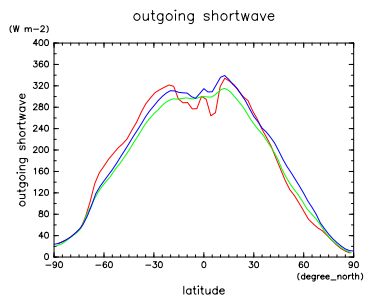
Figure 75: OSRA at Mar. by dcpam (red), NCEP (green), and ECMWF (blue)
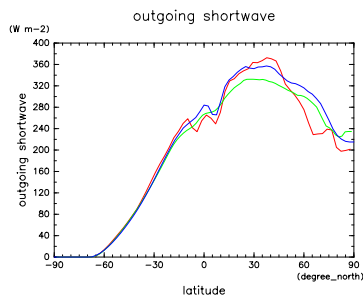
Figure 78: OSRA at Jun. by dcpam (red), NCEP (green), and ECMWF (blue)

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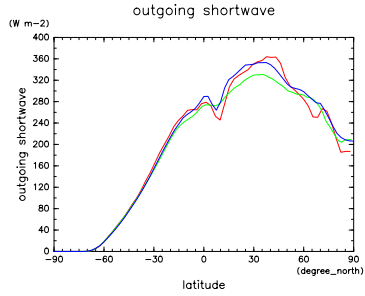
Figure 79: OSRA at Jul. by dcpam (red), NCEP (green), and ECMWF (blue)
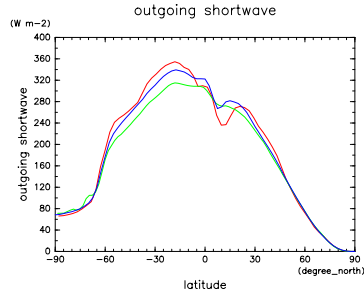
Figure 82: OSRA at Oct. by dcpam (red), NCEP (green), and ECMWF (blue)
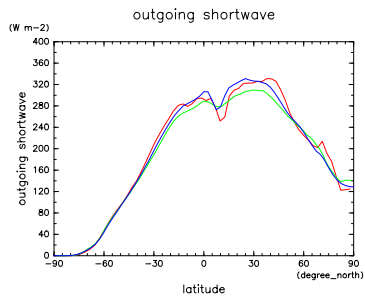
Figure 80: OSRA at Aug. by dcpam (red), NCEP (green), and ECMWF (blue)
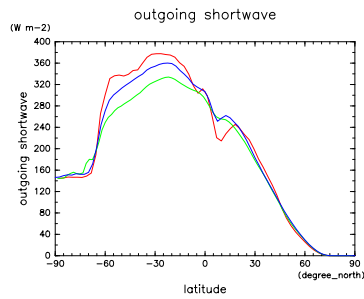
Figure 83: OSRA at Nov. by dcpam (red), NCEP (green), and ECMWF (blue)
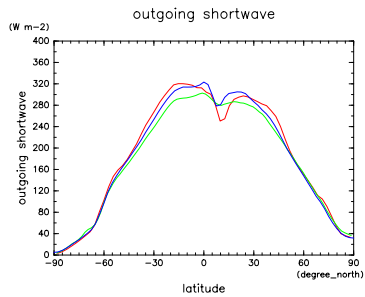
Figure 81: OSRA at Sep. by dcpam (red), NCEP (green), and ECMWF (blue)
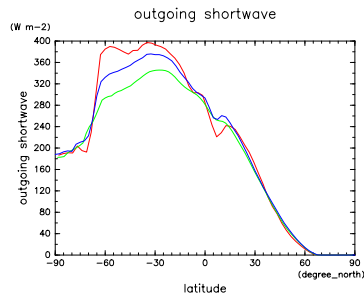
Figure 84: OSRA at Dec. by dcpam (red), NCEP (green), and ECMWF (blue)

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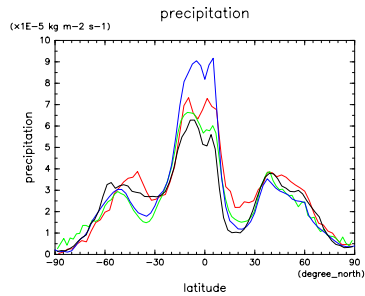
Figure 85: Rain at Jan. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
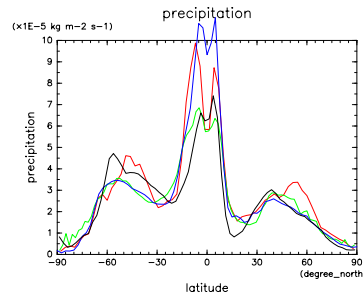
Figure 88: Rain at Apr. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
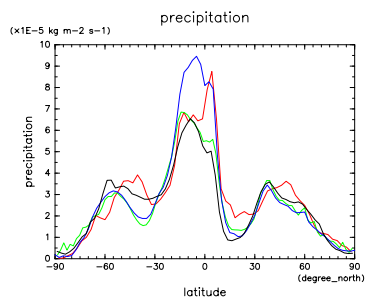
Figure 86: Rain at Feb. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
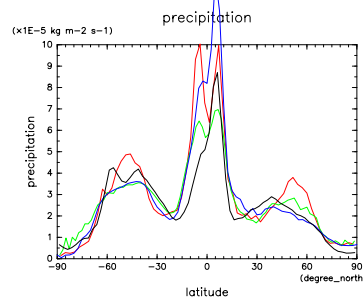
Figure 89: Rain at May by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
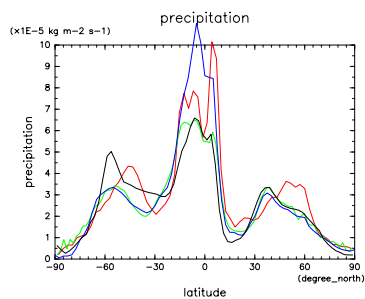
Figure 87: Rain at Mar. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
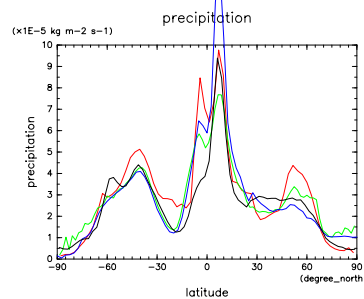
Figure 90: Rain at Jun. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)

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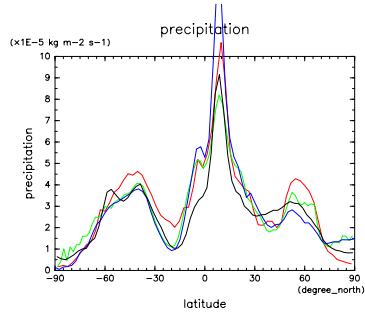
Figure 91: Rain at Jul. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
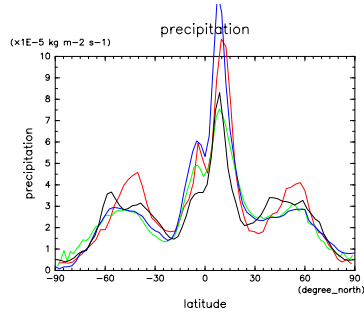
Figure 94: Rain at Oct. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
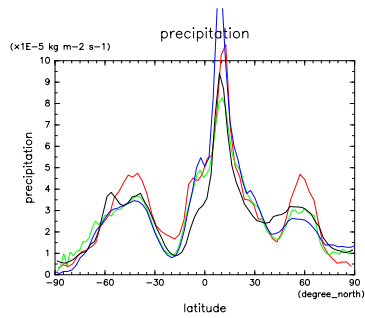
Figure 92: Rain at Aug. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
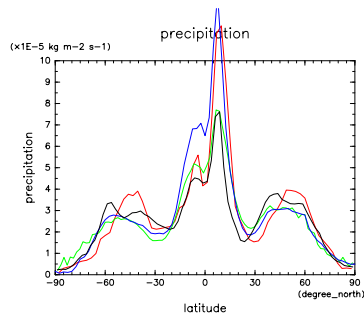
Figure 95: Rain at Nov. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
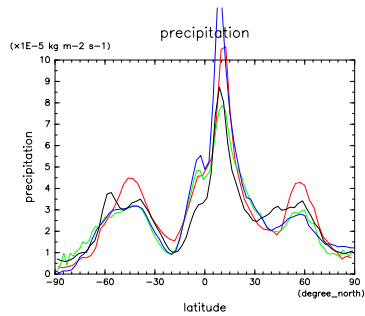
Figure 93: Rain at Sep. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
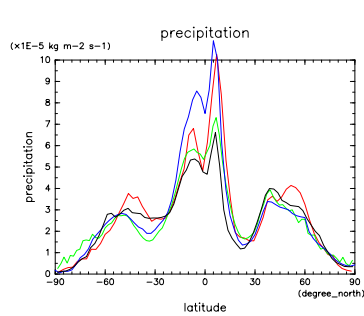
Figure 96: Rain at Dec. by dcpam (red), NCEP (green), ECMWF (blue), and GPCP (black)
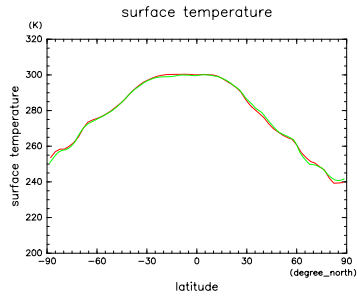
Figure 97: SurfTemp at Jan. by dc-pam (red), NCEP (skt) (green)
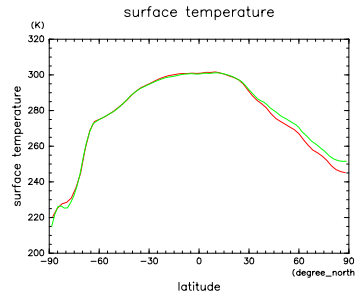
Figure 100: SurfTemp at Apr. by dc-pam (red), NCEP (skt) (green)
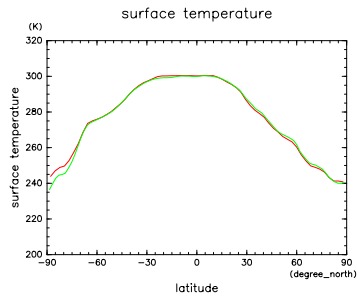
Figure 98: SurfTemp at Feb. by dc-pam (red), NCEP (skt) (green)
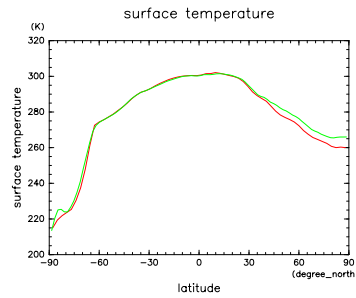
Figure 101: SurfTemp at May by dc-pam (red), NCEP (skt) (green)
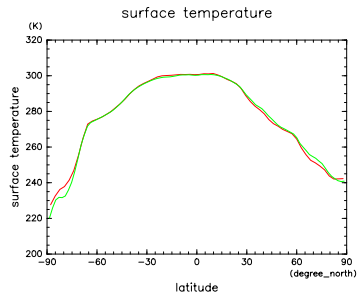
Figure 99: SurfTemp at Mar. by dc-pam (red), NCEP (skt) (green)
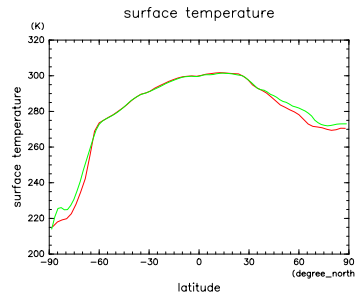
Figure 102: SurfTemp at Jun. by dc-pam (red), NCEP (skt) (green)
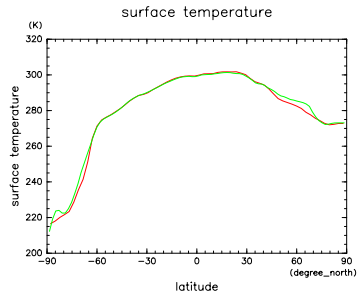
Figure 103: SurfTemp at Jul. by dc-pam (red), NCEP (skt) (green)

Figure 104: SurfTemp at Aug. by dc-pam (red), NCEP (skt) (green)

Figure 105: SurfTemp at Sep. by dc-pam (red), NCEP (skt) (green)

Figure 106: SurfTemp at Oct. by dc-pam (red), NCEP (skt) (green)

Figure 107: SurfTemp at Nov. by dc-pam (red), NCEP (skt) (green)
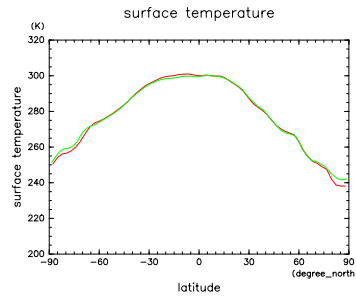
Figure 108: SurfTemp at Dec. by dc-pam (red), NCEP (skt) (green)

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0.2.6   Monthly mean longitude-latitude distribution
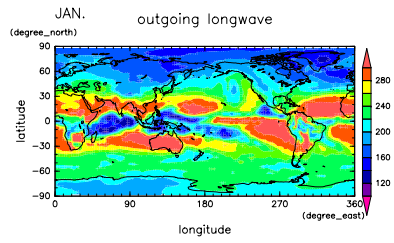
Figure 109: OLR at Jan. by dcpam
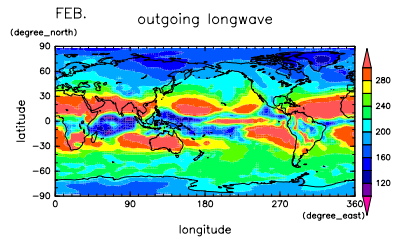
Figure 112: OLR at Feb. by dcpam
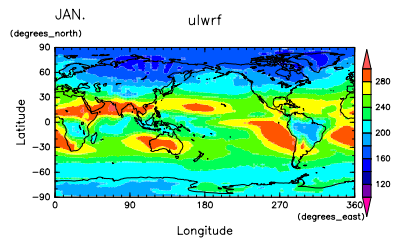
Figure 110: OLR at Jan. by NCEP
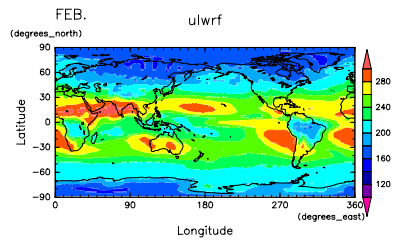
Figure 113: OLR at Feb. by NCEP
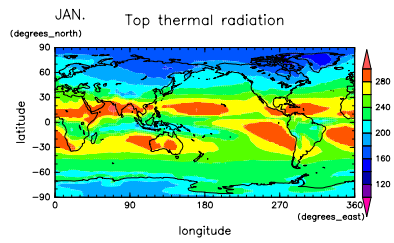
Figure 111: OLR at Jan. by ECMWF
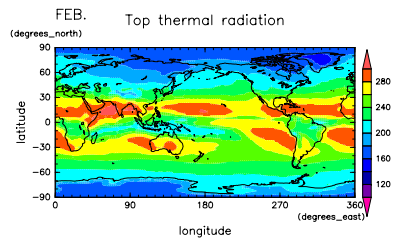
Figure 114: OLR at Feb. by ECMWF

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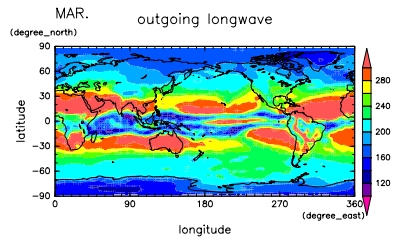
Figure 115: OLR at Mar. by dcpam
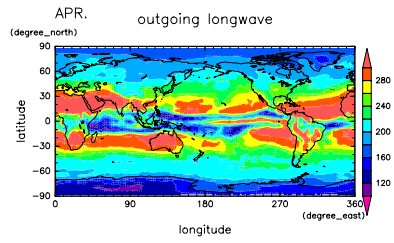
Figure 118: OLR at Apr. by dcpam
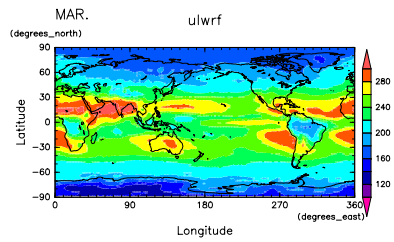
Figure 116: OLR at Mar. by NCEP
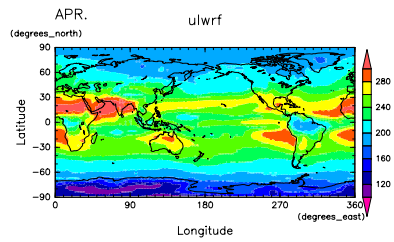
Figure 119: OLR at Apr. by NCEP
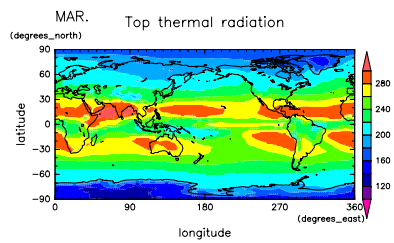
Figure 117: OLR at Mar. by ECMWF
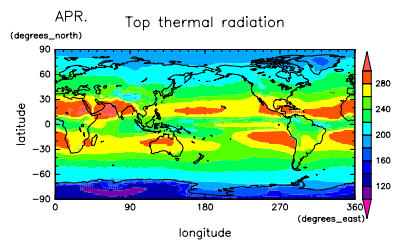
Figure 120: OLR at Apr. by ECMWF

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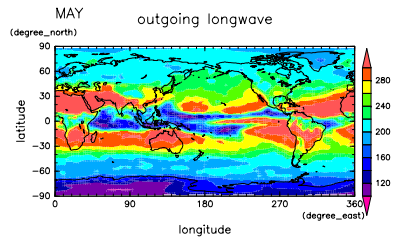
Figure 121: OLR at May by dcpam
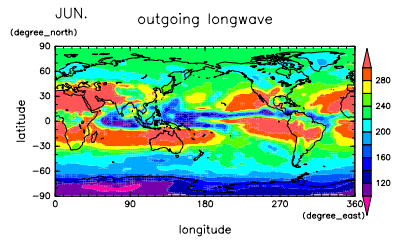
Figure 124: OLR at Jun. by dcpam
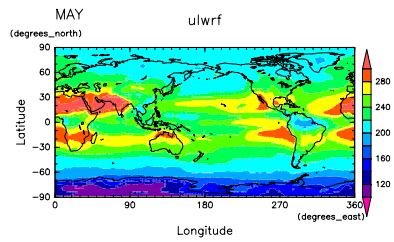
Figure 122: OLR at May by NCEP
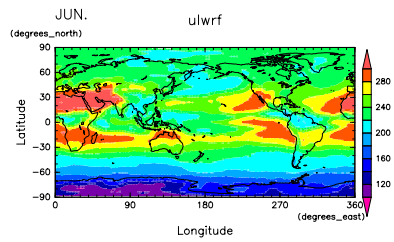
Figure 125: OLR at Jun. by NCEP
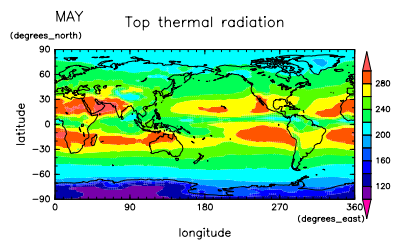
Figure 123: OLR at May by ECMWF
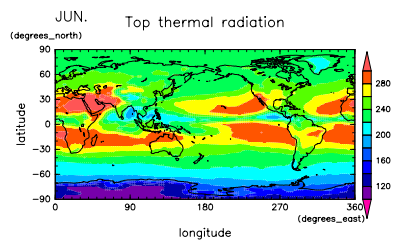
Figure 126: OLR at Jun. by ECMWF

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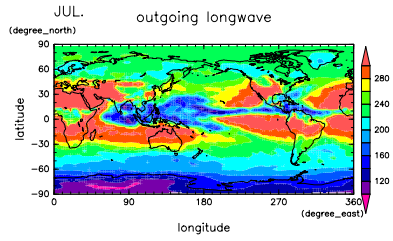
Figure 127: OLR at Jul. by dcpam
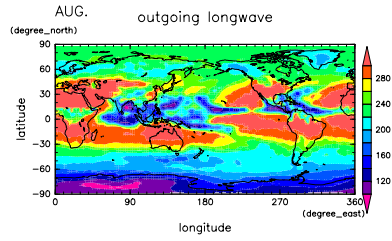
Figure 130: OLR at Aug. by dcpam
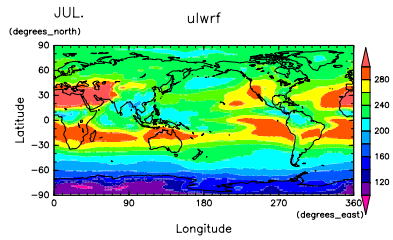
Figure 128: OLR at Jul. by NCEP
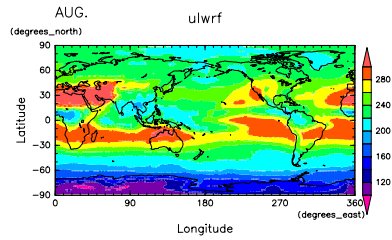
Figure 131: OLR at Aug. by NCEP
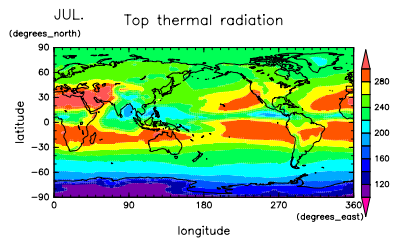
Figure 129: OLR at Jul. by ECMWF
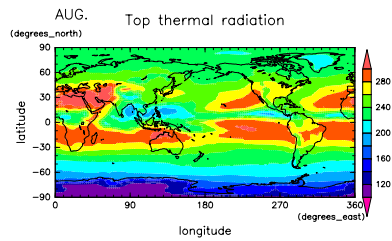
Figure 132: OLR at Aug. by ECMWF

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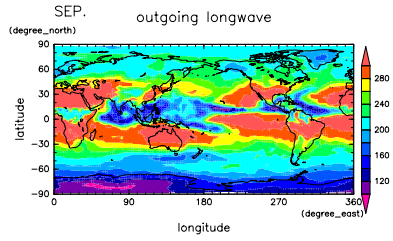
Figure 133: OLR at Sep. by dcpam
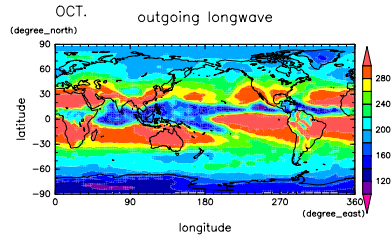
Figure 136: OLR at Oct. by dcpam
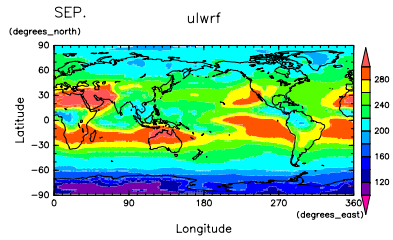
Figure 134: OLR at Sep. by NCEP
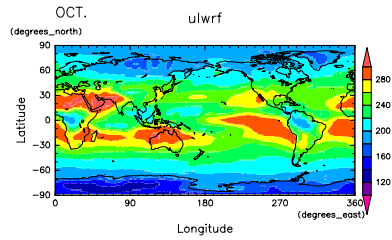
Figure 137: OLR at Oct. by NCEP
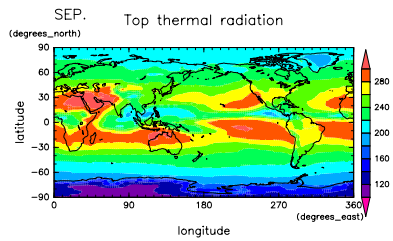
Figure 135: OLR at Sep. by ECMWF
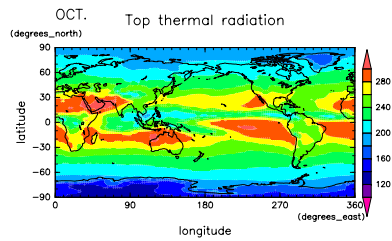
Figure 138: OLR at Oct. by ECMWF

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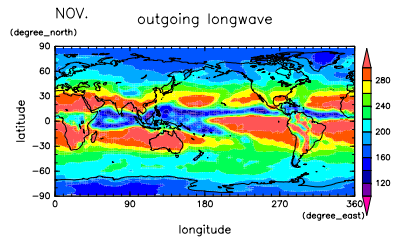
Figure 139: OLR at Nov. by dcpam
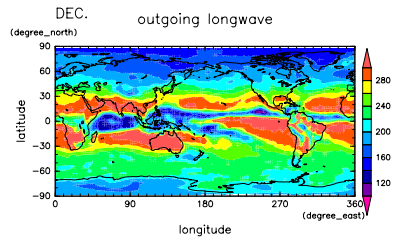
Figure 142: OLR at Dec. by dcpam
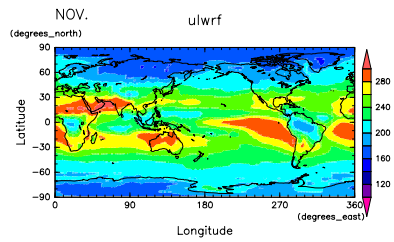
Figure 140: OLR at Nov. by NCEP
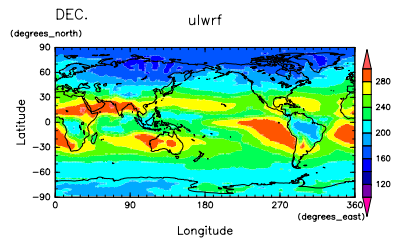
Figure 143: OLR at Dec. by NCEP
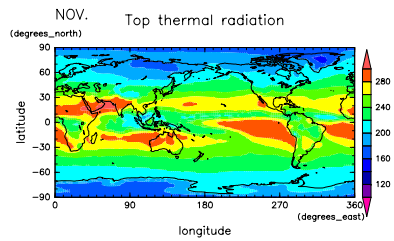
Figure 141: OLR at Nov. by ECMWF
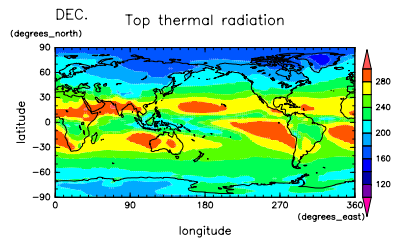
Figure 144: OLR at Dec. by ECMWF
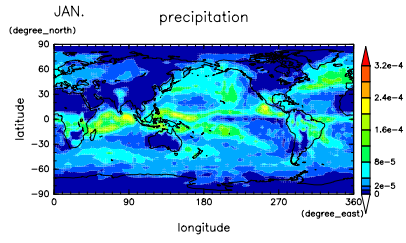
Figure 145: Rain at Jan. by dcpam
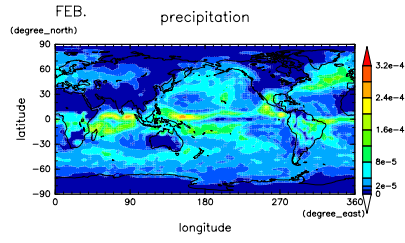
Figure 148: Rain at Feb. by dcpam
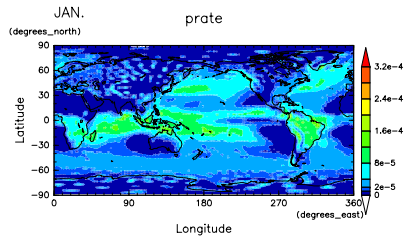
Figure 146: Rain at Jan. by NCEP
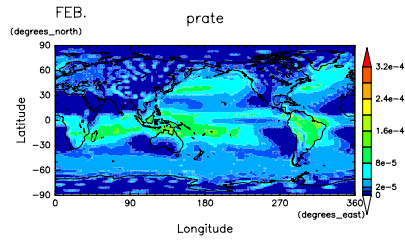
Figure 149: Rain at Feb. by NCEP
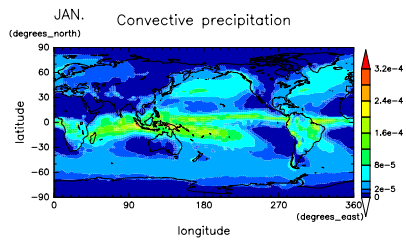
Figure 147: Rain at Jan. by ECMWF
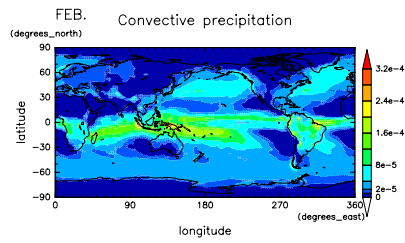
Figure 150: Rain at Feb. by ECMWF
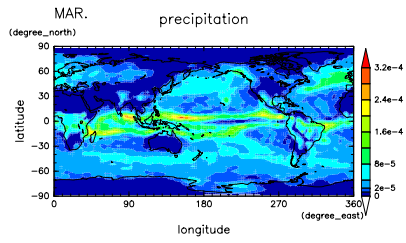
Figure 151: Rain at Mar. by dcpam
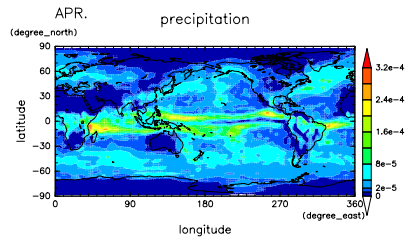
Figure 154: Rain at Apr. by dcpam
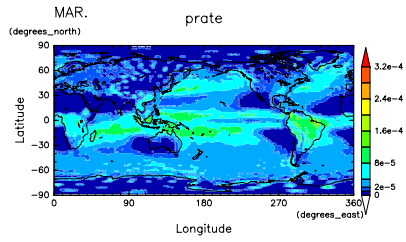
Figure 152: Rain at Mar. by NCEP
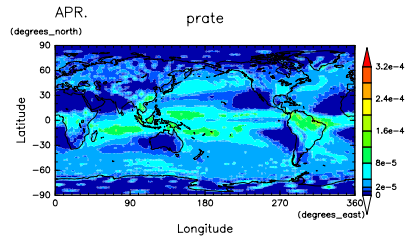
Figure 155: Rain at Apr. by NCEP
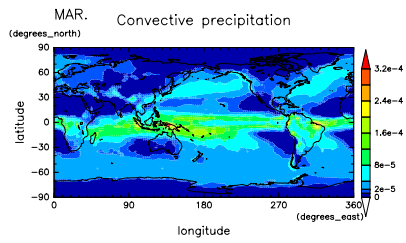
Figure 153: Rain at Mar. by ECMWF
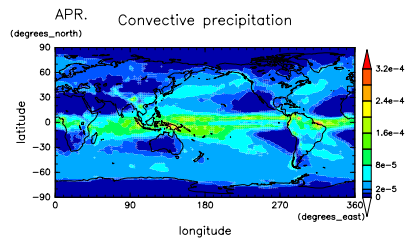
Figure 156: Rain at Apr. by ECMWF
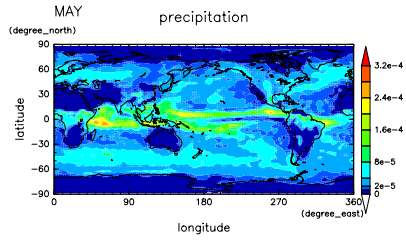
Figure 157: Rain at May by dcpam
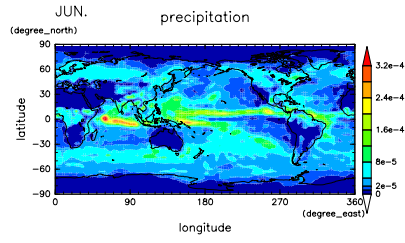
Figure 160: Rain at Jun. by dcpam
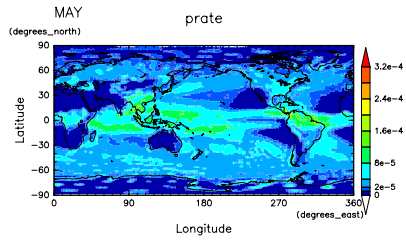
Figure 158: Rain at May by NCEP
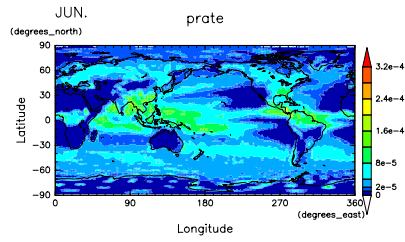
Figure 161: Rain at Jun. by NCEP
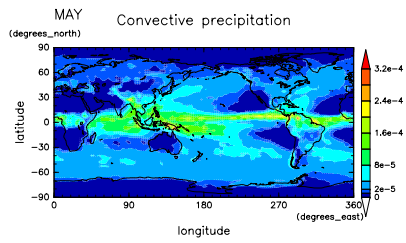
Figure 159: Rain at May by ECMWF
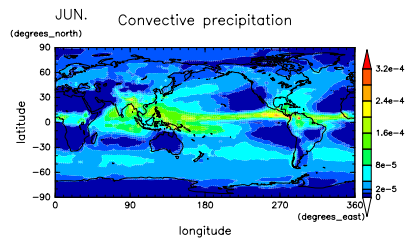
Figure 162: Rain at Jun. by ECMWF

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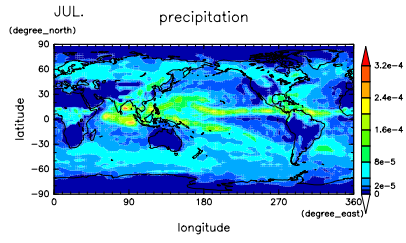
Figure 163: Rain at Jul. by dcpam
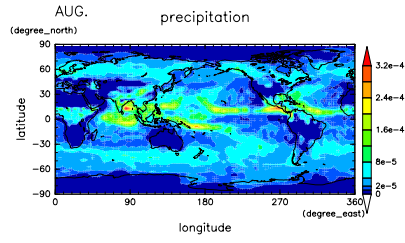
Figure 166: Rain at Aug. by dcpam
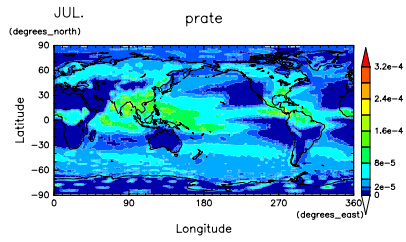
Figure 164: Rain at Jul. by NCEP
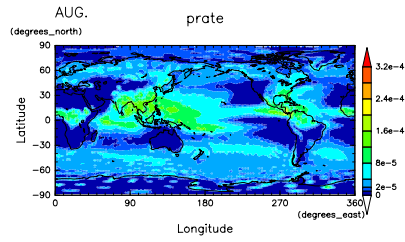
Figure 167: Rain at Aug. by NCEP
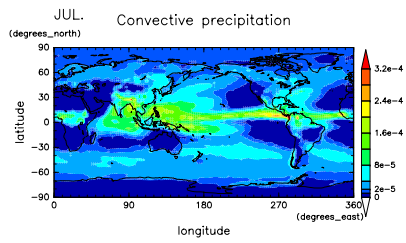
Figure 165: Rain at Jul. by ECMWF
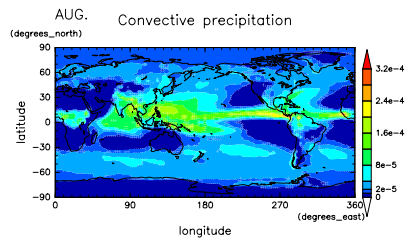
Figure 168: Rain at Aug. by ECMWF
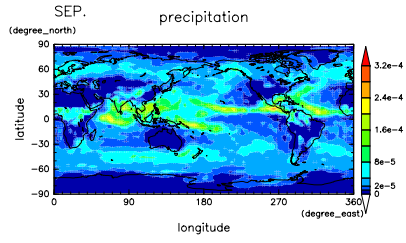
Figure 169: Rain at Sep. by dcpam
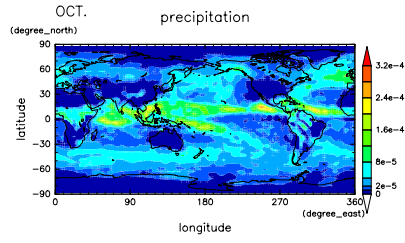
Figure 172: Rain at Oct. by dcpam
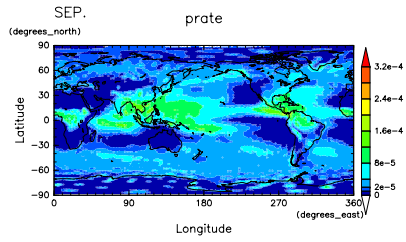
Figure 170: Rain at Sep. by NCEP
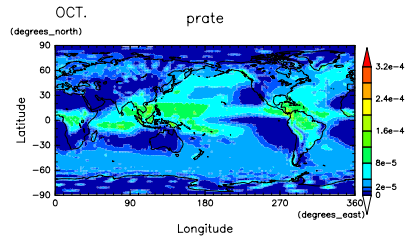
Figure 173: Rain at Oct. by NCEP
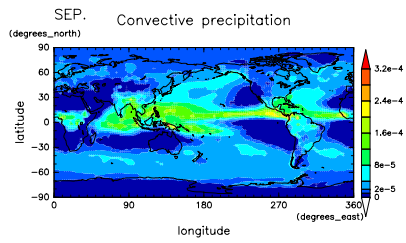
Figure 171: Rain at Sep. by ECMWF
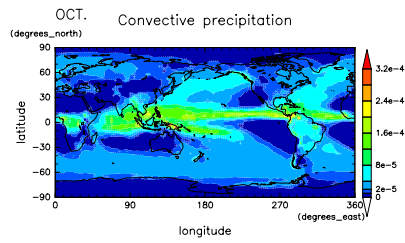
Figure 174: Rain at Oct. by ECMWF

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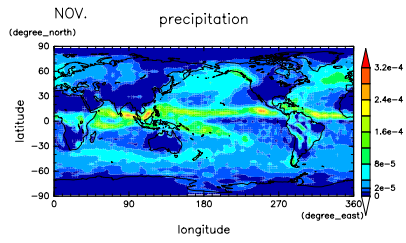
Figure 175: Rain at Nov. by dcpam
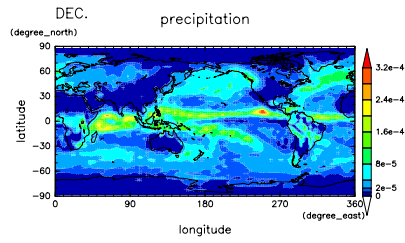
Figure 178: Rain at Dec. by dcpam
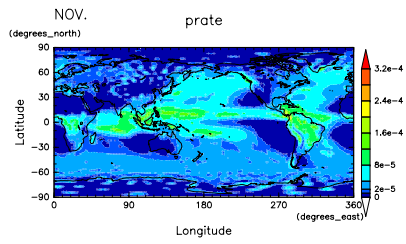
Figure 176: Rain at Nov. by NCEP
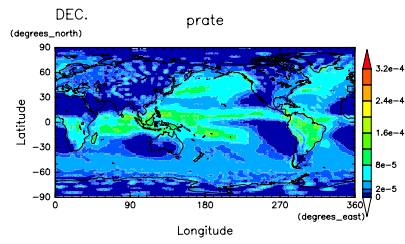
Figure 179: Rain at Dec. by NCEP
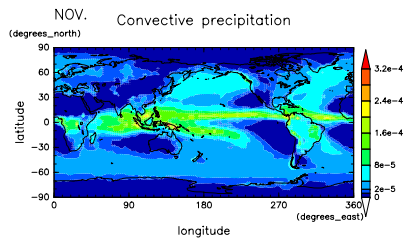
Figure 177: Rain at Nov. by ECMWF
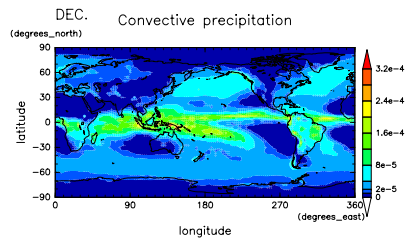
Figure 180: Rain at Dec. by ECMWF
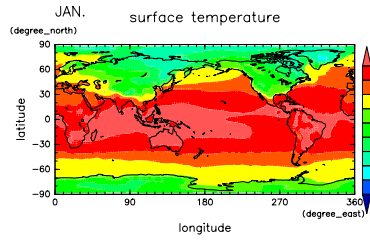
Figure 181: SurfTemp at Jan. by dc-pam
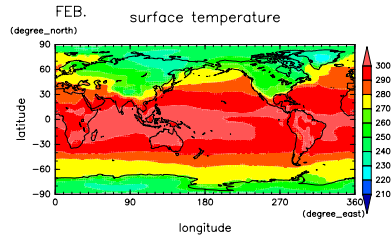
Figure 183: SurfTemp at Feb. by dc-pam
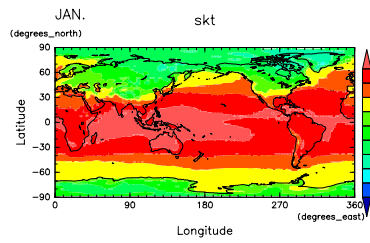
Figure 182: skt at Jan. by NCEP
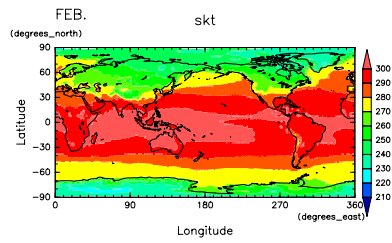
Figure 184: skt at Feb. by NCEP

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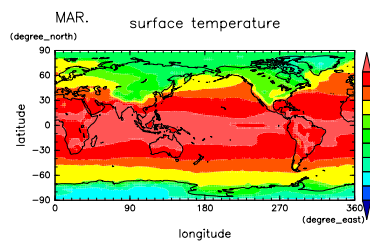
Figure 185: SurfTemp at Mar. by dc-pam
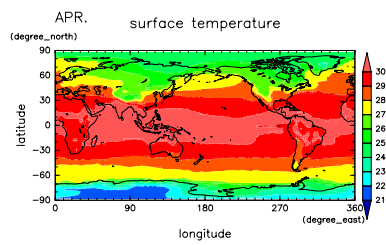
Figure 187: SurfTemp at Apr. by dc-pam
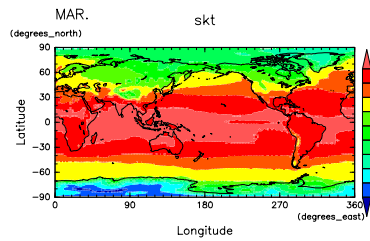
Figure 186: skt at Mar. by NCEP
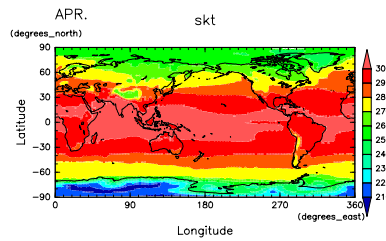
Figure 188: skt at Apr. by NCEP
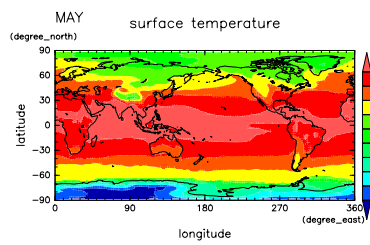
Figure 189: SurfTemp at May by dc-pam
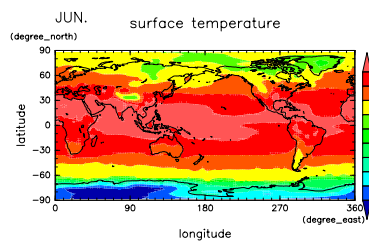
Figure 191: SurfTemp at Jun. by dc-pam
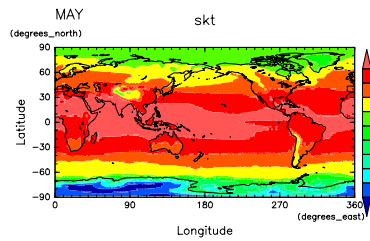
Figure 190: skt at May by NCEP
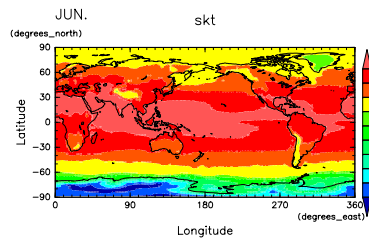
Figure 192: skt at Jun. by NCEP
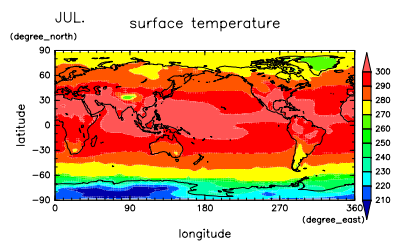
Figure 193: SurfTemp at Jul. by dc-pam
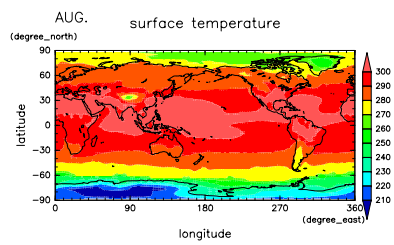
Figure 195: SurfTemp at Aug. by dc-pam
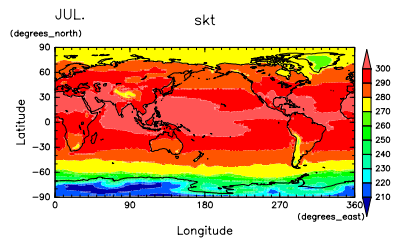
Figure 194: skt at Jul. by NCEP
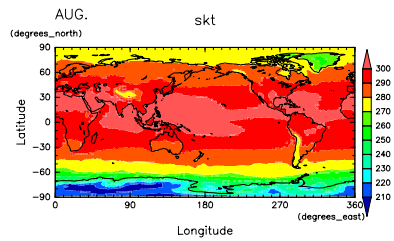
Figure 196: skt at Aug. by NCEP
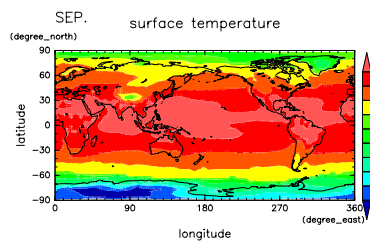
Figure 197: SurfTemp at Sep. by dc-pam
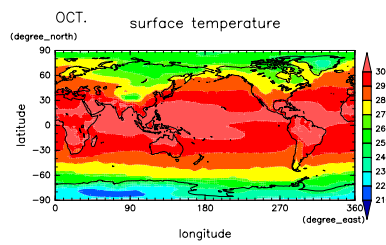
Figure 199: SurfTemp at Oct. by dc-pam
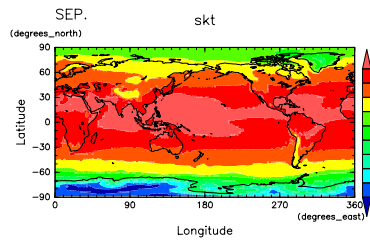
Figure 198: skt at Sep. by NCEP
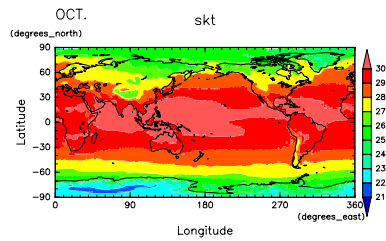
Figure 200: skt at Oct. by NCEP
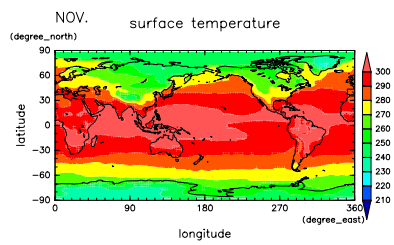
Figure 201: SurfTemp at Nov. by dc-pam
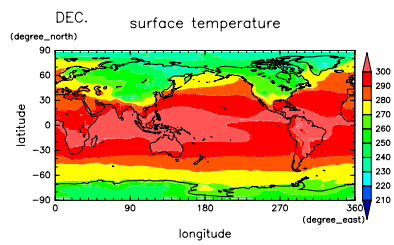
Figure 203: SurfTemp at Dec. by dc-pam
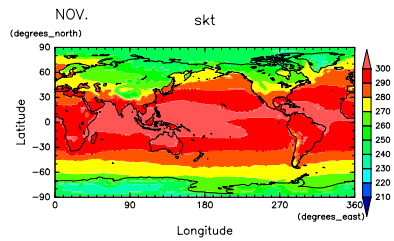
Figure 202: skt at Nov. by NCEP
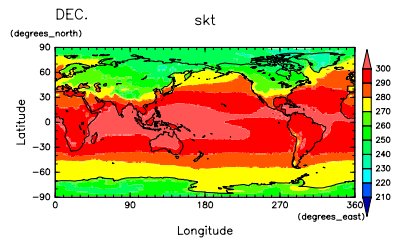
Figure 204: skt at Dec. by NCEP

0.2.7 Monthly mean latitude-pressure (linear) distribution
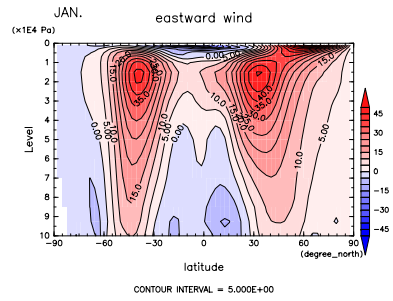
Figure 205: U at Jan. by dcpam
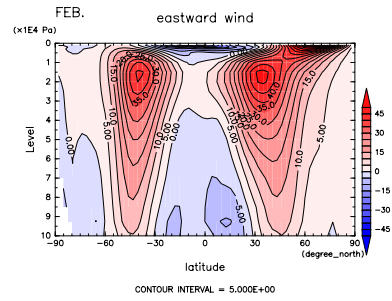
Figure 208: U at Feb. by dcpam
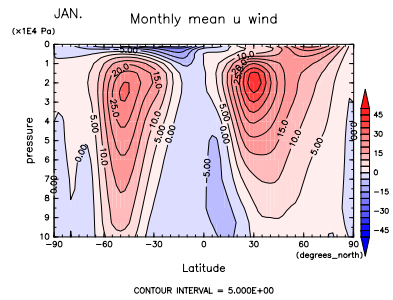
Figure 206: U at Jan. by NCEP
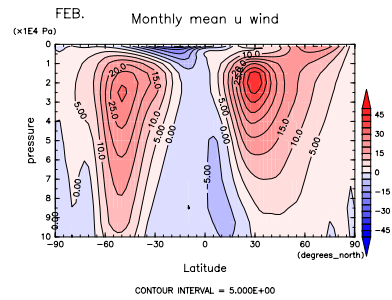
Figure 209: U at Feb. by NCEP
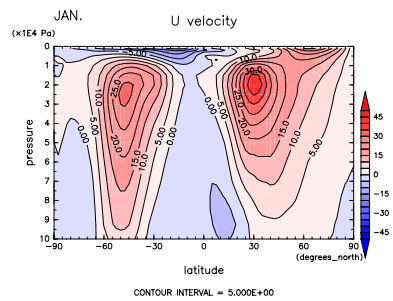
Figure 207: U at Jan. by ECMWF
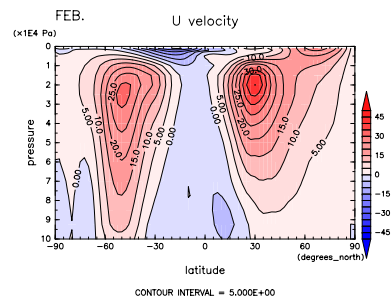
Figure 210: U at Feb. by ECMWF

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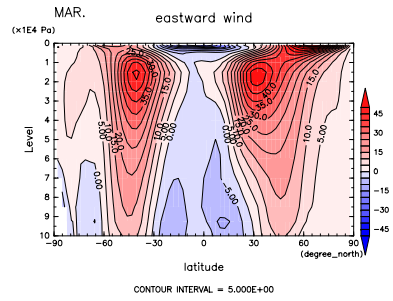
Figure 211: U at Mar. by dcpam
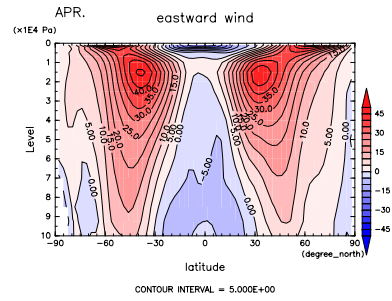
Figure 214: U at Apr. by dcpam
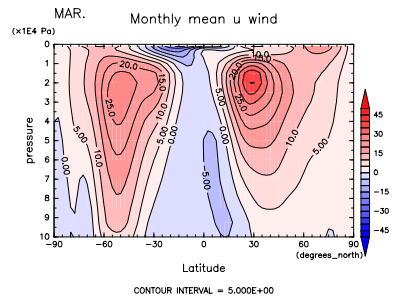
Figure 212: U at Mar. by NCEP
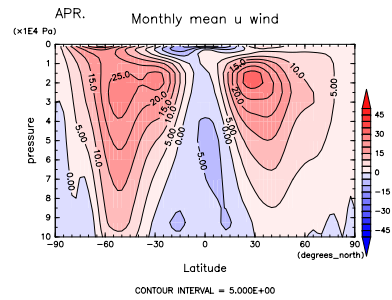
Figure 215: U at Apr. by NCEP
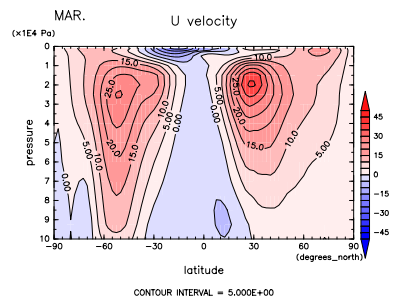
Figure 213: U at Mar. by ECMWF
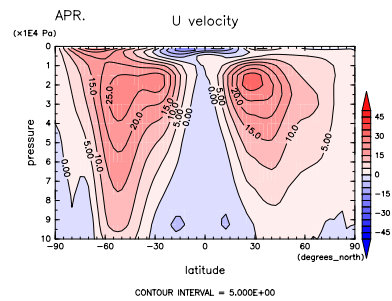
Figure 216: U at Apr. by ECMWF
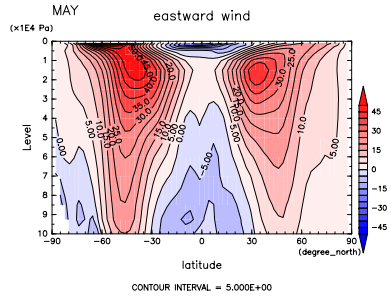
Figure 217: U at May by dcpam
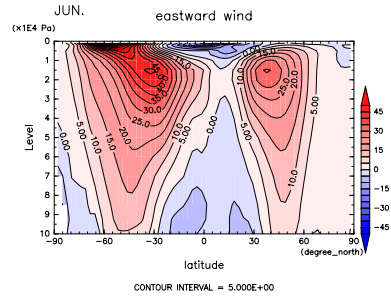
Figure 220: U at Jun. by dcpam
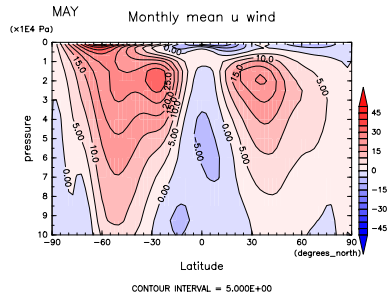
Figure 218: U at May by NCEP
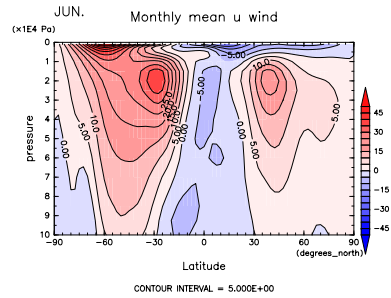
Figure 221: U at Jun. by NCEP
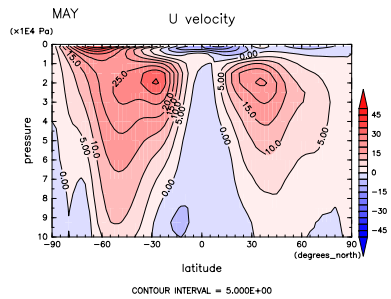
Figure 219: U at May by ECMWF
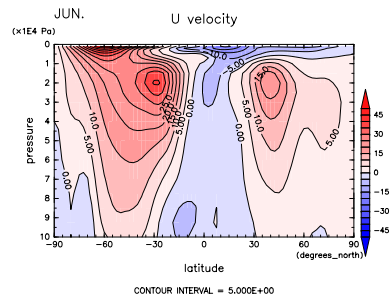
Figure 222: U at Jun. by ECMWF

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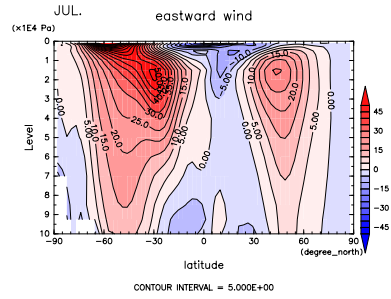
Figure 223: U at Jul. by dcpam
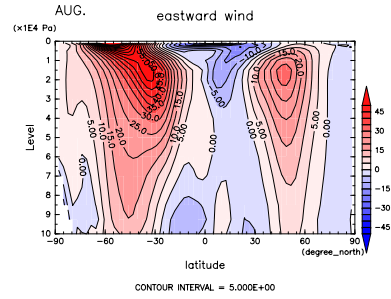
Figure 226: U at Aug. by dcpam
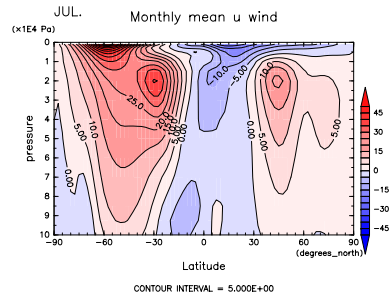
Figure 224: U at Jul. by NCEP
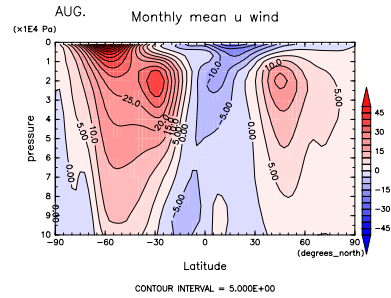
Figure 227: U at Aug. by NCEP
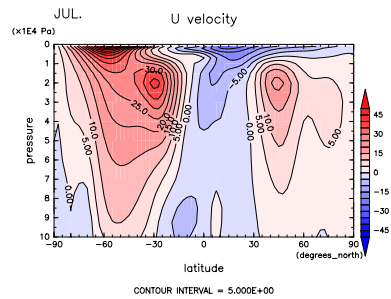
Figure 225: U at Jul. by ECMWF
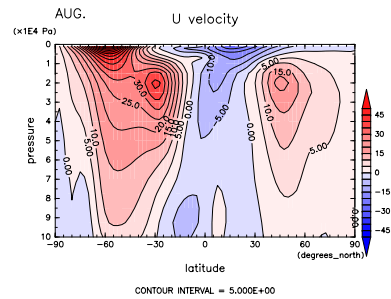
Figure 228: U at Aug. by ECMWF
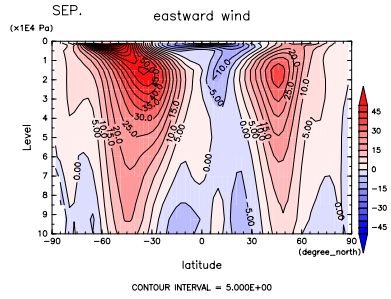
Figure 229: U at Sep. by dcpam
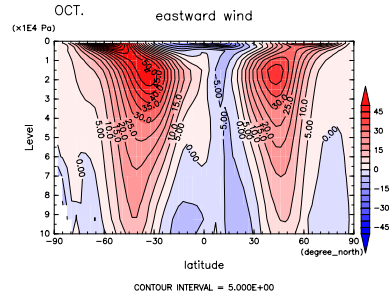
Figure 232: U at Oct. by dcpam
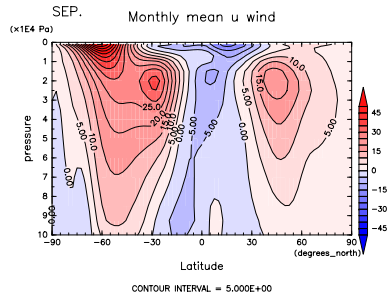
Figure 230: U at Sep. by NCEP
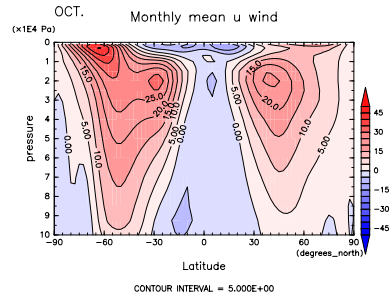
Figure 233: U at Oct. by NCEP
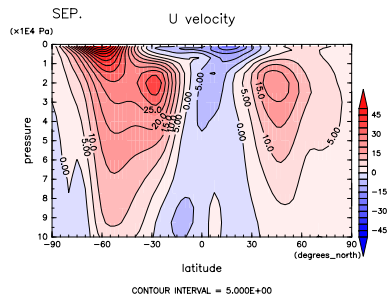
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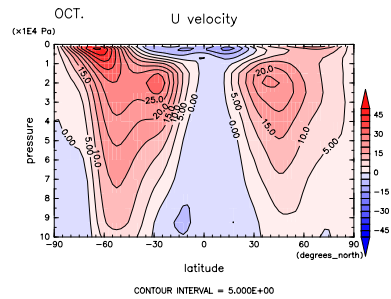
Figure 234: U at Oct. by ECMWF
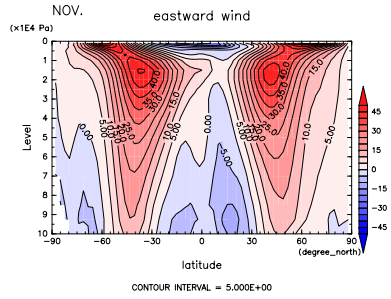
Figure 235: U at Nov. by dcpam
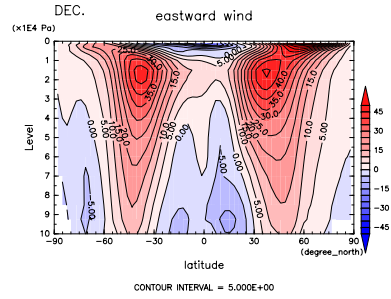
Figure 238: U at Dec. by dcpam
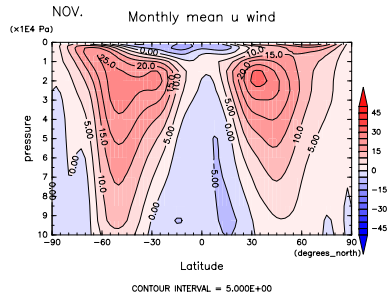
Figure 236: U at Nov. by NCEP
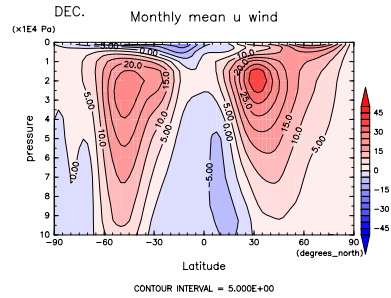
Figure 239: U at Dec. by NCEP
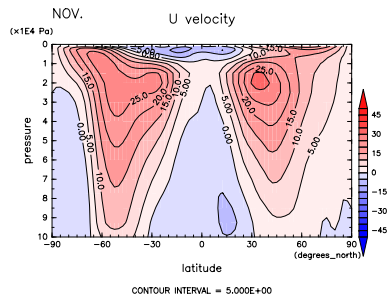
Figure 237: U at Nov. by ECMWF
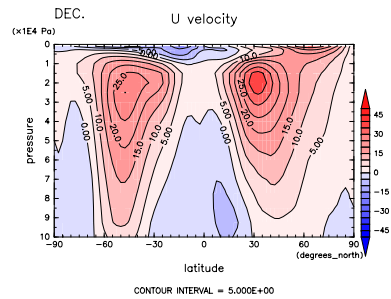
Figure 240: U at Dec. by ECMWF

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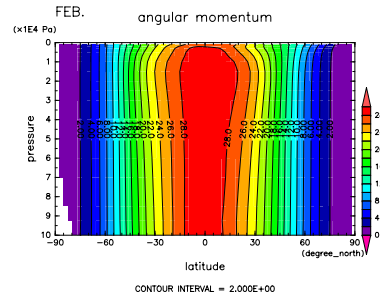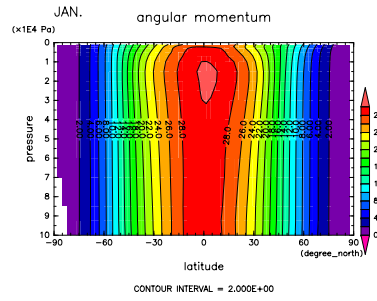
Figure 241: ANGMOM at Jan. by dcpam



Figure 244: ANGMOM at Feb. by dcpam
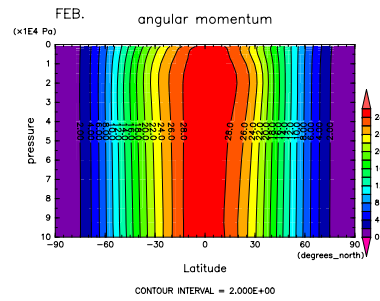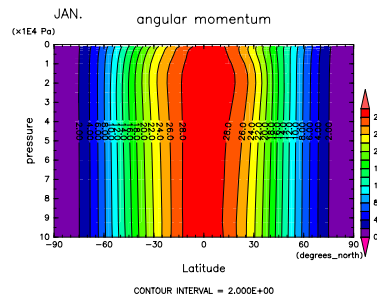
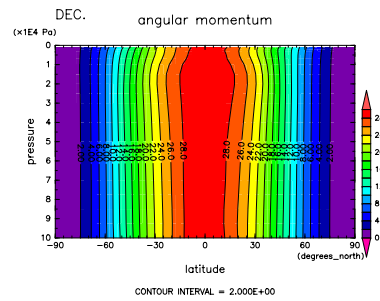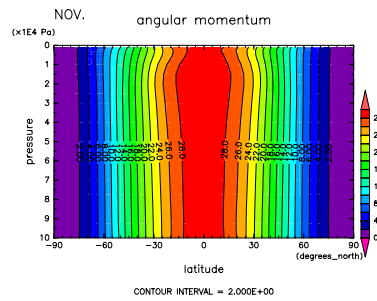Figure 242: ANGMOM at Jan. by NCEP

Figure 245: ANGMOM at Feb. by NCEP
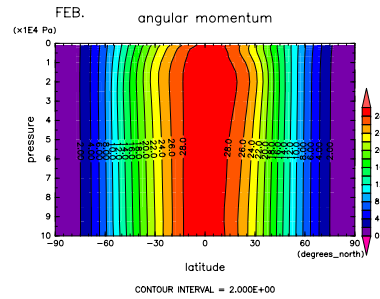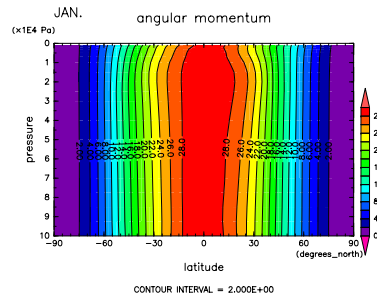
Figure 243: ANGMOM at Jan. by ECMWF

Figure 246: ANGMOM at Feb. by ECMWF

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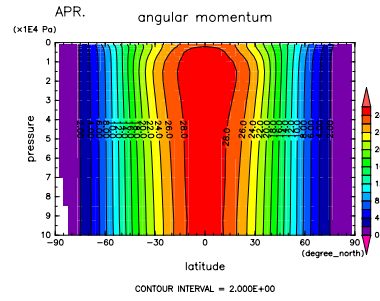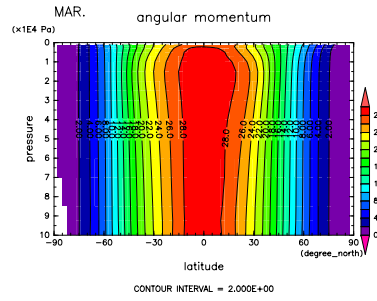
Figure 247: ANGMOM at Mar. by dcpam

Figure 250: ANGMOM at Apr. by dcpam
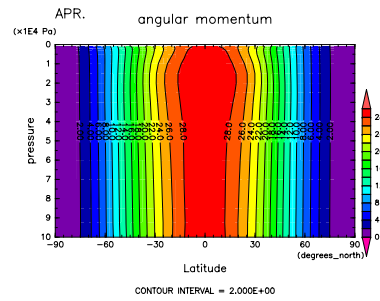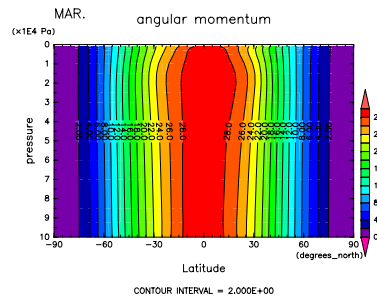
Figure 248: ANGMOM at Mar. by NCEP

Figure 251: ANGMOM at Apr. by NCEP
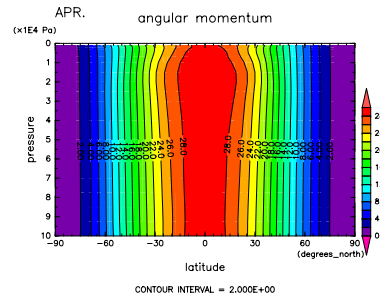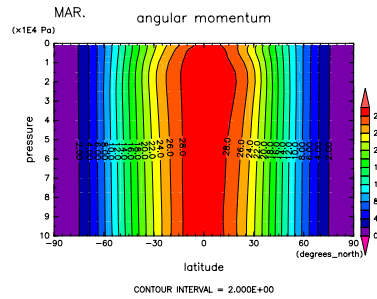
Figure 249: ANGMOM at Mar. by ECMWF

Figure 252: ANGMOM at Apr. by ECMWF

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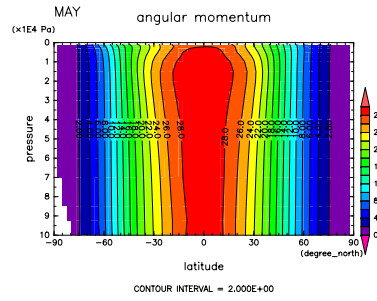
Figure 253: ANGMOM at May by dc-pam
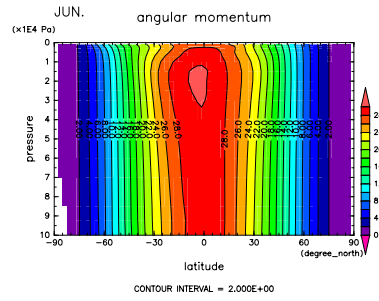
Figure 256: ANGMOM at Jun. by dcpam
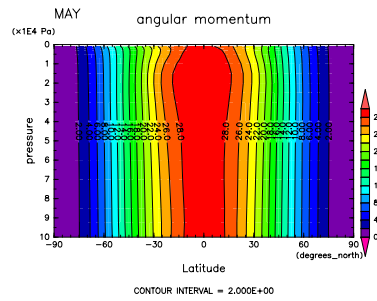
Figure 254: ANGMOM at May by NCEP
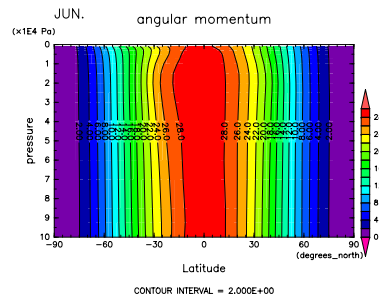
Figure 257: ANGMOM at Jun. by NCEP
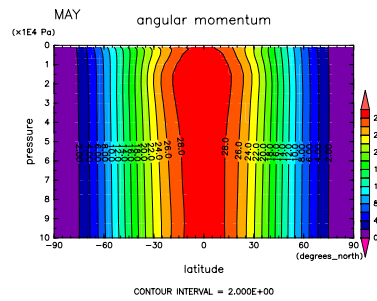
Figure 255: ANGMOM at May by ECMWF
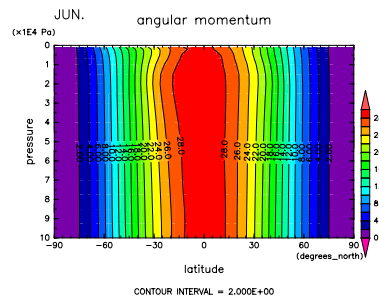
Figure 258: ANGMOM at Jun. by ECMWF

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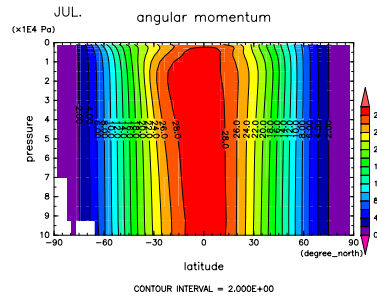
Figure 259: ANGMOM at Jul. by dcpam
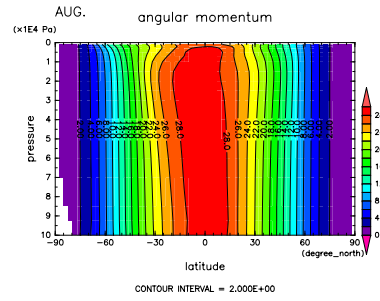
Figure 262: ANGMOM at Aug. by dcpam
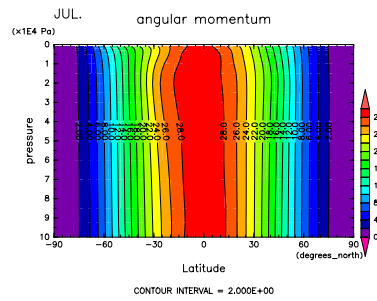
Figure 260: ANGMOM at Jul. by NCEP
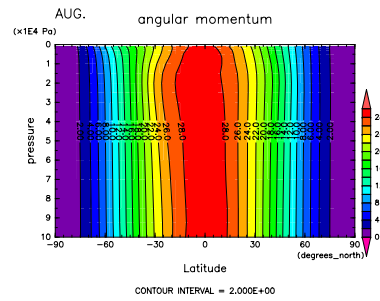
Figure 263: ANGMOM at Aug. by NCEP
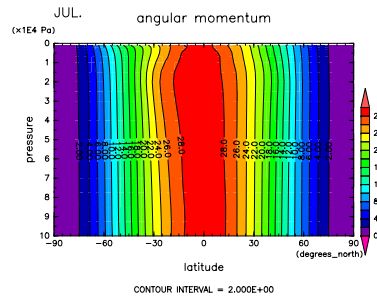
Figure 261: ANGMOM at Jul. by ECMWF
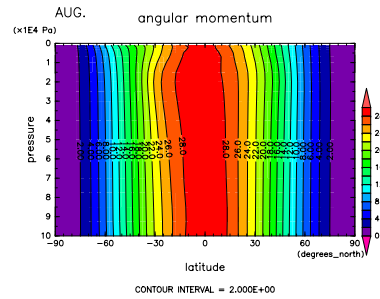
Figure 264: ANGMOM at Aug. by ECMWF
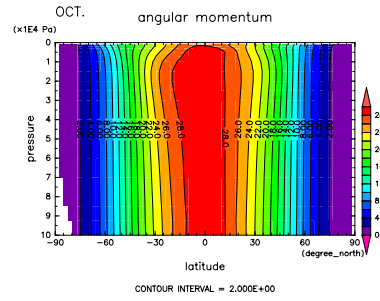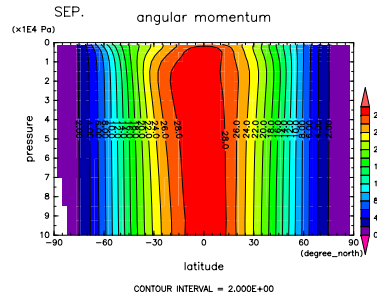
Figure 265: ANGMOM at Sep. by dcpam

Figure 268: ANGMOM at Oct. by dcpam
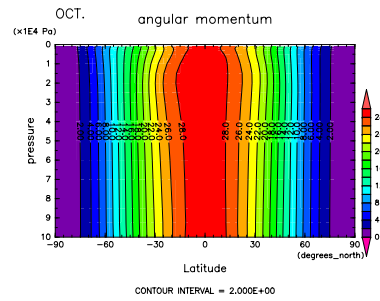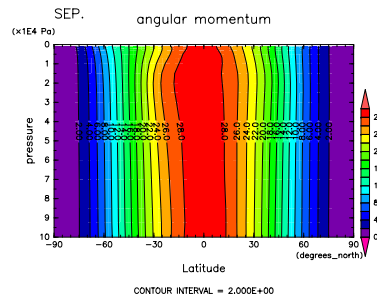
Figure 266: ANGMOM at Sep. by NCEP

Figure 269: ANGMOM at Oct. by NCEP
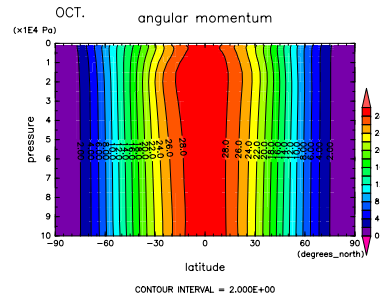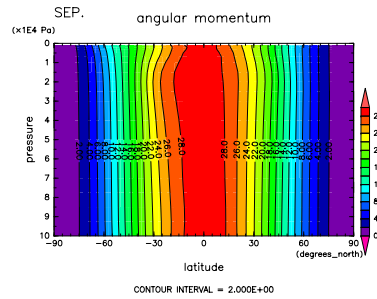
Figure 267: ANGMOM at Sep. by ECMWF

Figure 270: ANGMOM at Oct. by ECMWF

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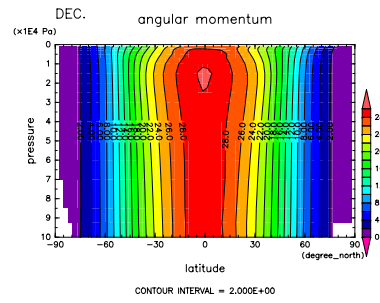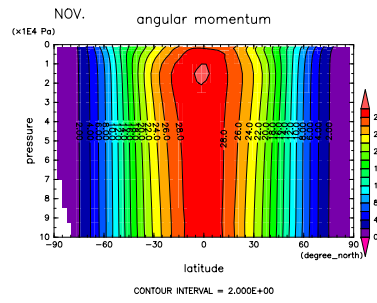
Figure 271: ANGMOM at Nov. by dcpam

Figure 274: ANGMOM at Dec. by dcpam
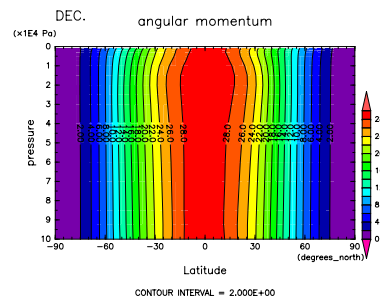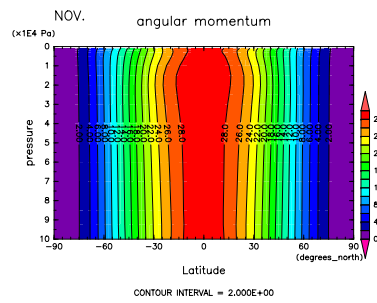
Figure 272: ANGMOM at Nov. by NCEP

Figure 275: ANGMOM at Dec. by NCEP

Figure 273: ANGMOM at Nov. by ECMWF

Figure 276: ANGMOM at Dec. by ECMWF

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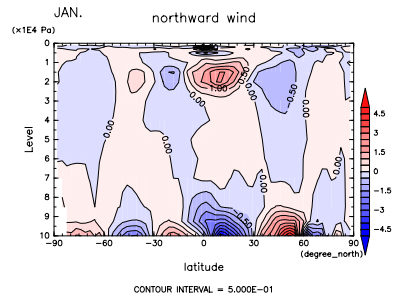
Figure 277: V at Jan. by dcpam
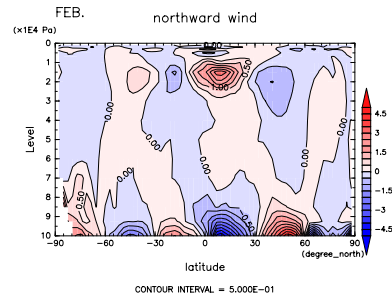

Figure 280: V at Feb. by dcpam
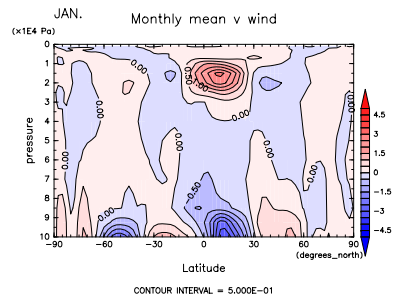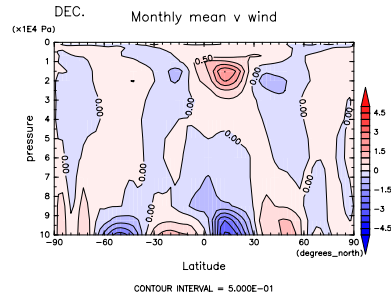

Figure 278: V at Jan. by NCEP
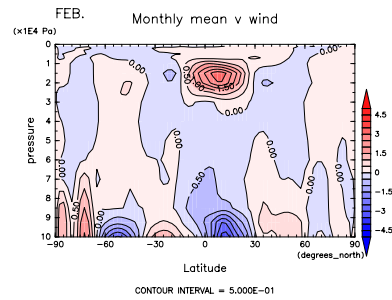
Figure 281: V at Feb. by NCEP
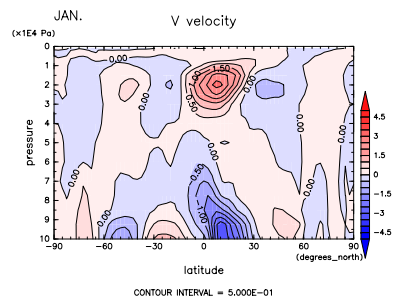
Figure 279: V at Jan. by ECMWF
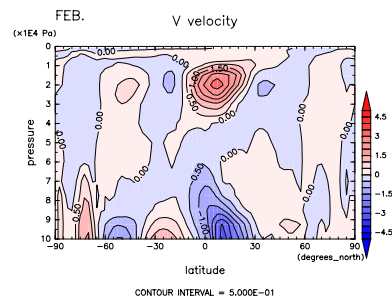
Figure 282: V at Feb. by ECMWF

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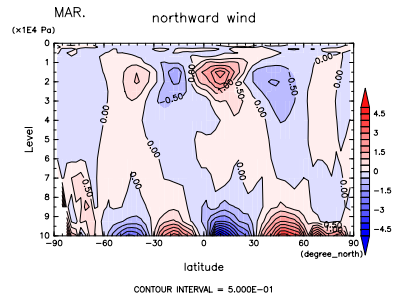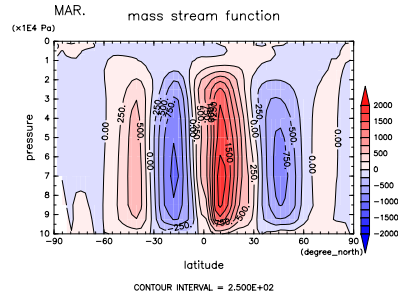
Figure 283: V at Mar. by dcpam
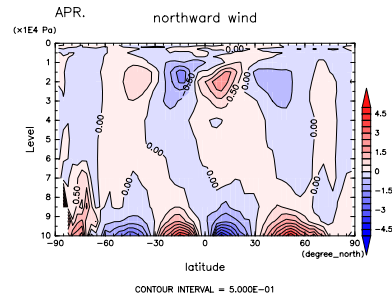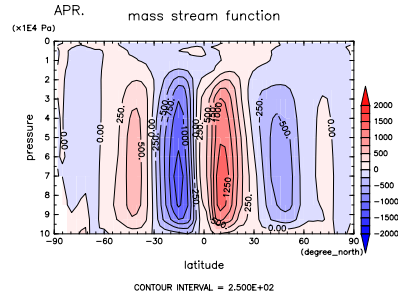

Figure 286: V at Apr. by dcpam
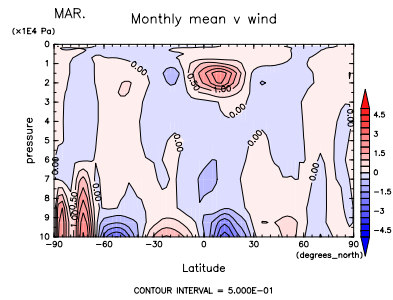
Figure 284: V at Mar. by NCEP
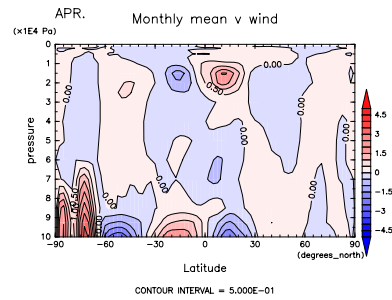
Figure 287: V at Apr. by NCEP
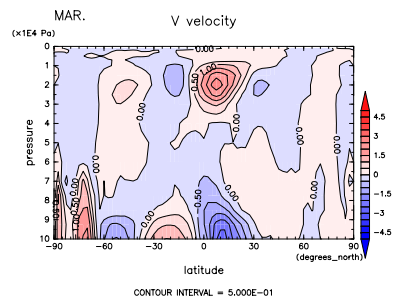
Figure 285: V at Mar. by ECMWF
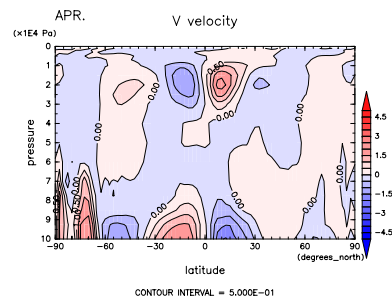
Figure 288: V at Apr. by ECMWF

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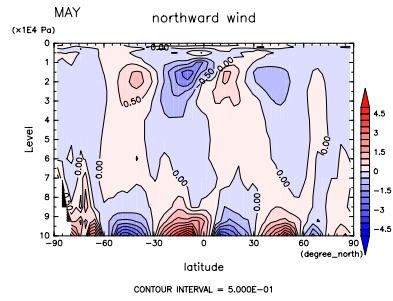
Figure 289: V at May by dcpam
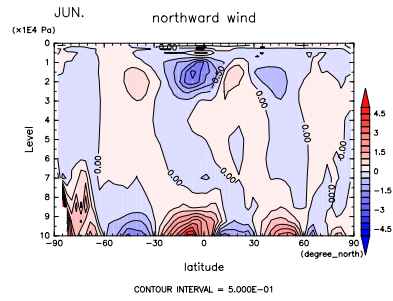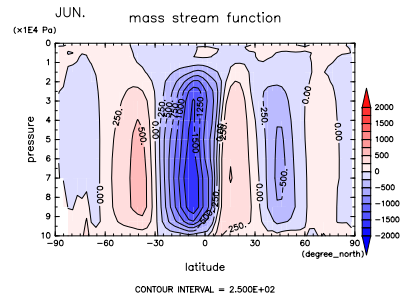

Figure 292: V at Jun. by dcpam
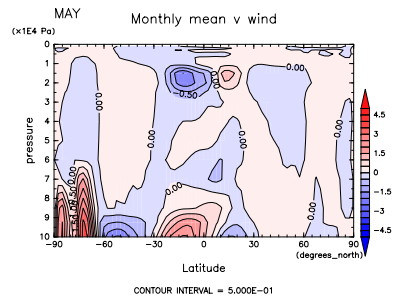
Figure 290: V at May by NCEP
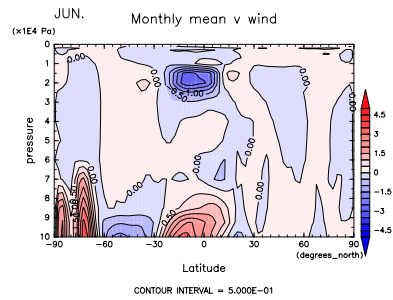
Figure 293: V at Jun. by NCEP
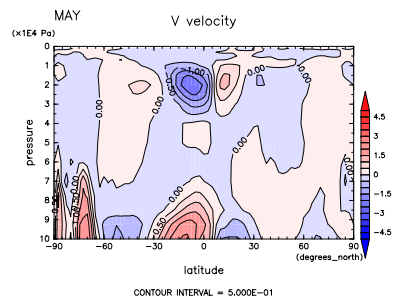
Figure 291: V at May by ECMWF
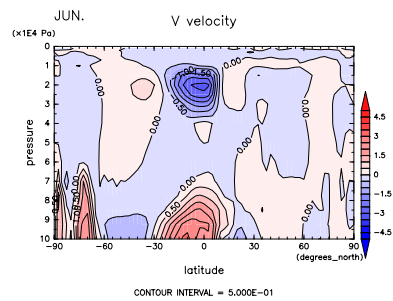
Figure 294: V at Jun. by ECMWF
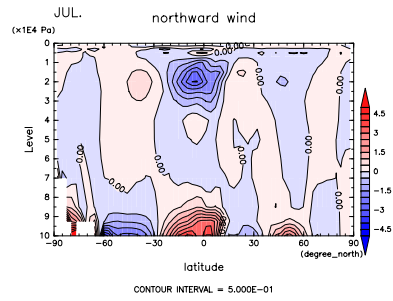
Figure 295: V at Jul. by dcpam
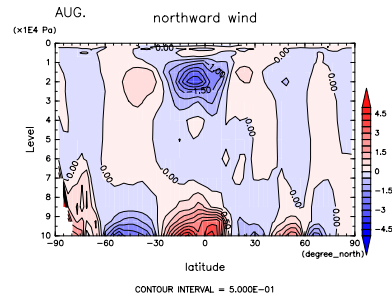
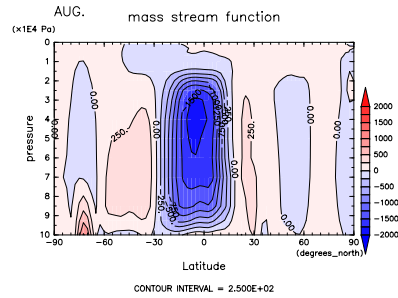Figure 298: V at Aug. by dcpam
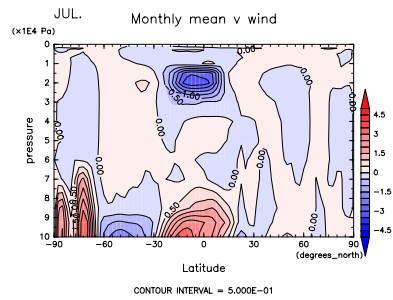
Figure 296: V at Jul. by NCEP
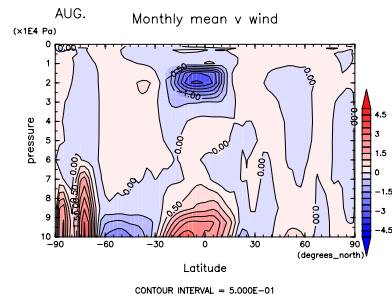
Figure 299: V at Aug. by NCEP
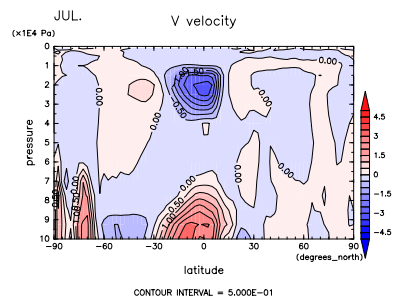
Figure 297: V at Jul. by ECMWF
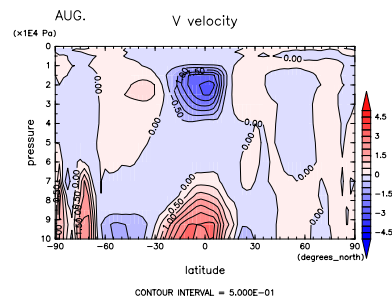
Figure 300: V at Aug. by ECMWF

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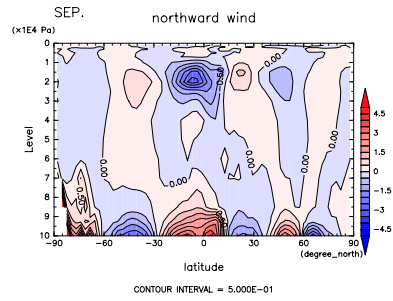
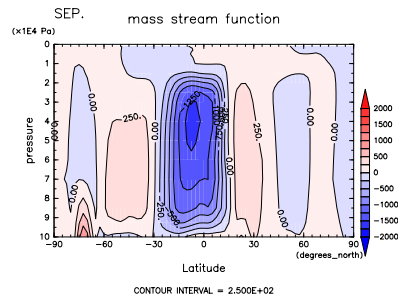Figure 301: V at Sep. by dcpam
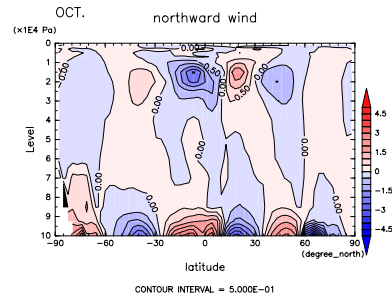
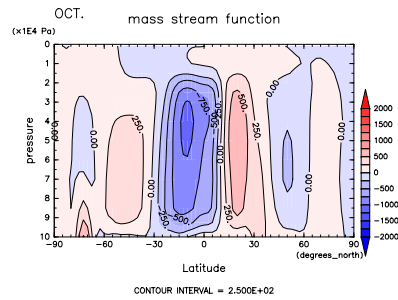Figure 304: V at Oct. by dcpam
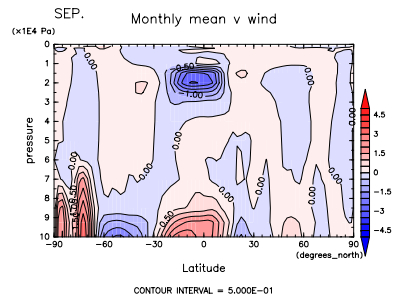
Figure 302: V at Sep. by NCEP
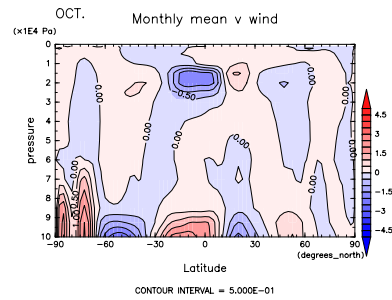
Figure 305: V at Oct. by NCEP
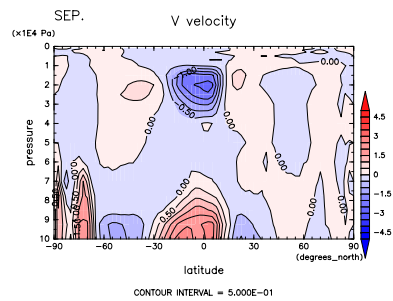
Figure 303: V at Sep. by ECMWF
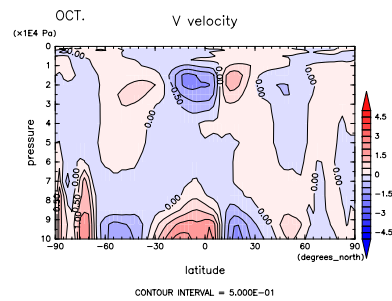
Figure 306: V at Oct. by ECMWF

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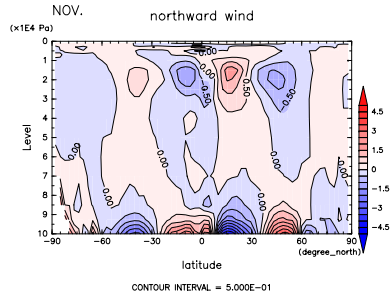
Figure 307: V at Nov. by dcpam
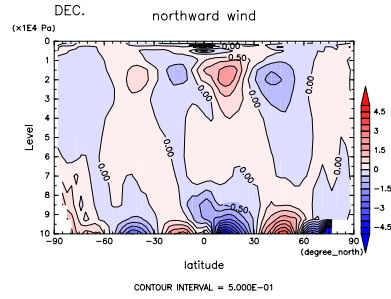
Figure 310: V at Dec. by dcpam
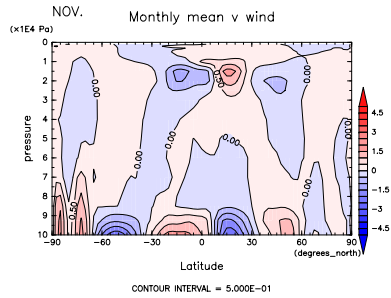
Figure 308: V at Nov. by NCEP

Figure 311: V at Dec. by NCEP
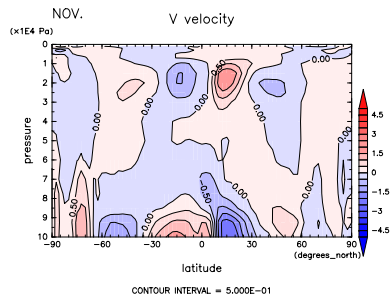
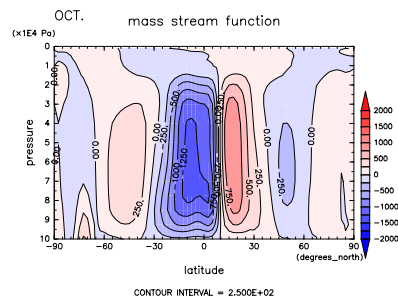Figure 309: V at Nov. by ECMWF
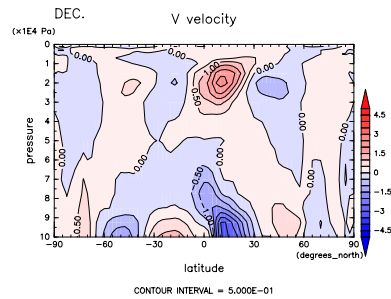
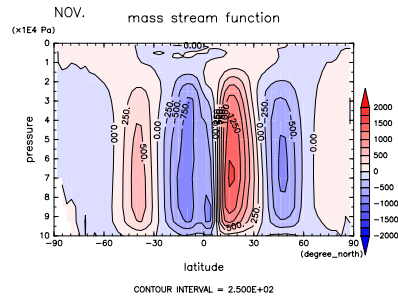Figure 312: V at Dec. by ECMWF

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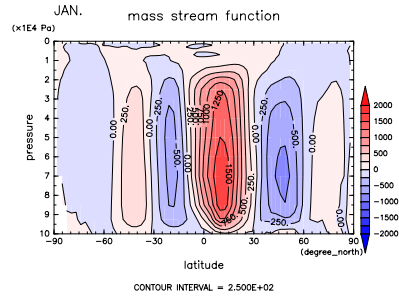
Figure 313: MSF at Jan. by dcpam
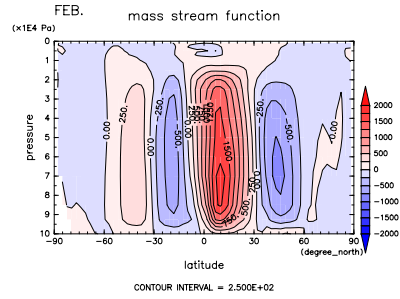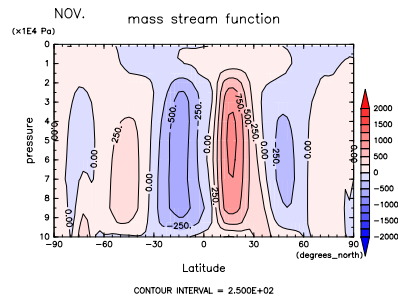

Figure 316: MSF at Feb. by dcpam
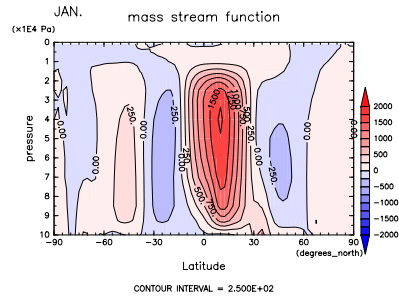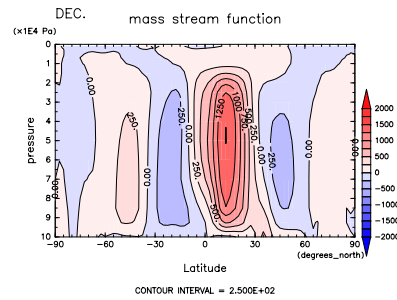

Figure 314: MSF at Jan. by NCEP
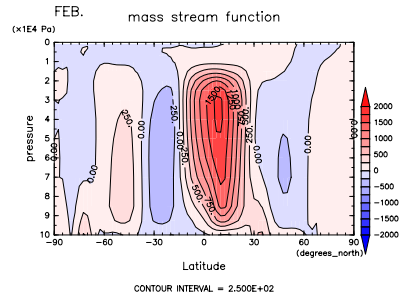
Figure 317: MSF at Feb. by NCEP
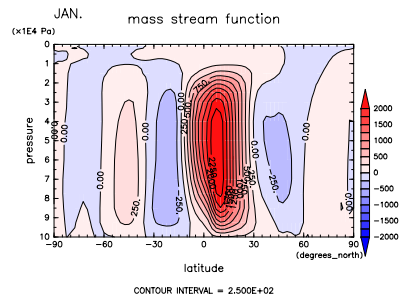
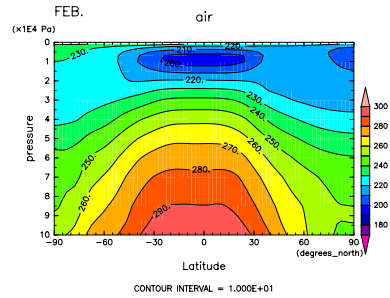
Figure 315: MSF at Jan. by ECMWF
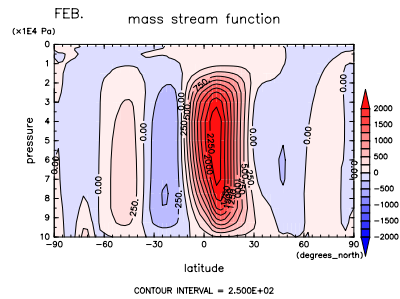
Figure 318: MSF at Feb. by ECMWF

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Figure 319: MSF at Mar. by dcpam

Figure 322: MSF at Apr. by dcpam
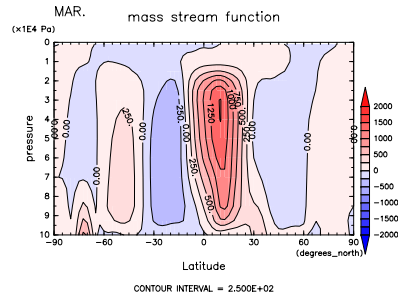
Figure 320: MSF at Mar. by NCEP
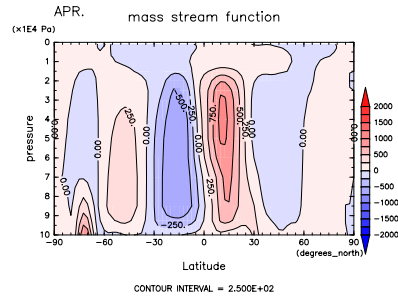
Figure 323: MSF at Apr. by NCEP
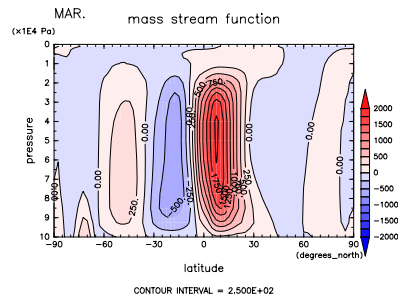
Figure 321: MSF at Mar. by ECMWF
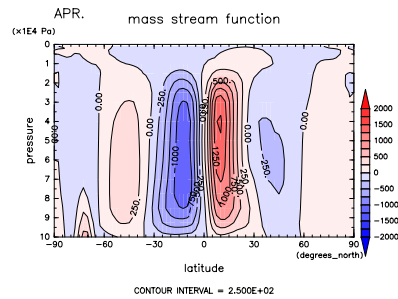
Figure 324: MSF at Apr. by ECMWF
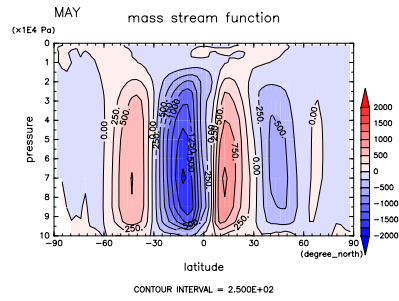
Figure 325: MSF at May by dcpam

Figure 328: MSF at Jun. by dcpam
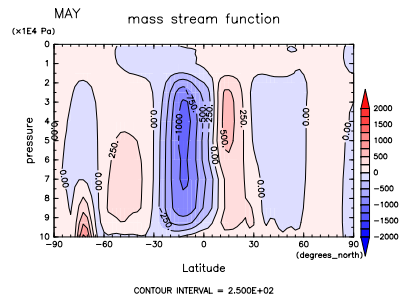
Figure 326: MSF at May by NCEP
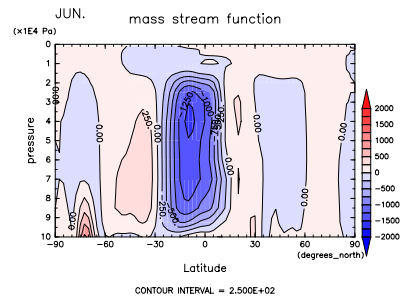
Figure 329: MSF at Jun. by NCEP
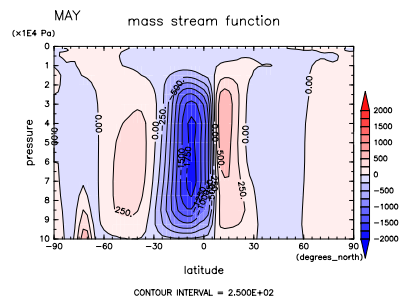
Figure 327: MSF at May by ECMWF
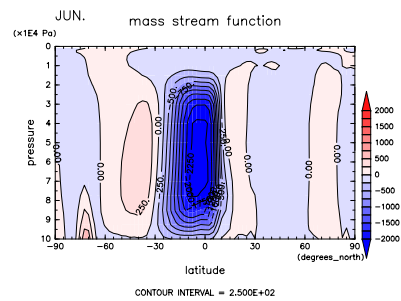
Figure 330: MSF at Jun. by ECMWF
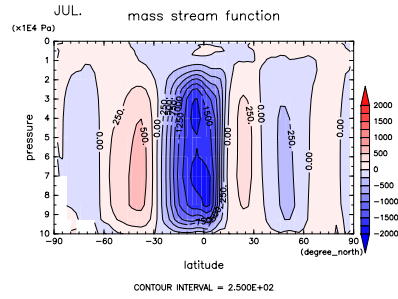
Figure 331: MSF at Jul. by dcpam   Figure 334: MSF at Aug. by dcpam
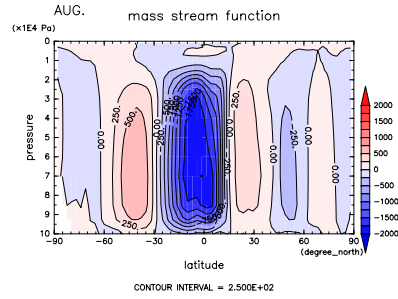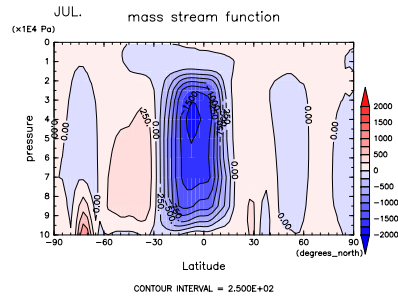
Figure 332: MSF at Jul. by NCEP   Figure 335: MSF at Aug. by NCEP
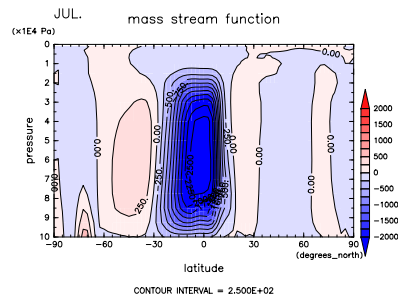
Figure 333: MSF at Jul. by ECMWF   Figure 336: MSF at Aug. by ECMWF
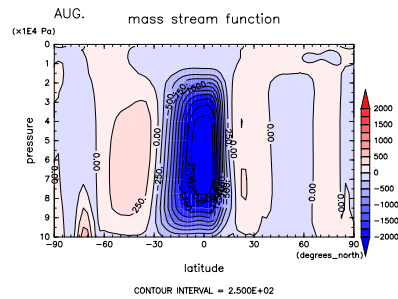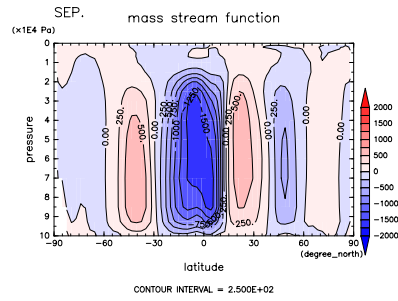
Figure 337: MSF at Sep. by dcpam
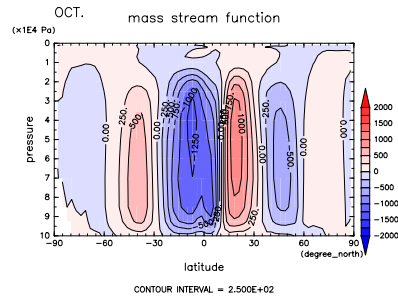
Figure 340: MSF at Oct. by dcpam

Figure 338: MSF at Sep. by NCEP

Figure 341: MSF at Oct. by NCEP
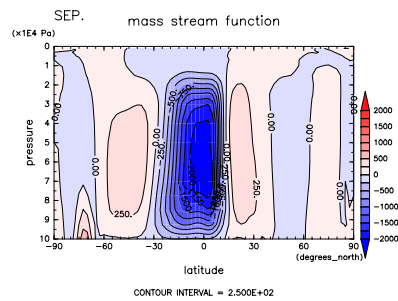
Figure 339: MSF at Sep. by ECMWF

Figure 342: MSF at Oct. by ECMWF

Figure 343: MSF at Nov. by dcpam
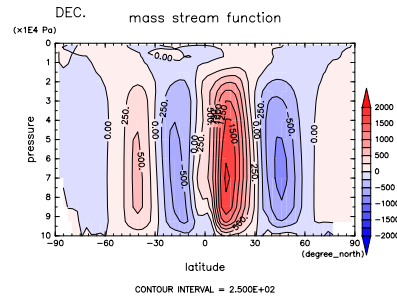
Figure 346: MSF at Dec. by dcpam

Figure 344: MSF at Nov. by NCEP

Figure 347: MSF at Dec. by NCEP
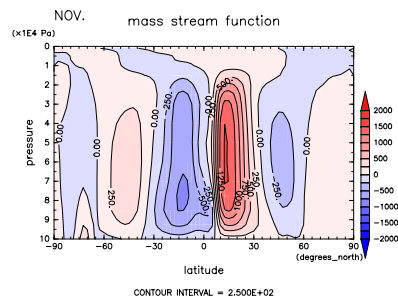
Figure 345: MSF at Nov. by ECMWF
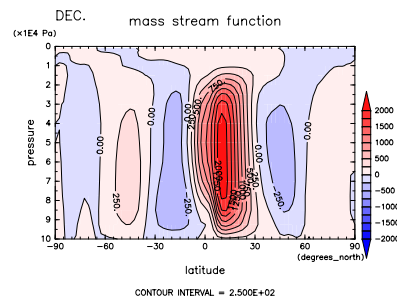
Figure 348: MSF at Dec. by ECMWF
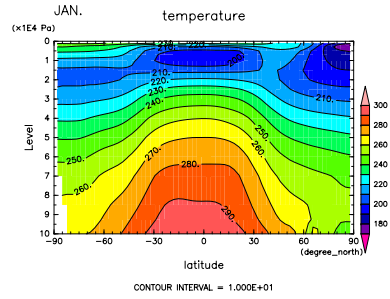
Figure 349: T at Jan. by dcpam
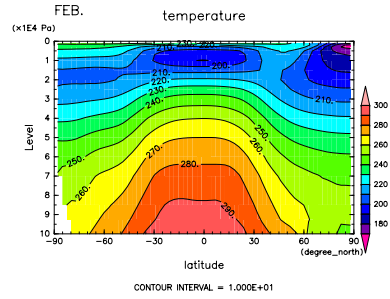
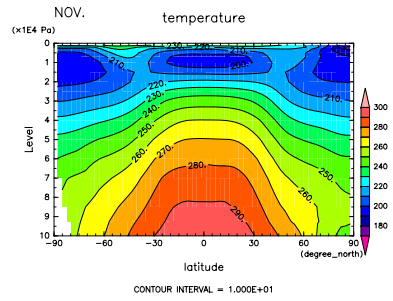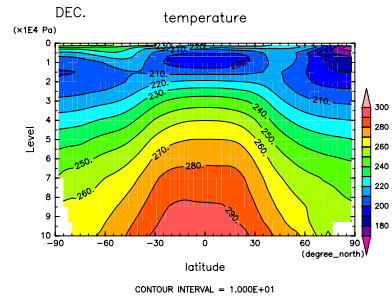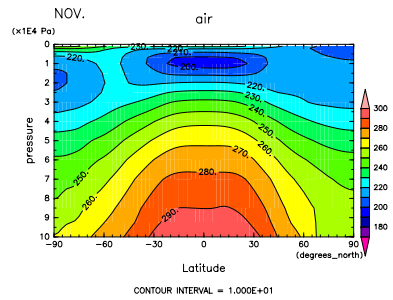Figure 352: T at Feb. by dcpam
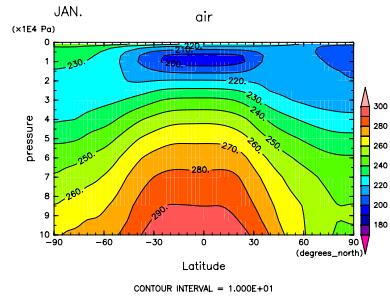
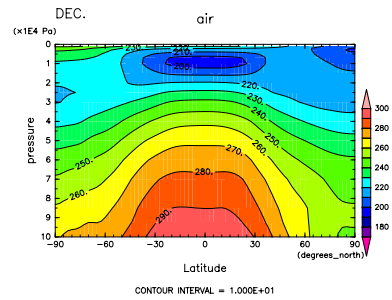Figure 350: T at Jan. by NCEP

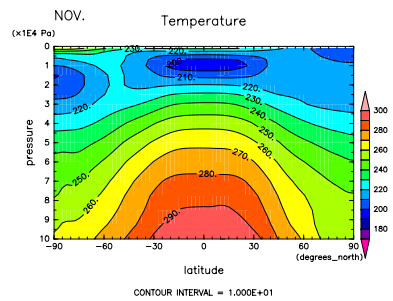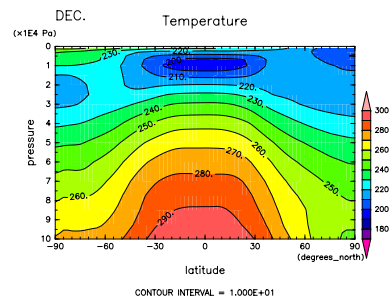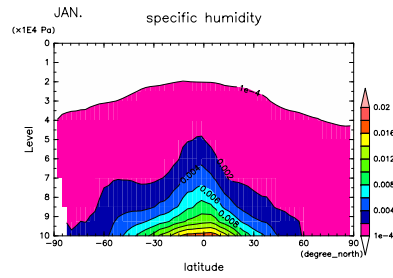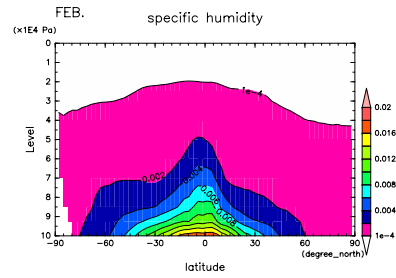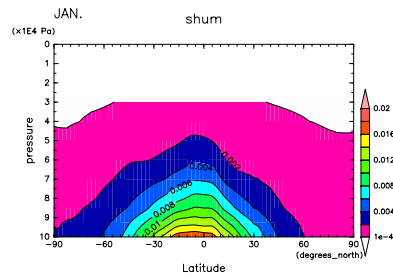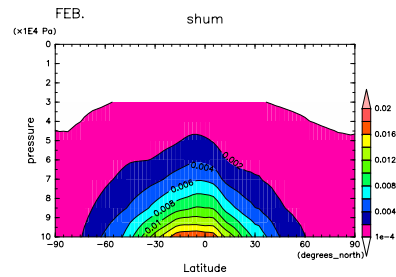Figure 353: T at Feb. by NCEP
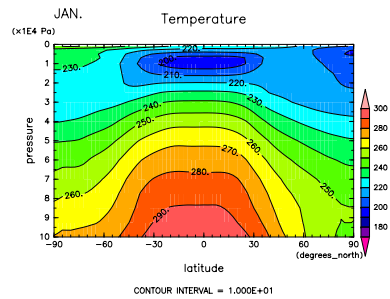
Figure 351: T at Jan. by ECMWF
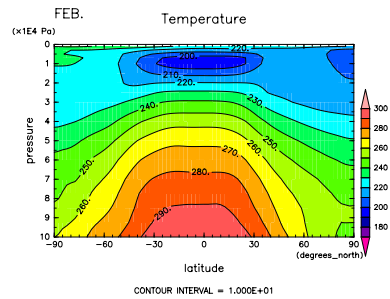
Figure 354: T at Feb. by ECMWF

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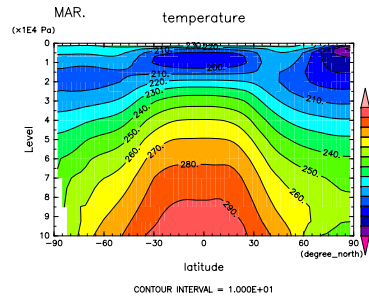
Figure 355: T at Mar. by dcpam
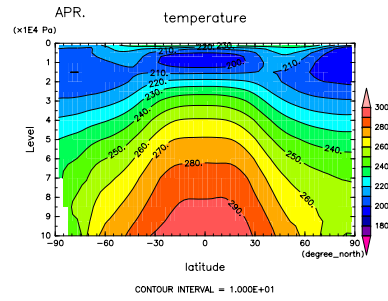
Figure 358: T at Apr. by dcpam
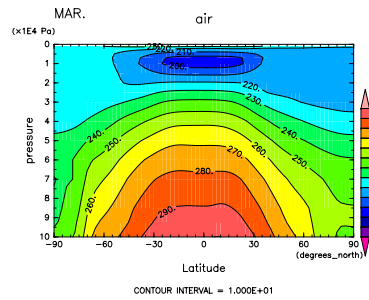
Figure 356: T at Mar. by NCEP
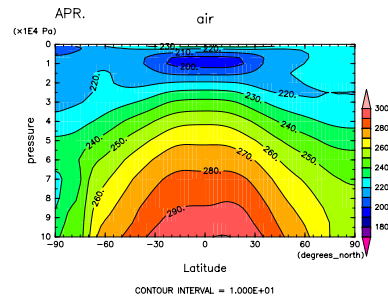
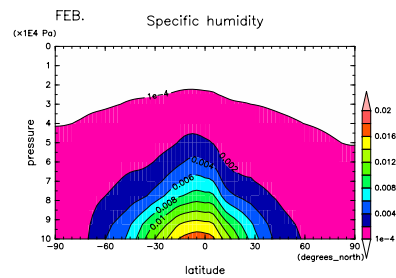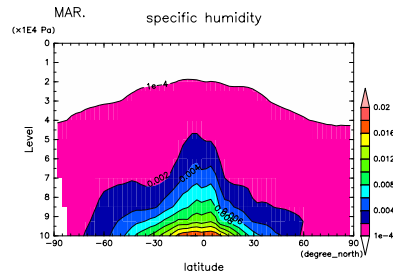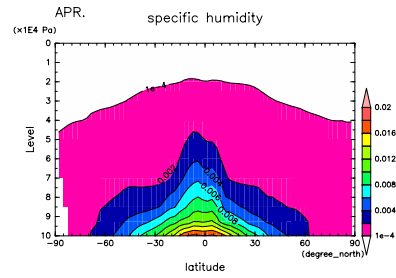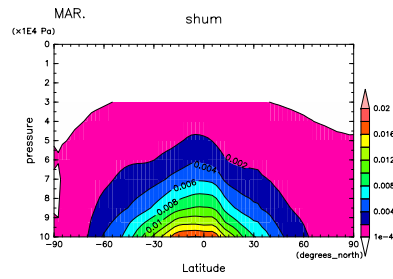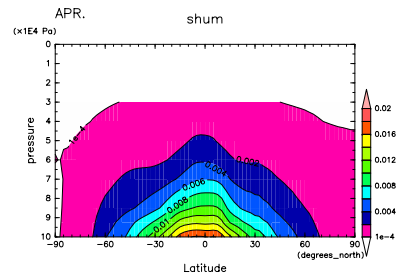Figure 359: T at Apr. by NCEP
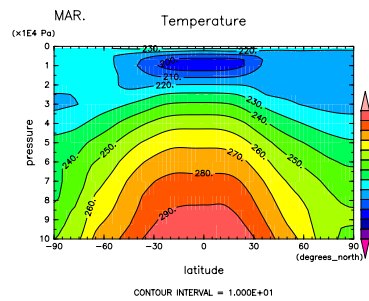
Figure 357: T at Mar. by ECMWF
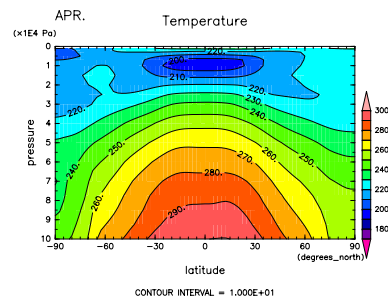
Figure 360: T at Apr. by ECMWF

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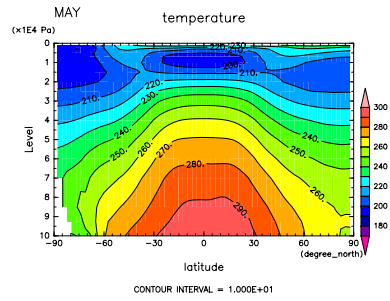
Figure 361: T at May by dcpam
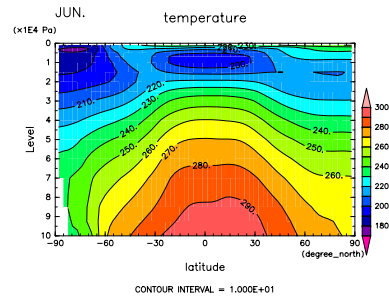
Figure 364: T at Jun. by dcpam
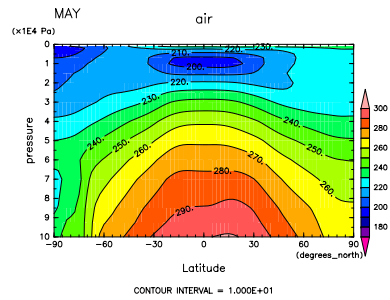
Figure 362: T at May by NCEP
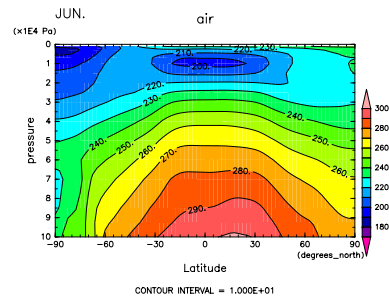
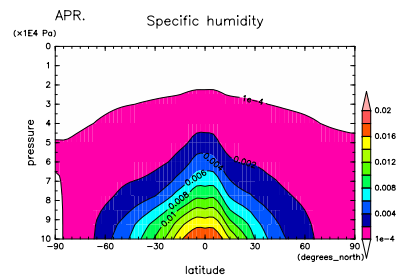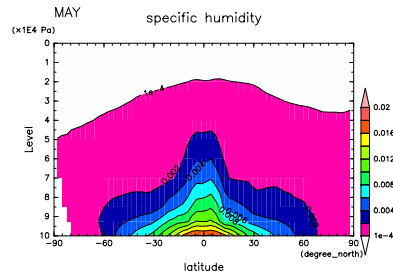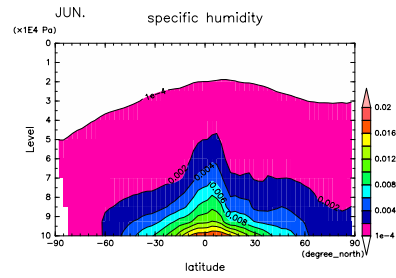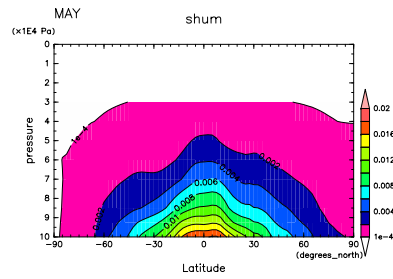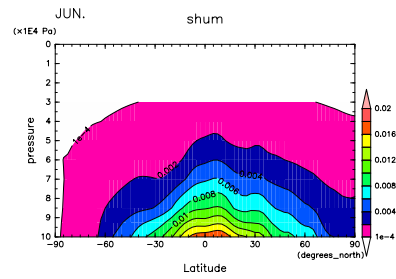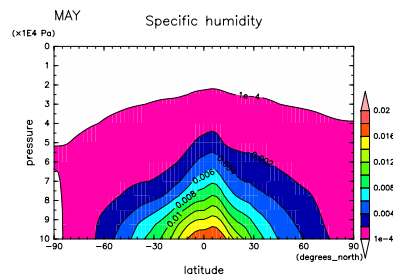
Figure 365: T at Jun. by NCEP
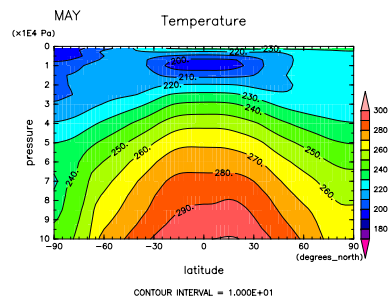
Figure 363: T at May by ECMWF
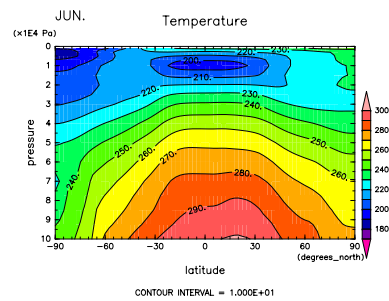
Figure 366: T at Jun. by ECMWF
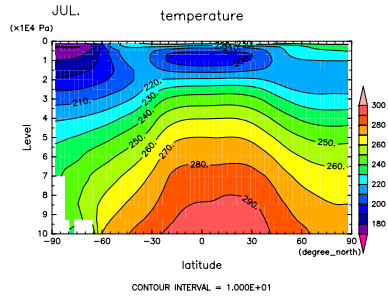
Figure 367: T at Jul. by dcpam
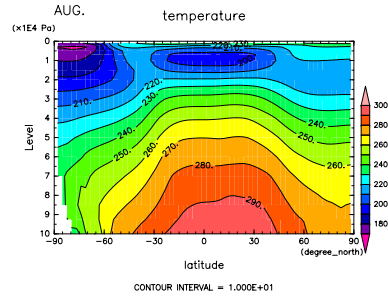
Figure 370: T at Aug. by dcpam
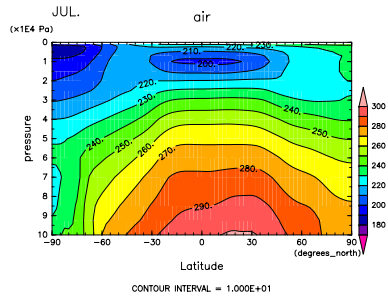
Figure 368: T at Jul. by NCEP
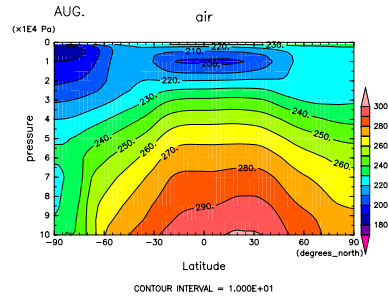
Figure 371: T at Aug. by NCEP
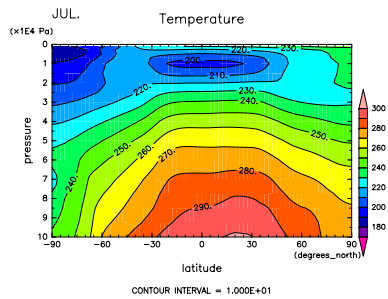
Figure 369: T at Jul. by ECMWF
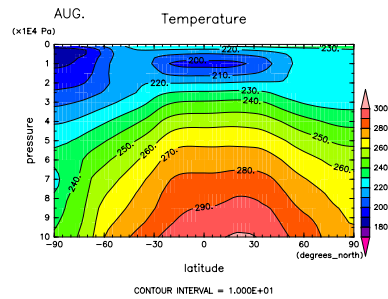
Figure 372: T at Aug. by ECMWF
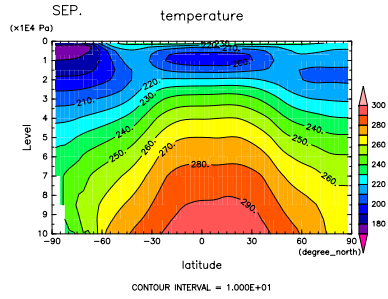
Figure 373: T at Sep. by dcpam
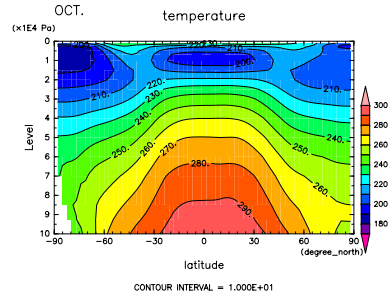
Figure 376: T at Oct. by dcpam
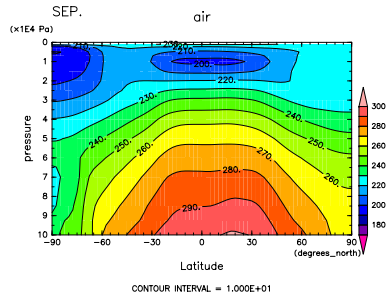
Figure 374: T at Sep. by NCEP
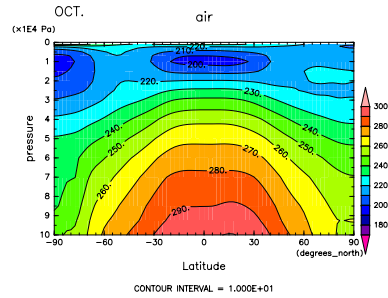
Figure 377: T at Oct. by NCEP
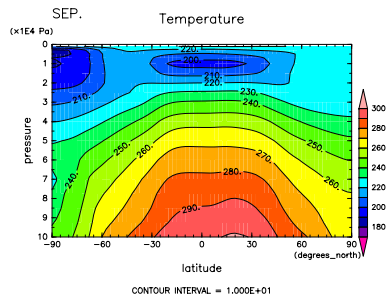
Figure 375: T at Sep. by ECMWF
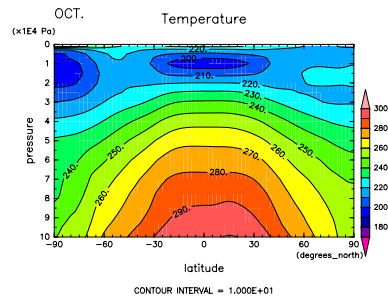
Figure 378: T at Oct. by ECMWF

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Figure 379: T at Nov. by dcpam

Figure 382: T at Dec. by dcpam

Figure 380: T at Nov. by NCEP

Figure 383: T at Dec. by NCEP

Figure 381: T at Nov. by ECMWF

Figure 384: T at Dec. by ECMWF

Figure 385: q at Jan. by dcpam

Figure 388: q at Feb. by dcpam

Figure 386: q at Jan. by NCEP

Figure 389: q at Feb. by NCEP
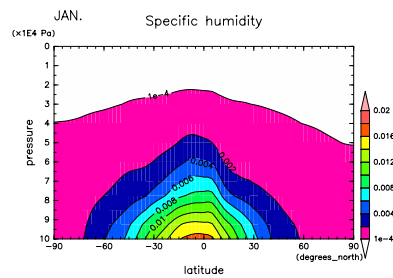
Figure 387: q at Jan. by ECMWF

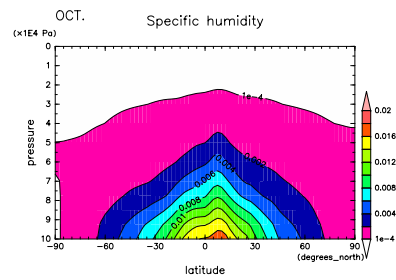Figure 390: q at Feb. by ECMWF

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Figure 391: q at Mar. by dcpam

Figure 394: q at Apr. by dcpam

Figure 392: q at Mar. by NCEP

Figure 395: q at Apr. by NCEP
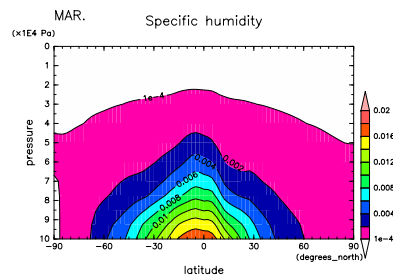
Figure 393: q at Mar. by ECMWF

Figure 396: q at Apr. by ECMWF

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Figure 397: q at May by dcpam

Figure 400: q at Jun. by dcpam

Figure 398: q at May by NCEP

Figure 401: q at Jun. by NCEP

Figure 399: q at May by ECMWF
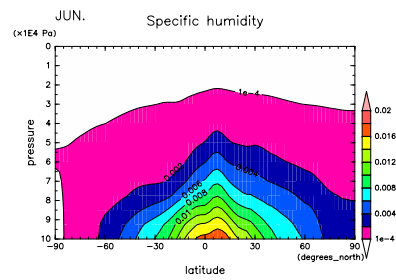
Figure 402: q at Jun. by ECMWF

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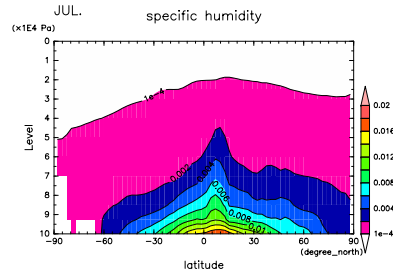
Figure 403: q at Jul. by dcpam
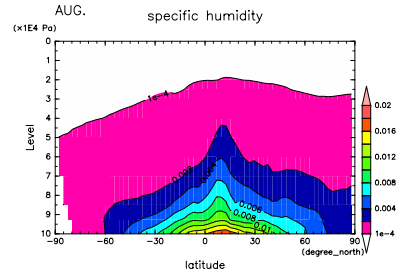
Figure 406: q at Aug. by dcpam
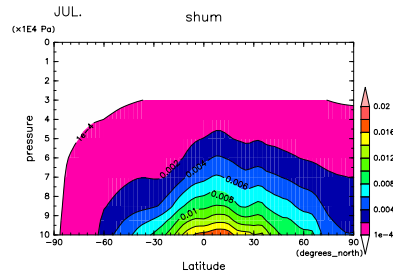
Figure 404: q at Jul. by NCEP
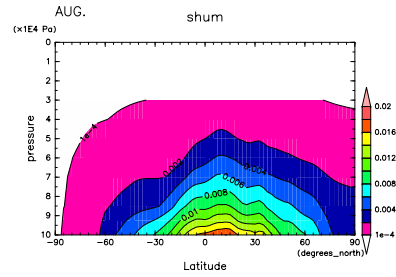
Figure 407: q at Aug. by NCEP
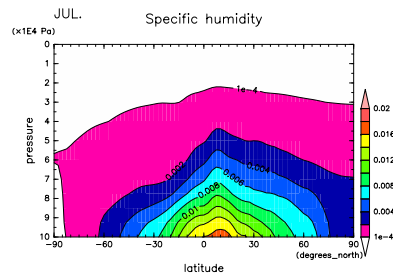
Figure 405: q at Jul. by ECMWF
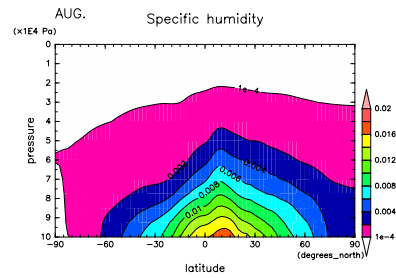
Figure 408: q at Aug. by ECMWF
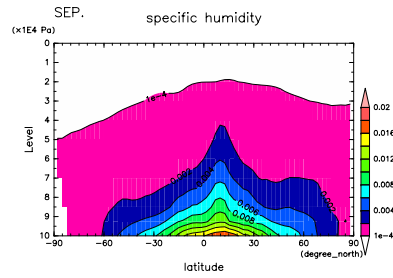
Figure 409: q at Sep. by dcpam
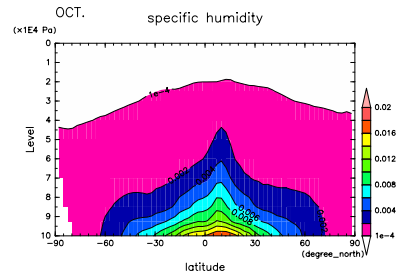
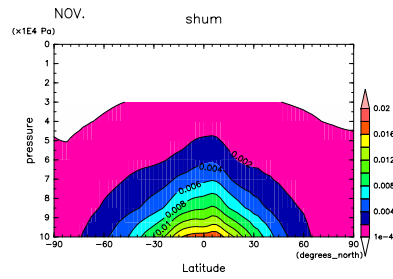Figure 412: q at Oct. by dcpam
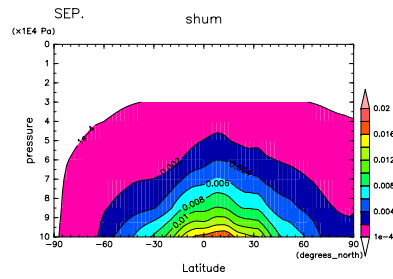
Figure 410: q at Sep. by NCEP
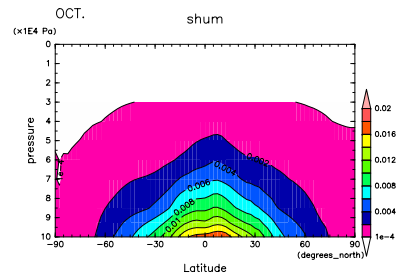
Figure 413: q at Oct. by NCEP
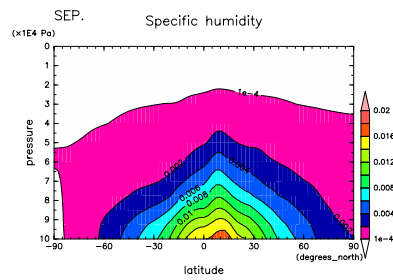
Figure 411: q at Sep. by ECMWF

Figure 414: q at Oct. by ECMWF

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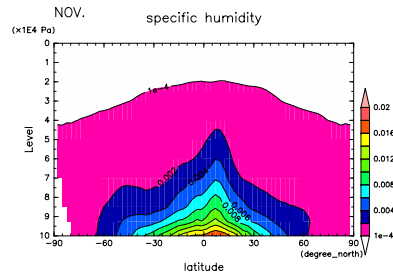
Figure 415: q at Nov. by dcpam
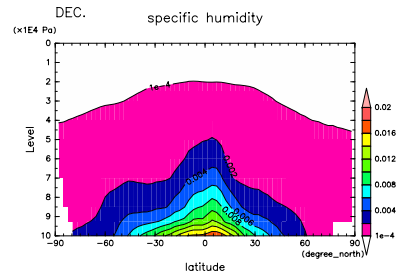
Figure 418: q at Dec. by dcpam

Figure 416: q at Nov. by NCEP
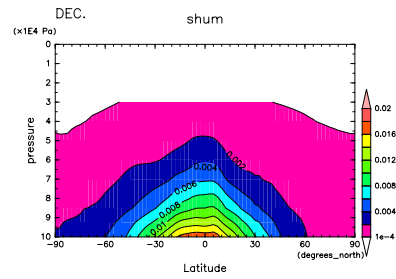
Figure 419: q at Dec. by NCEP
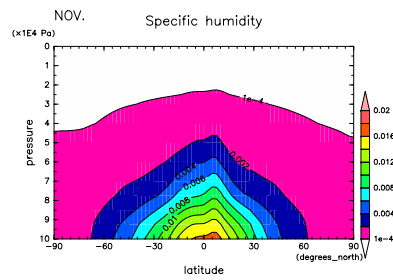
Figure 417: q at Nov. by ECMWF
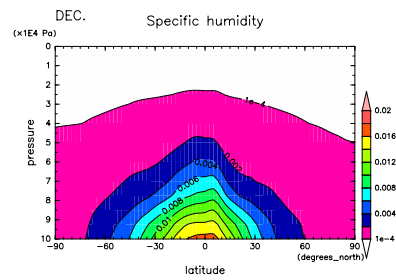
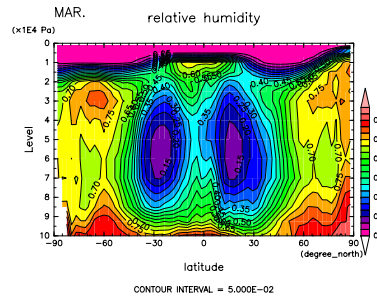Figure 420: q at Dec. by ECMWF

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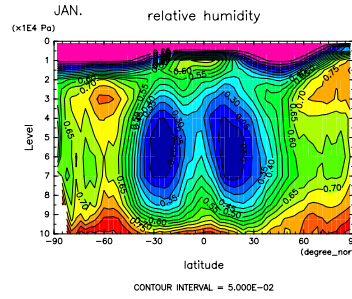
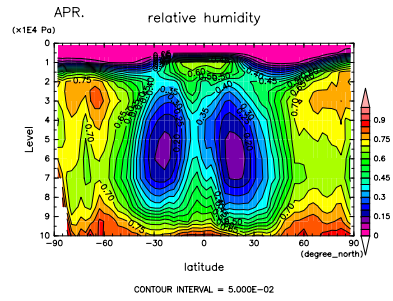Figure 421: RH at Jan. by dcpam
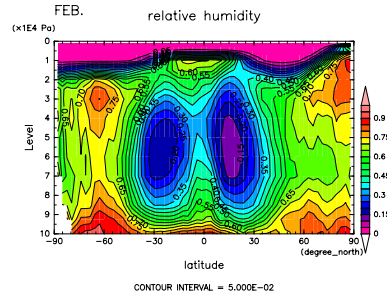
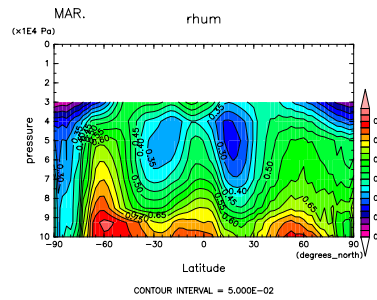

Figure 424: RH at Feb. by dcpam
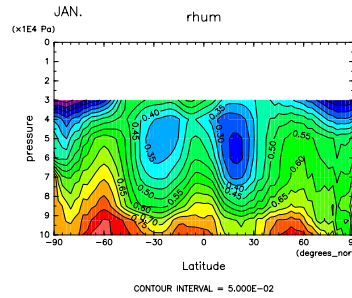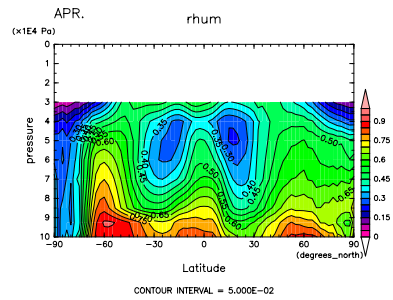

Figure 422: RH at Jan. by NCEP
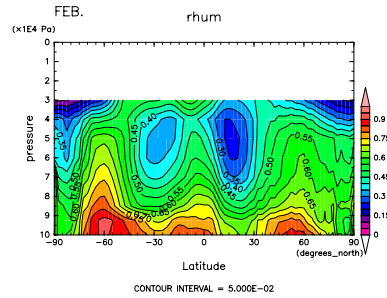
Figure 425: RH at Feb. by NCEP
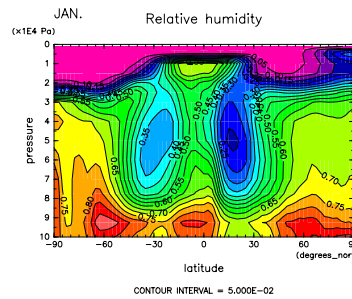
Figure 423: RH at Jan. by ECMWF
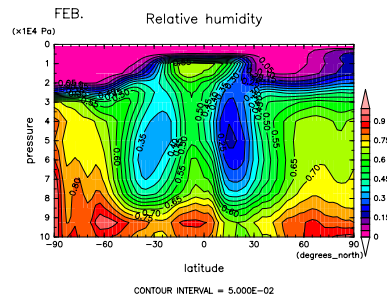
Figure 426: RH at Feb. by ECMWF

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Figure 427: RH at Mar. by dcpam

Figure 430: RH at Apr. by dcpam

Figure 428: RH at Mar. by NCEP
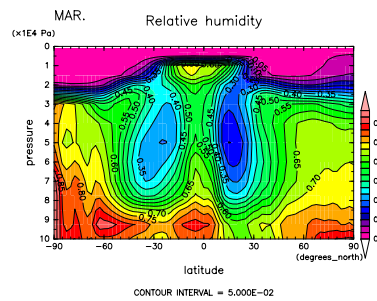

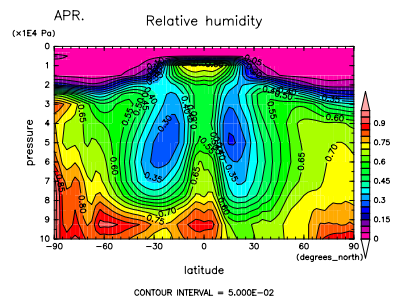Figure 431: RH at Apr. by NCEP

Figure 429: RH at Mar. by ECMWF

Figure 432: RH at Apr. by ECMWF
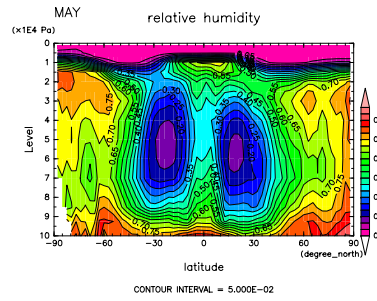
Figure 433: RH at May by dcpam
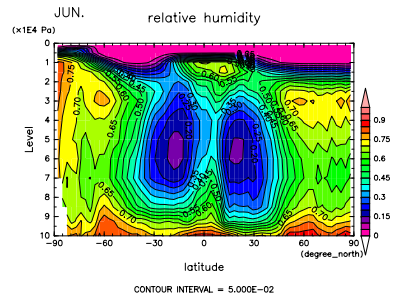
Figure 436: RH at Jun. by dcpam
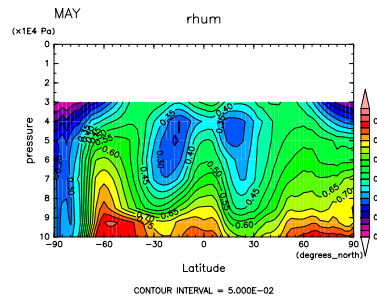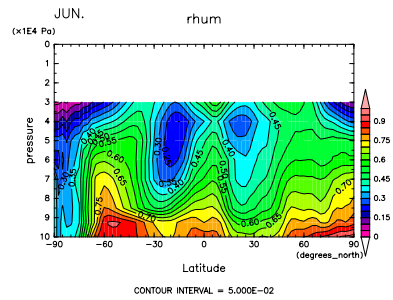

Figure 434: RH at May by NCEP
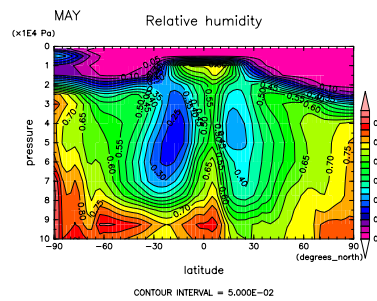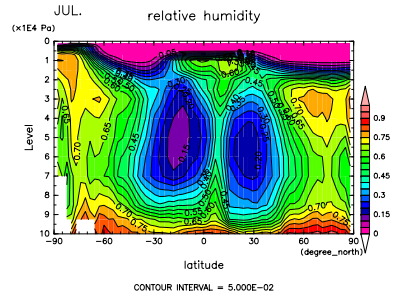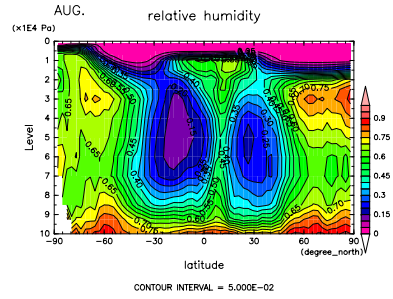

Figure 437: RH at Jun. by NCEP

Figure 435: RH at May by ECMWF
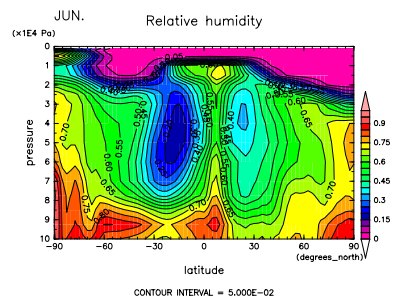
Figure 438: RH at Jun. by ECMWF

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Figure 439: RH at Jul. by dcpam
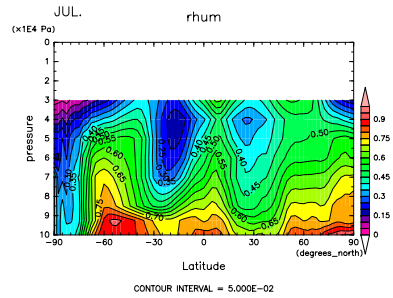

Figure 442: RH at Aug. by dcpam
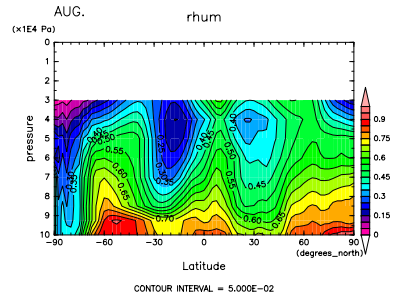

Figure 440: RH at Jul. by NCEP
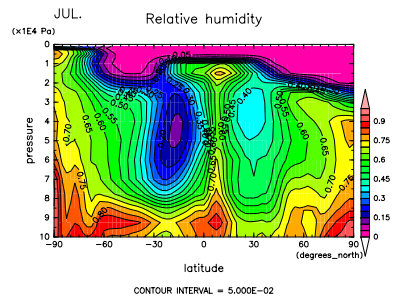

Figure 443: RH at Aug. by NCEP

Figure 441: RH at Jul. by ECMWF
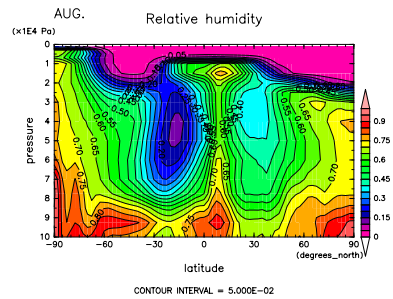
Figure 444: RH at Aug. by ECMWF
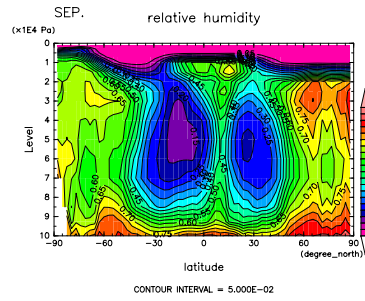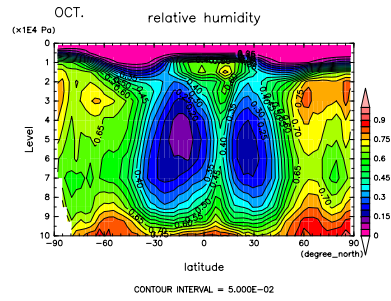
Figure 445: RH at Sep. by dcpam
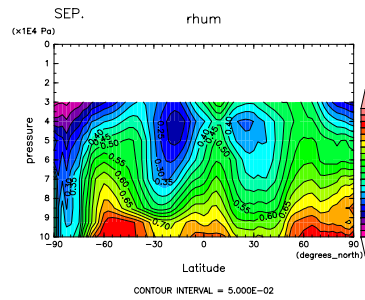

Figure 448: RH at Oct. by dcpam
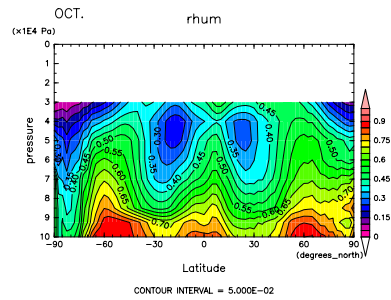

Figure 446: RH at Sep. by NCEP
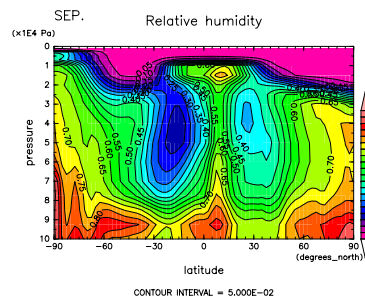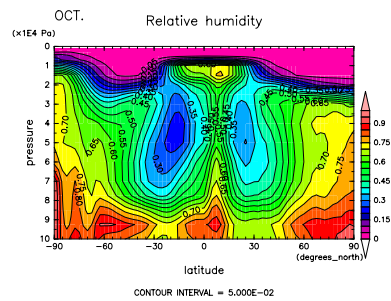

Figure 449: RH at Oct. by NCEP

Figure 447: RH at Sep. by ECMWF

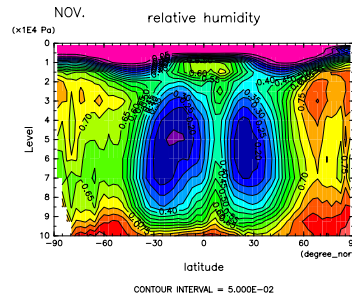Figure 450: RH at Oct. by ECMWF
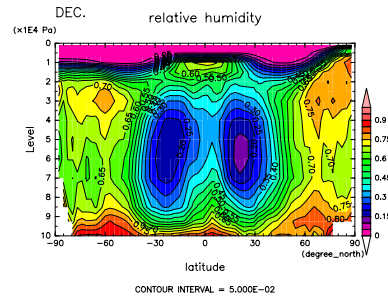
Figure 451: RH at Nov. by dcpam
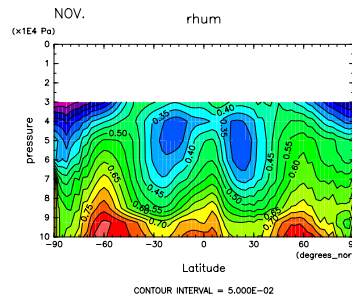

Figure 454: RH at Dec. by dcpam
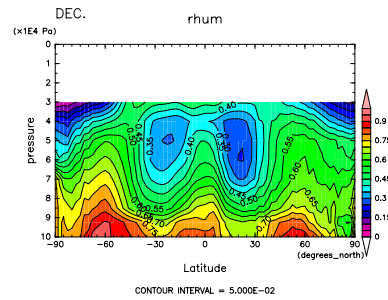

Figure 452: RH at Nov. by NCEP
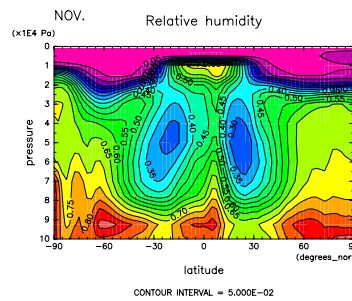

Figure 455: RH at Dec. by NCEP

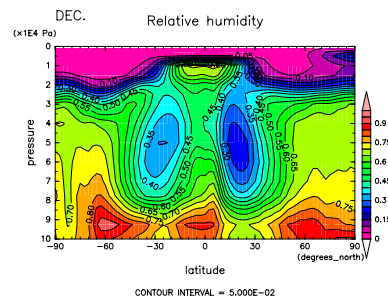Figure 453: RH at Nov. by ECMWF

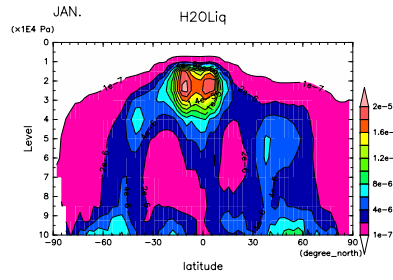Figure 456: RH at Dec. by ECMWF
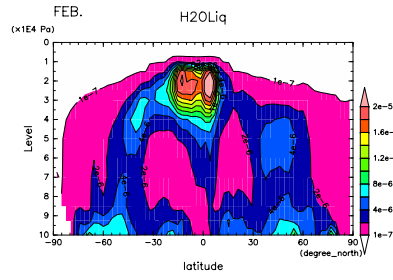
Figure 457: q_l at Jan. by dcpam
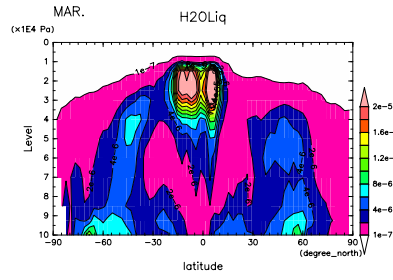

Figure 458: q_l at Feb. by dcpam
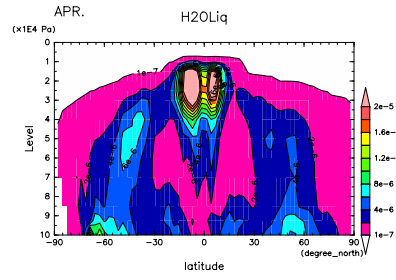
Figure 459: q_l at Mar. by dcpam

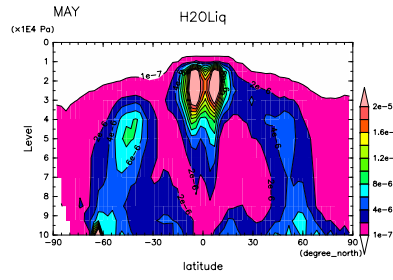Figure 460: q_l at Apr. by dcpam
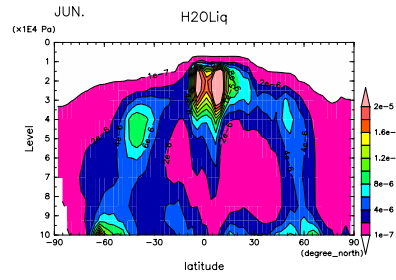
Figure 461: q_l at May by dcpam
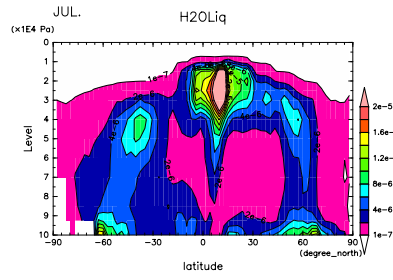

Figure 462: q_l at Jun. by dcpam

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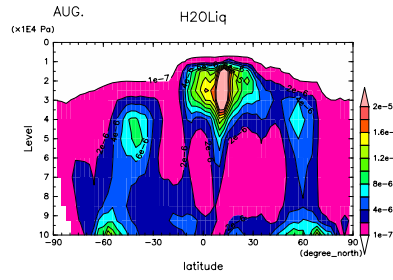Figure 463: q_l at Jul. by dcpam

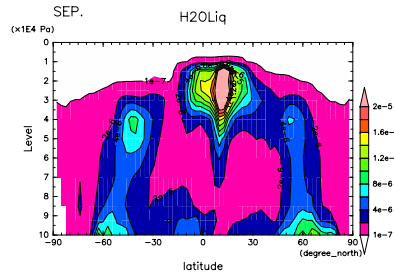Figure 464: q_l at Aug. by dcpam
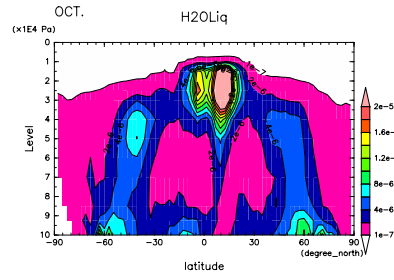
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Figure 465: q_l at Sep. by dcpam

Figure 466: q_l at Oct. by dcpam

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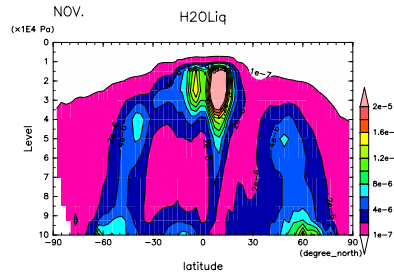
Figure 467: q_l at Nov. by dcpam
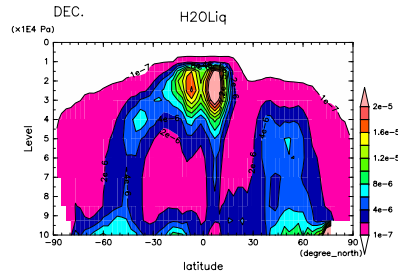
Figure 468: q_l at Dec. by dcpam

JAN.   H2OSol

(×1E4 Pa)

Level

latitude

(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7
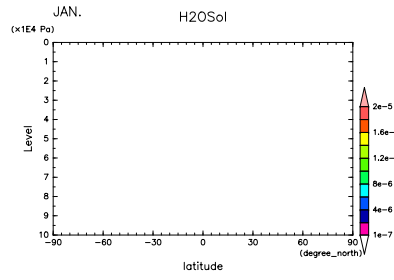
Figure 469: q_i at Jan. by dcpam

FEB.   H2OSol

(×1E4 Pa)

Level

latitude

(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7
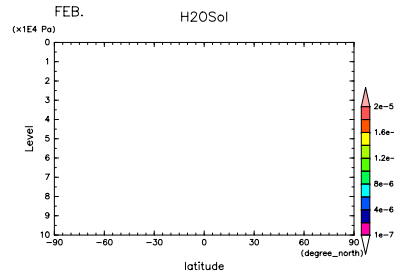
Figure 470: q_i at Feb. by dcpam
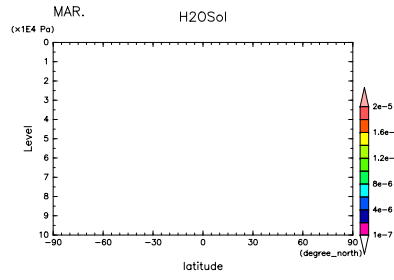
Figure 471: q_i at Mar. by dcpam
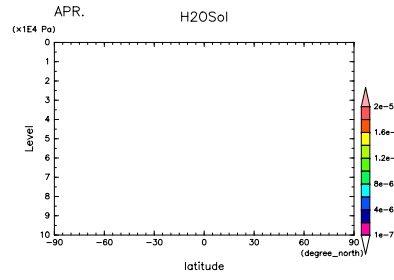
Figure 472: q_i at Apr. by dcpam

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MAY
(×1E4 Pa)
H2OSol

Level

latitude
(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7

JUN.
(×1E4 Pa)
H2OSol

Level

latitude
(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7
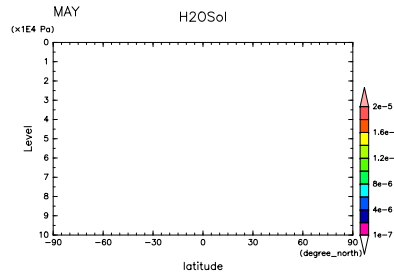
Figure 473: q_i at May by dcpam
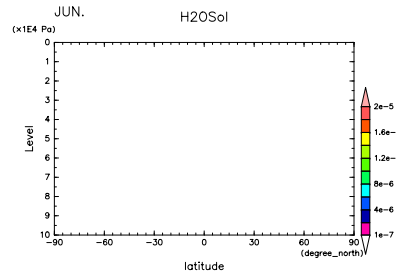
Figure 474: q_i at Jun. by dcpam
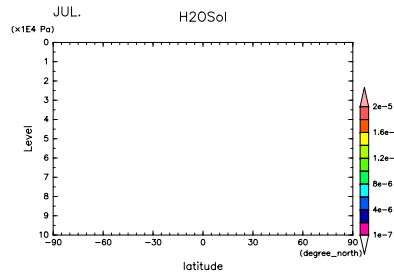
Figure 475: q_i at Jul. by dcpam
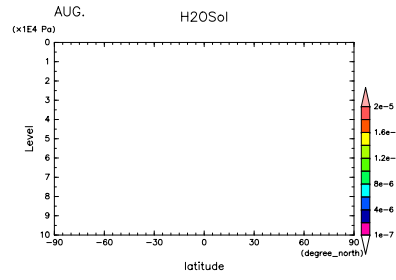
Figure 476: q_i at Aug. by dcpam

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SEP. H2OSol

(×1E4 Pa)

Level

latitude

(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7

OCT. H2OSol

(×1E4 Pa)

Level

latitude

(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7
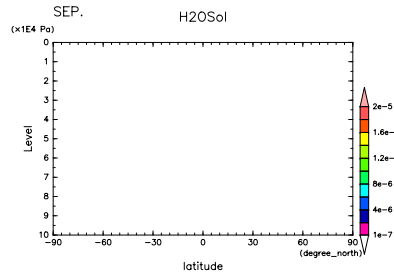
Figure 477: q_i at Sep. by dcpam   Figure 478: q_i at Oct. by dcpam
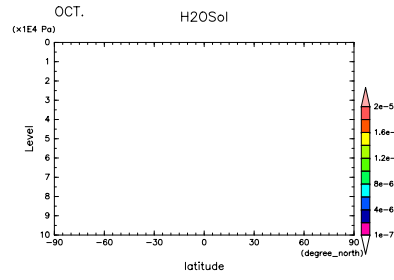
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NOV.　　　　　H2OSol

(×1E4 Pa)

Level

latitude　(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7

DEC.　　　　　H2OSol

(×1E4 Pa)

Level

latitude　(degree_north)

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7
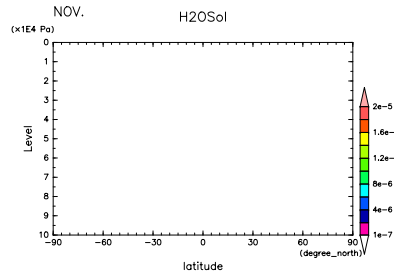
Figure 479: q_i at Nov. by dcpam　　　Figure 480: q_i at Dec. by dcpam
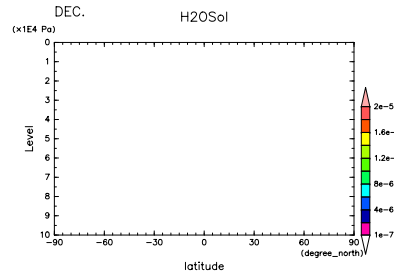
112
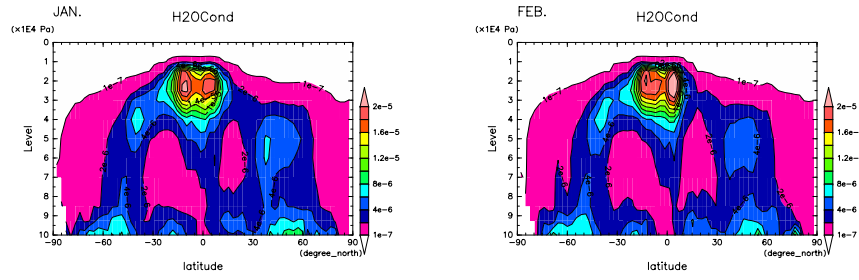
Figure 481: $q_l + q_i$ at Jan. by dcpam   Figure 482: $q_l + q_i$ at Feb. by dcpam
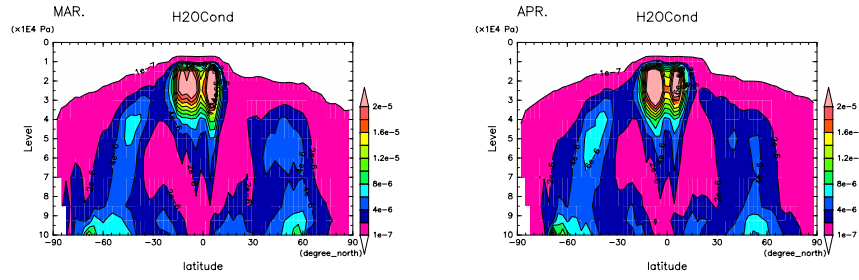
Figure 483: $q_l + q_i$ at Mar. by dcpam   Figure 484: $q_l + q_i$ at Apr. by dcpam

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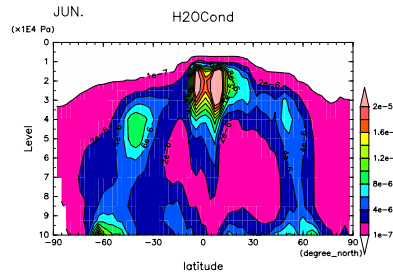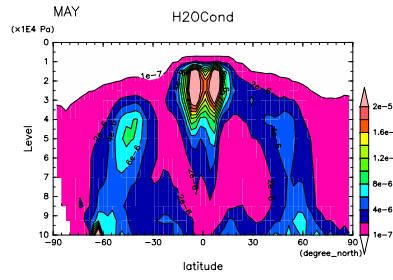
Figure 485: $q_l + q_i$ at May by dcpam   Figure 486: $q_l + q_i$ at Jun. by dcpam
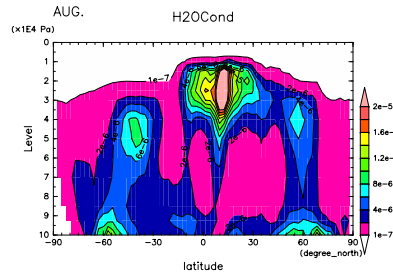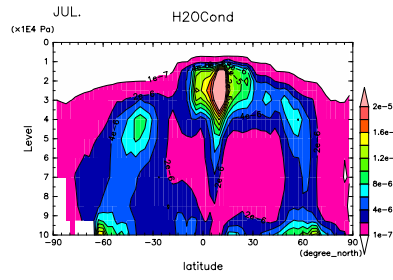
Figure 487: $q_l + q_i$ at Jul. by dcpam   Figure 488: $q_l + q_i$ at Aug. by dcpam
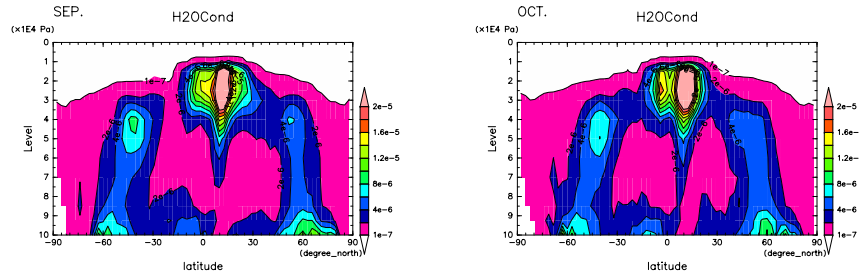
Figure 489: $q_l + q_i$ at Sep. by dcpam

Figure 490: $q_l + q_i$ at Oct. by dcpam

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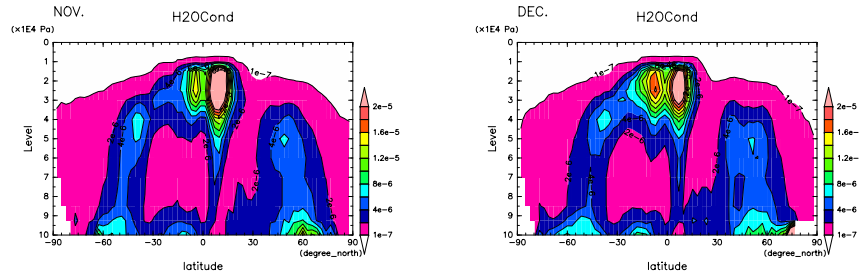
Figure 491: $q_l + q_i$ at Nov. by dcpam   Figure 492: $q_l + q_i$ at Dec. by dcpam

0.2.8 Monthly mean latitude-pressure (logarithmic) distribution
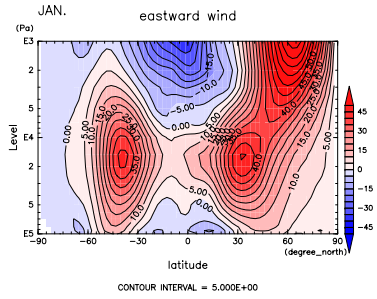
Figure 493: U at Jan. by dcpam
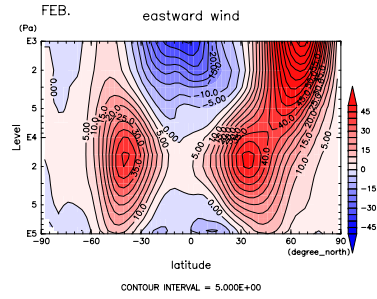
Figure 496: U at Feb. by dcpam
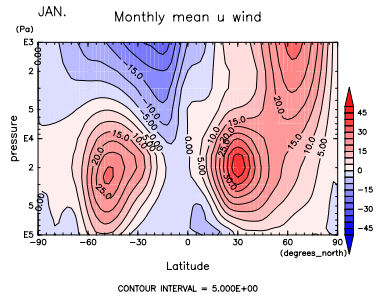
Figure 494: U at Jan. by NCEP
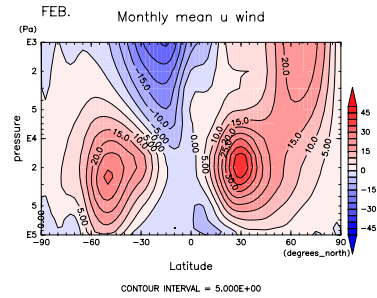
Figure 497: U at Feb. by NCEP
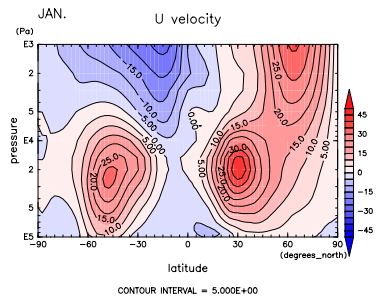
Figure 495: U at Jan. by ECMWF
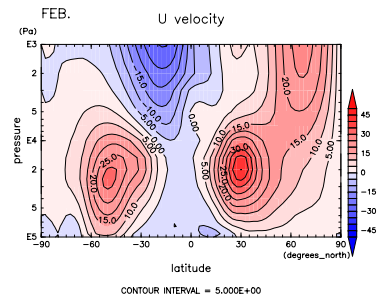
Figure 498: U at Feb. by ECMWF

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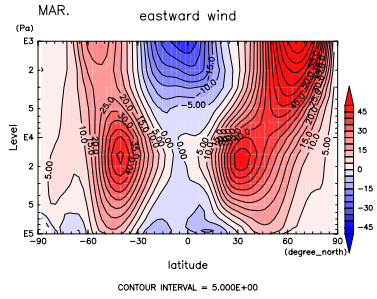
Figure 499: U at Mar. by dcpam
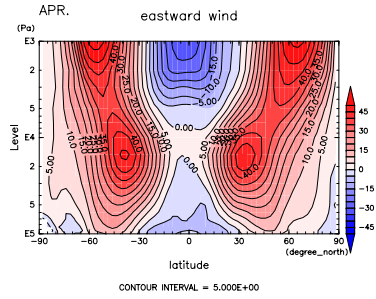
Figure 502: U at Apr. by dcpam
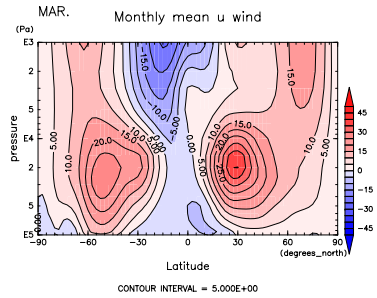
Figure 500: U at Mar. by NCEP
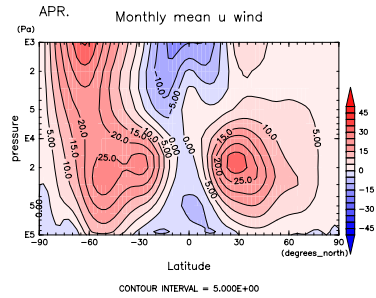
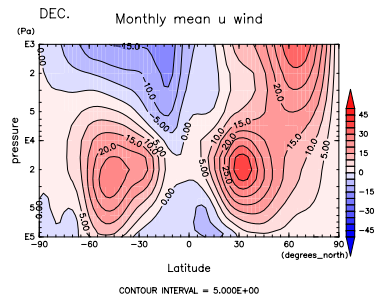Figure 503: U at Apr. by NCEP
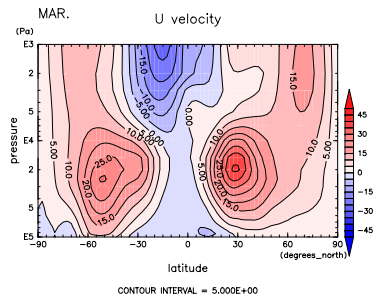
Figure 501: U at Mar. by ECMWF
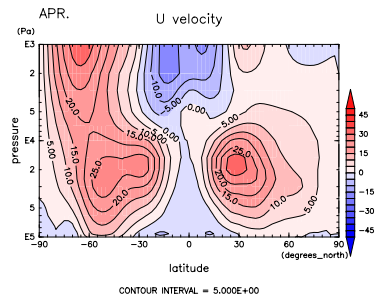
Figure 504: U at Apr. by ECMWF
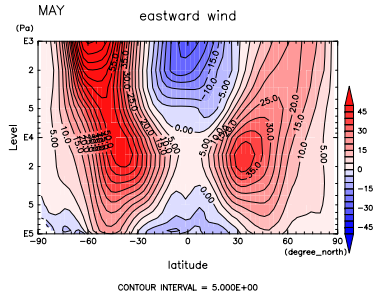
Figure 505: U at May by dcpam
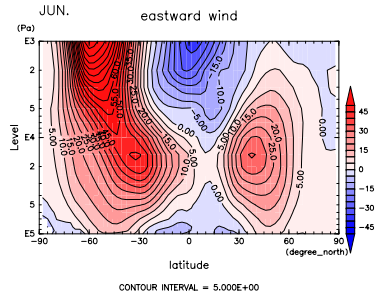
Figure 508: U at Jun. by dcpam
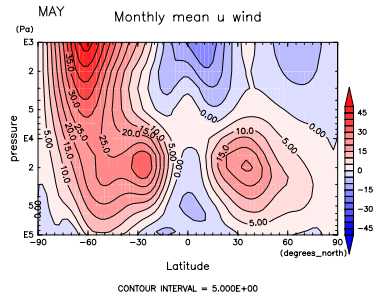
Figure 506: U at May by NCEP
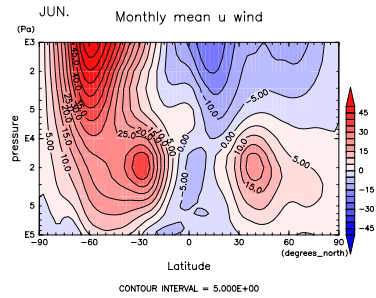
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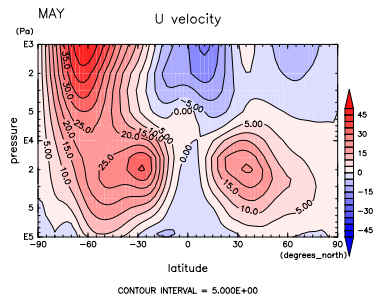
Figure 507: U at May by ECMWF
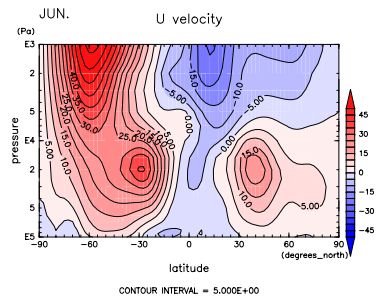
Figure 510: U at Jun. by ECMWF

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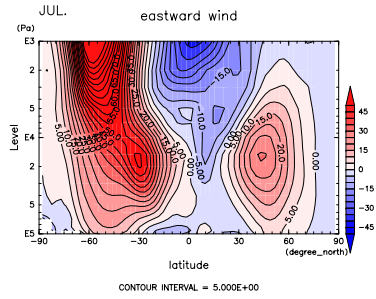
Figure 511: U at Jul. by dcpam
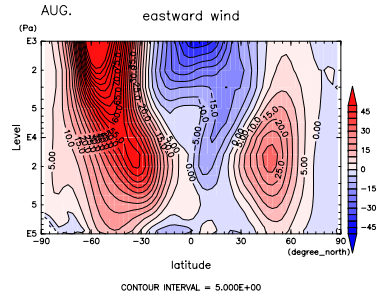
Figure 514: U at Aug. by dcpam
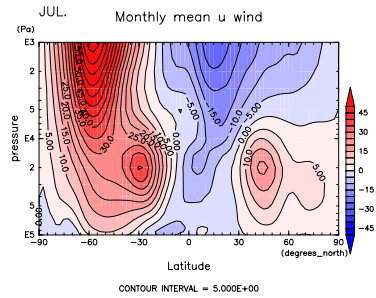
Figure 512: U at Jul. by NCEP
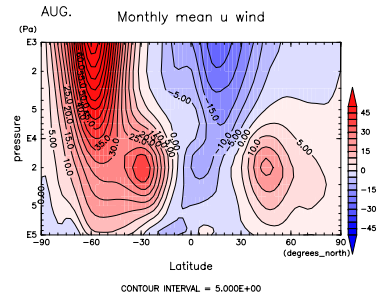
Figure 515: U at Aug. by NCEP
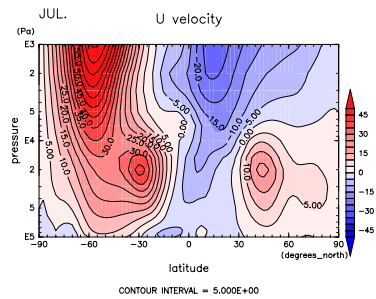
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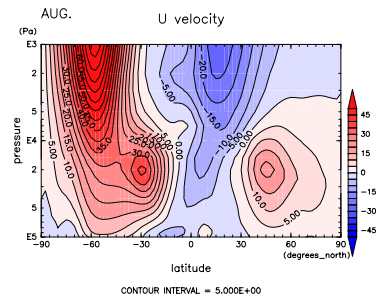
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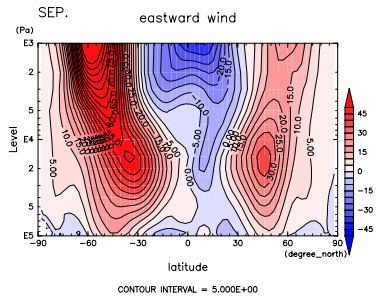
Figure 517: U at Sep. by dcpam
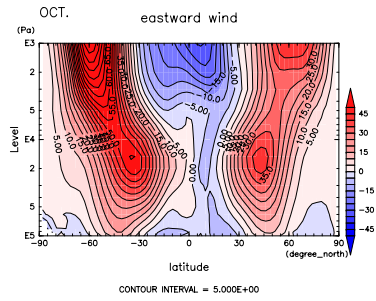
Figure 520: U at Oct. by dcpam
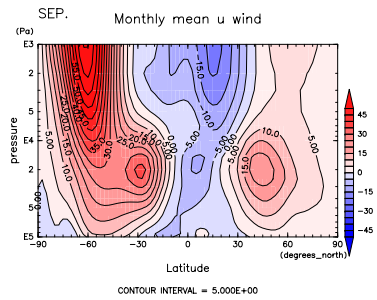
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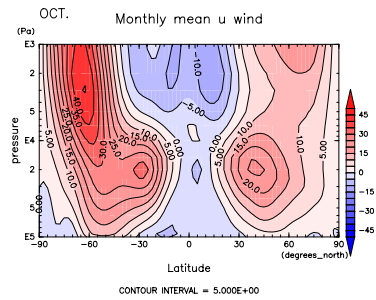
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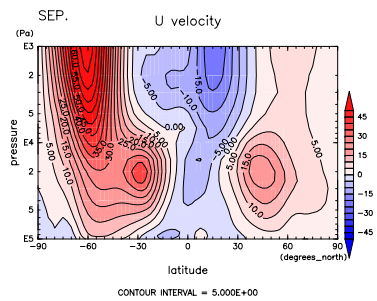
Figure 519: U at Sep. by ECMWF
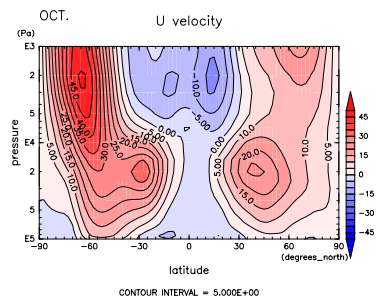
Figure 522: U at Oct. by ECMWF
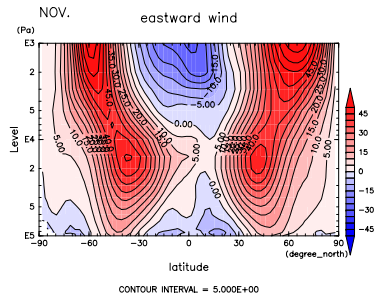
Figure 523: U at Nov. by dcpam
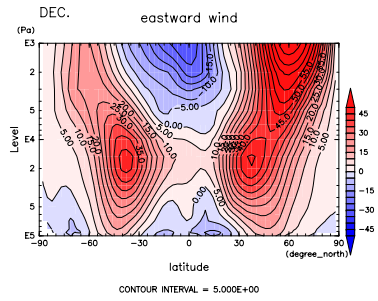
Figure 526: U at Dec. by dcpam
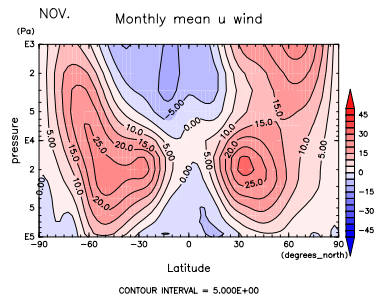
Figure 524: U at Nov. by NCEP

Figure 527: U at Dec. by NCEP
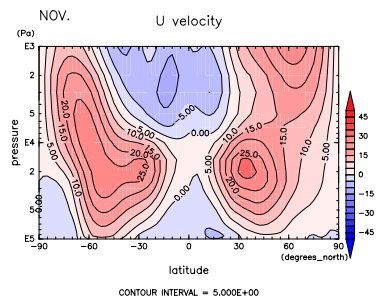
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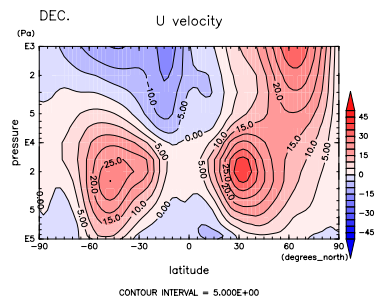

Figure 528: U at Dec. by ECMWF
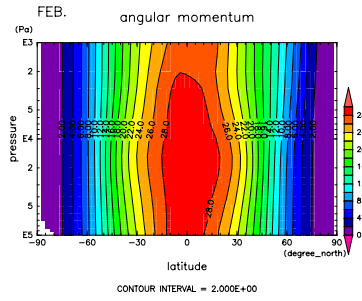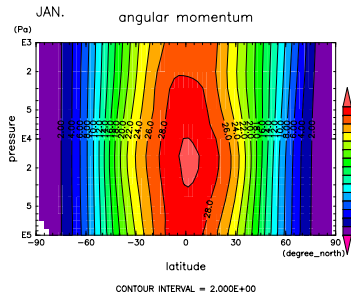
Figure 529: ANGMOM at Jan. by dcpam

Figure 532: ANGMOM at Feb. by dcpam
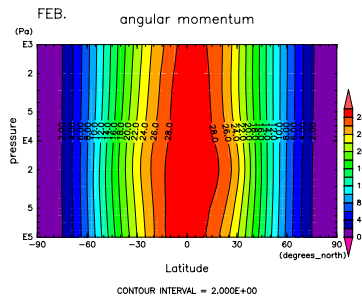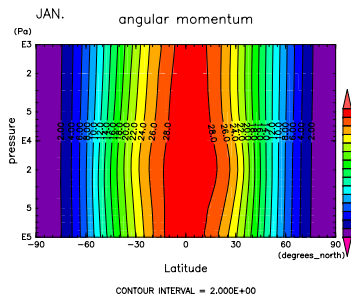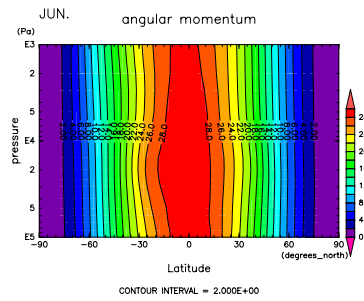

Figure 530: ANGMOM at Jan. by NCEP


Figure 533: ANGMOM at Feb. by NCEP
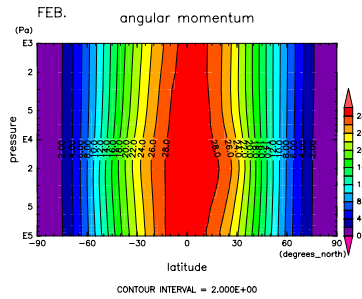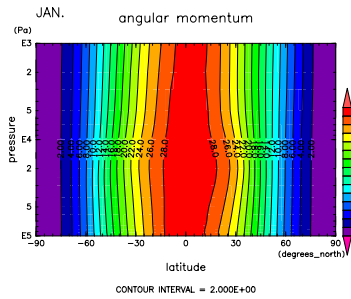
Figure 531: ANGMOM at Jan. by ECMWF

Figure 534: ANGMOM at Feb. by ECMWF

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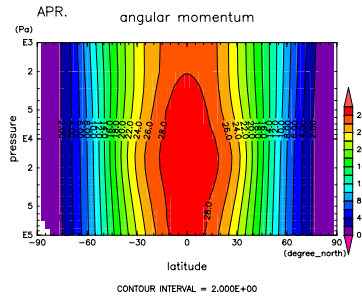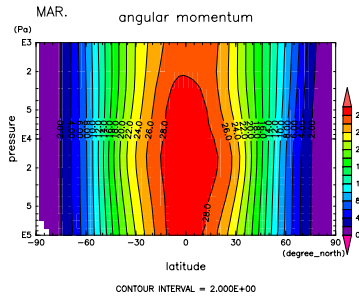
Figure 535: ANGMOM at Mar. by dcpam
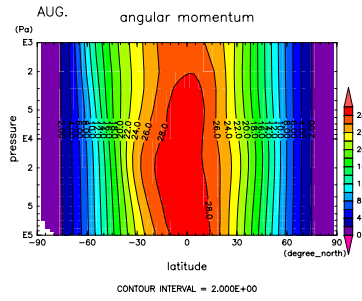

Figure 538: ANGMOM at Apr. by dcpam
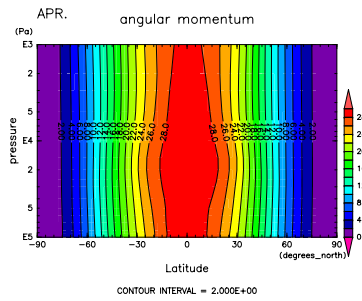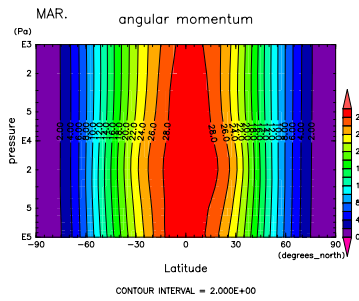
Figure 536: ANGMOM at Mar. by NCEP

Figure 539: ANGMOM at Apr. by NCEP
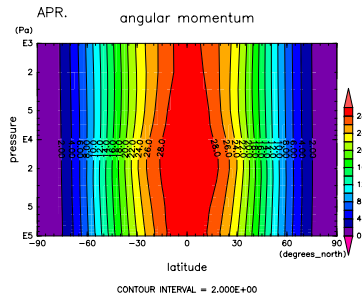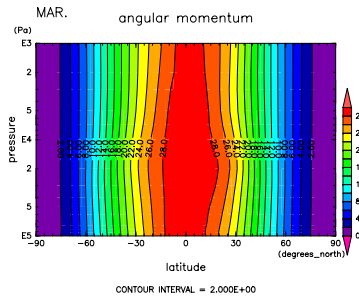
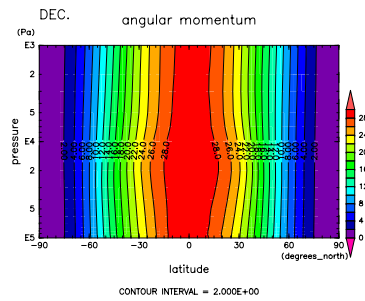Figure 537: ANGMOM at Mar. by ECMWF

Figure 540: ANGMOM at Apr. by ECMWF

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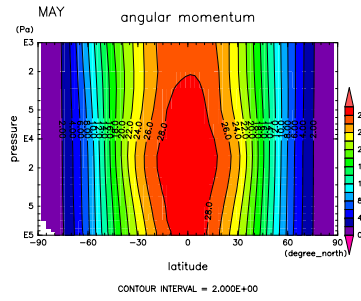
Figure 541: ANGMOM at May by dc-pam
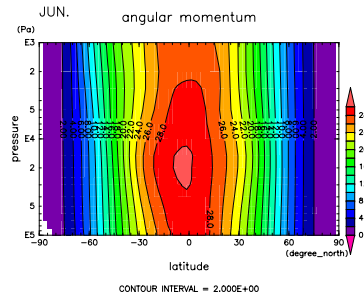
Figure 544: ANGMOM at Jun. by dcpam
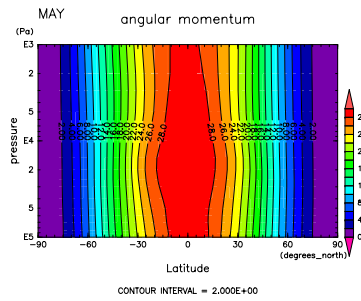
Figure 542: ANGMOM at May by NCEP

Figure 545: ANGMOM at Jun. by NCEP
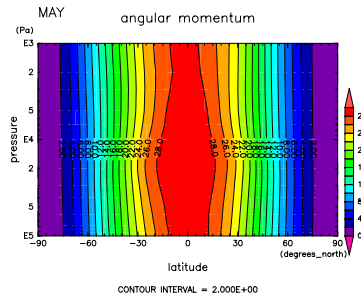
Figure 543: ANGMOM at May by ECMWF
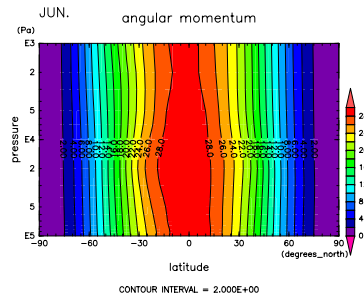
Figure 546: ANGMOM at Jun. by ECMWF

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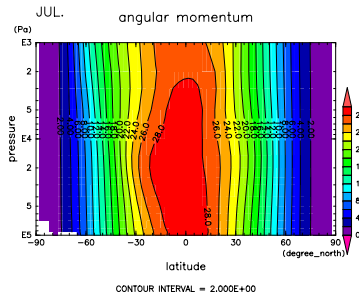
Figure 547: ANGMOM at Jul. by dc-
pam

Figure 550: ANGMOM at Aug. by
dcpam
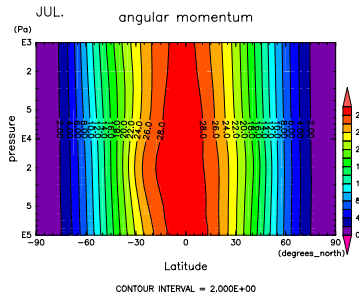
Figure 548: ANGMOM at Jul. by
NCEP
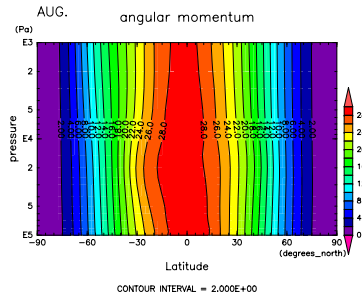
Figure 551: ANGMOM at Aug. by
NCEP
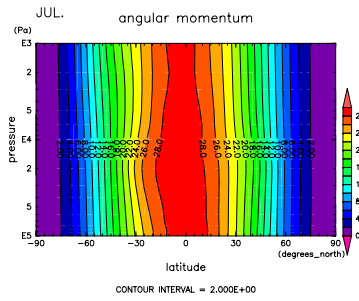
Figure 549: ANGMOM at Jul. by
ECMWF
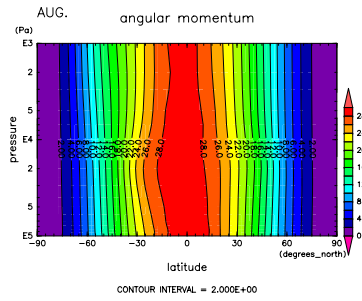
Figure 552: ANGMOM at Aug. by
ECMWF

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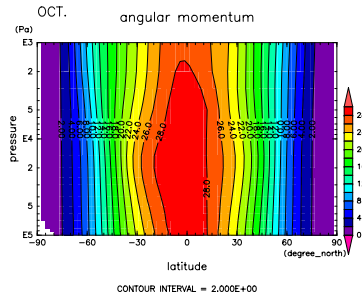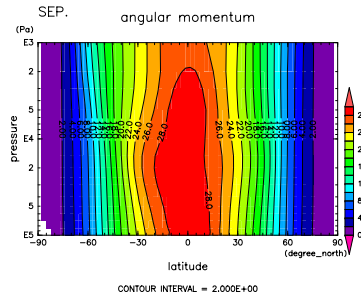
Figure 553: ANGMOM at Sep. by dcpam

Figure 556: ANGMOM at Oct. by dcpam
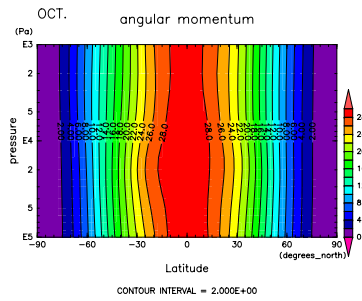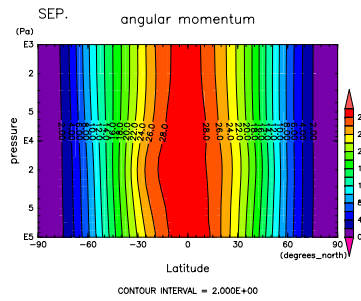
Figure 554: ANGMOM at Sep. by NCEP

Figure 557: ANGMOM at Oct. by NCEP
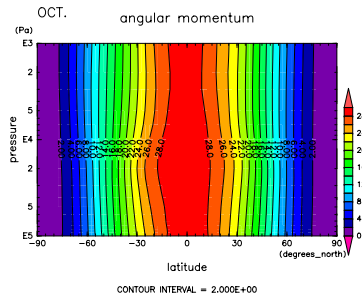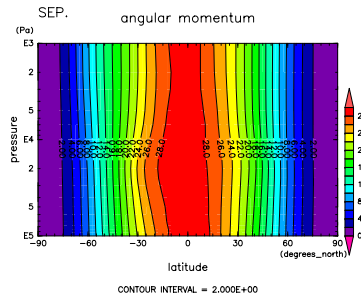
Figure 555: ANGMOM at Sep. by ECMWF

Figure 558: ANGMOM at Oct. by ECMWF

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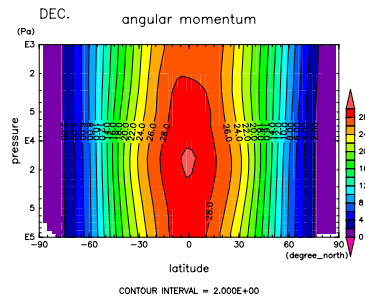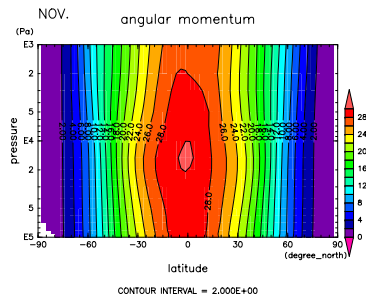
Figure 559: ANGMOM at Nov. by dcpam

Figure 562: ANGMOM at Dec. by dcpam
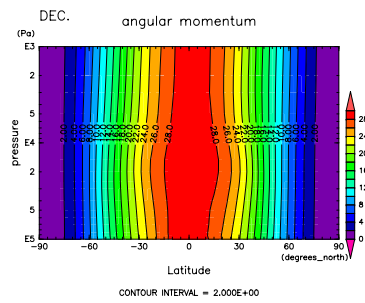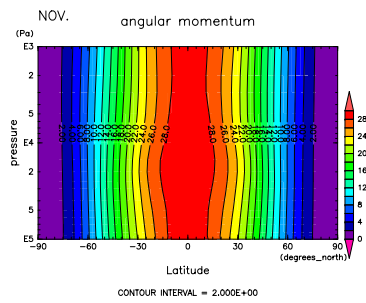
Figure 560: ANGMOM at Nov. by NCEP

Figure 563: ANGMOM at Dec. by NCEP
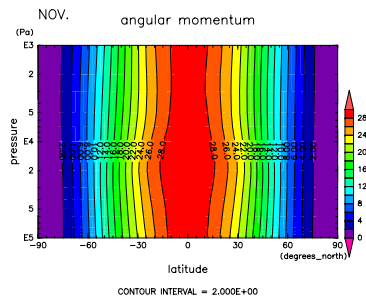
Figure 561: ANGMOM at Nov. by ECMWF

Figure 564: ANGMOM at Dec. by ECMWF

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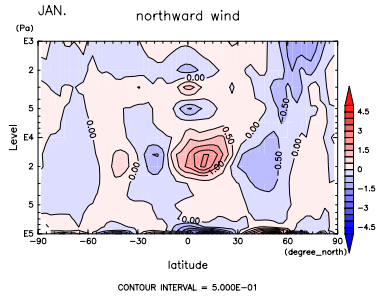
Figure 565: V at Jan. by dcpam
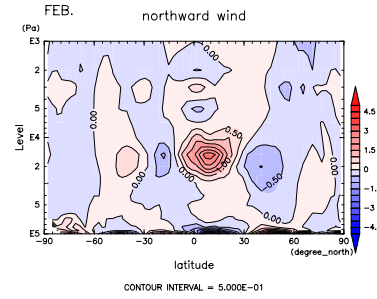
Figure 568: V at Feb. by dcpam
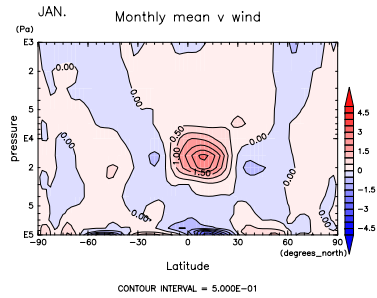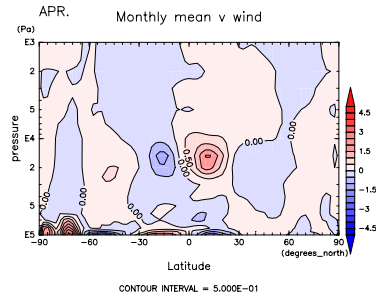

Figure 566: V at Jan. by NCEP
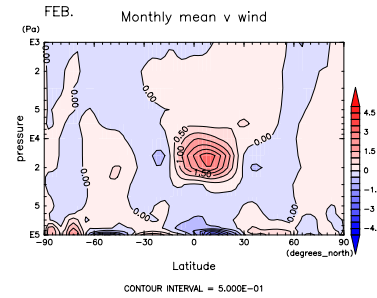

Figure 569: V at Feb. by NCEP
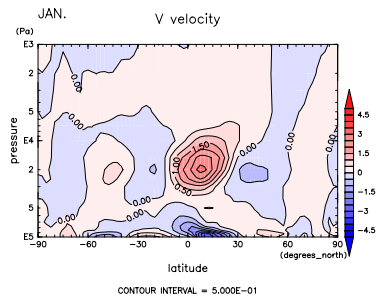
Figure 567: V at Jan. by ECMWF
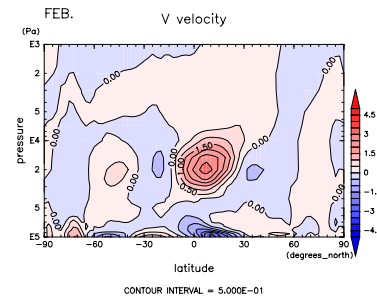
Figure 570: V at Feb. by ECMWF

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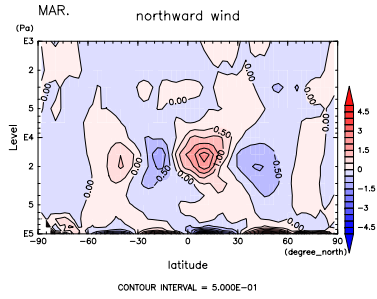
Figure 571: V at Mar. by dcpam
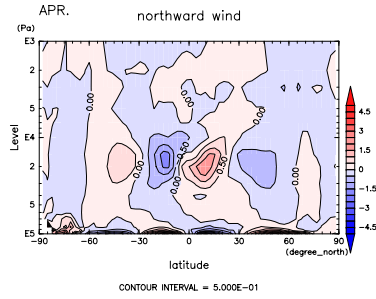
Figure 574: V at Apr. by dcpam
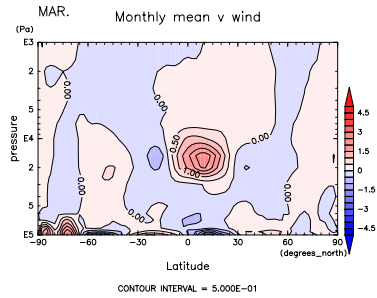
Figure 572: V at Mar. by NCEP

Figure 575: V at Apr. by NCEP
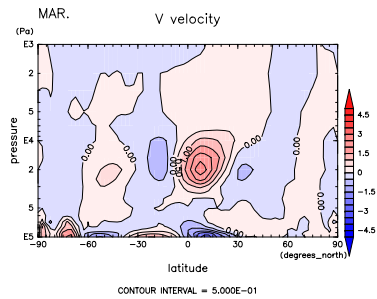
Figure 573: V at Mar. by ECMWF
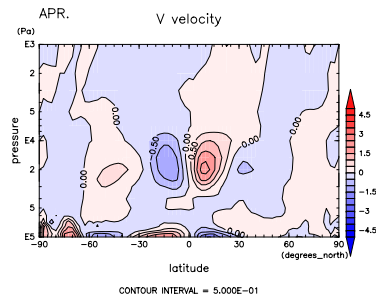
Figure 576: V at Apr. by ECMWF

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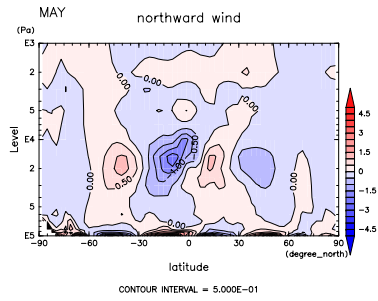
Figure 577: V at May by dcpam
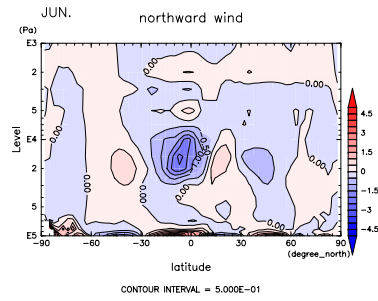
Figure 580: V at Jun. by dcpam
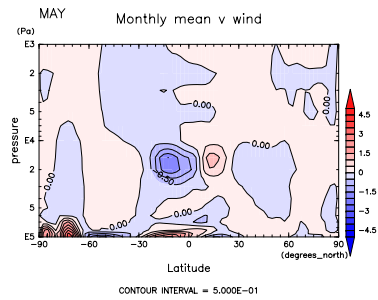
Figure 578: V at May by NCEP
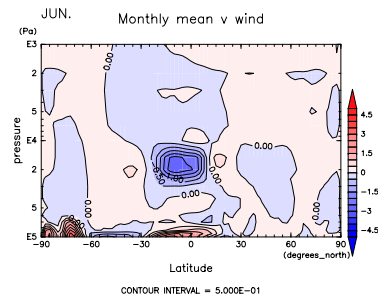

Figure 581: V at Jun. by NCEP
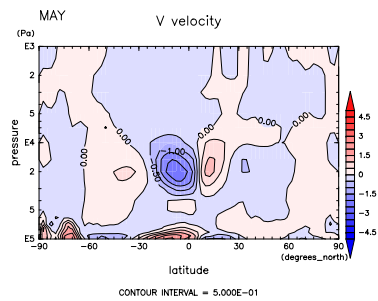
Figure 579: V at May by ECMWF
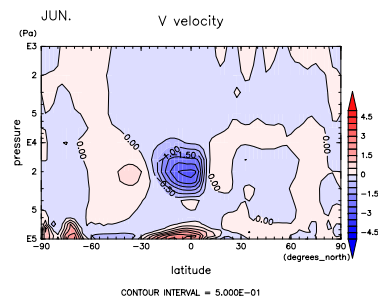
Figure 582: V at Jun. by ECMWF

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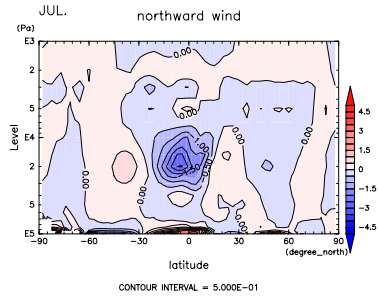
Figure 583: V at Jul. by dcpam
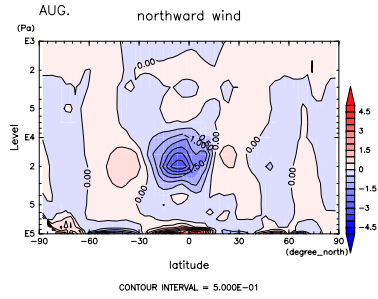
Figure 586: V at Aug. by dcpam
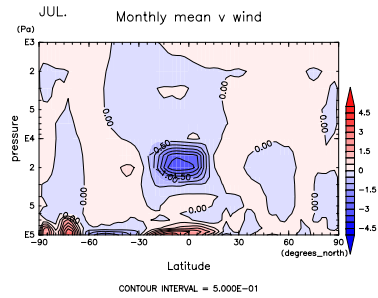
Figure 584: V at Jul. by NCEP
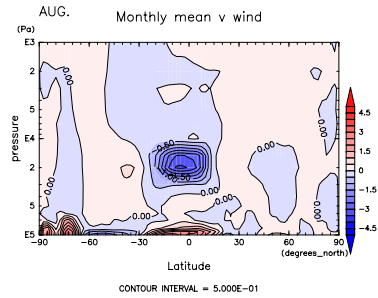
Figure 587: V at Aug. by NCEP
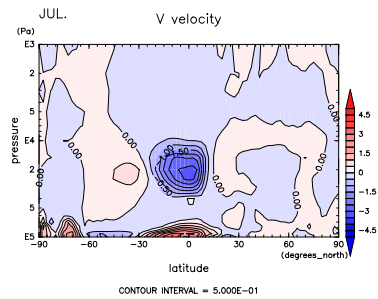
Figure 585: V at Jul. by ECMWF
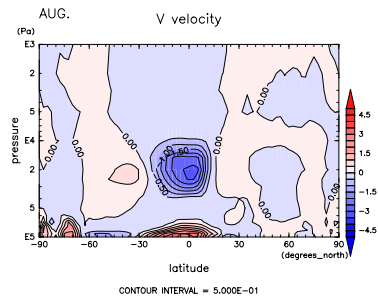
Figure 588: V at Aug. by ECMWF

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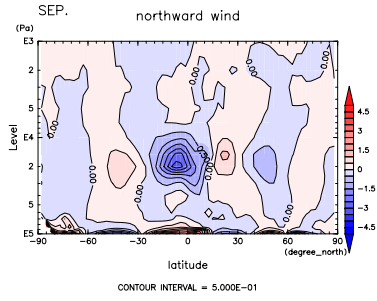
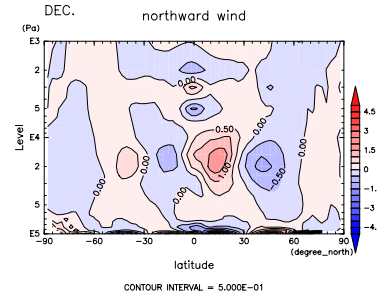Figure 589: V at Sep. by dcpam
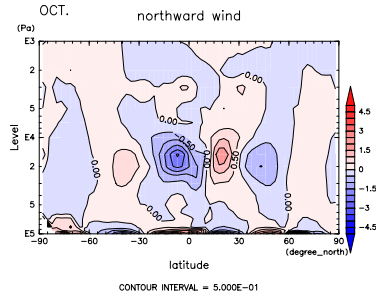
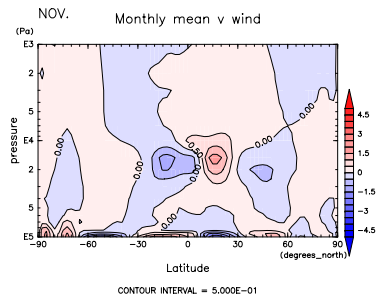Figure 592: V at Oct. by dcpam
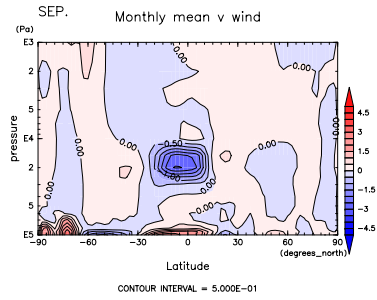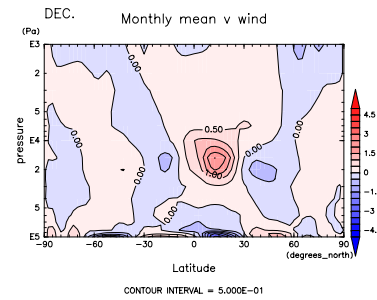

Figure 590: V at Sep. by NCEP
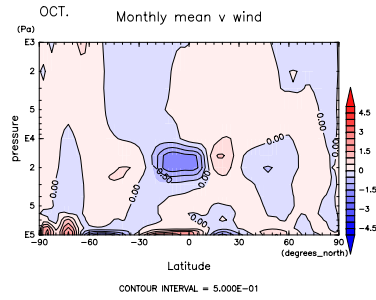
Figure 593: V at Oct. by NCEP
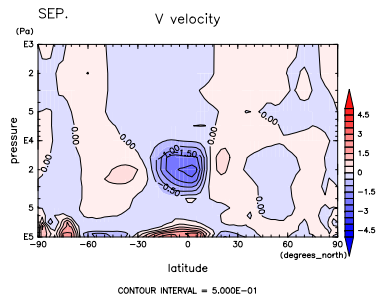
Figure 591: V at Sep. by ECMWF
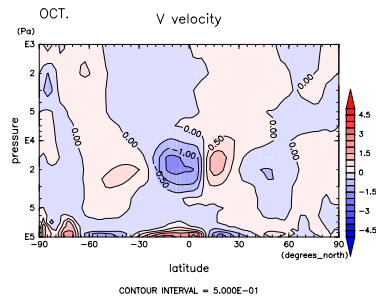
Figure 594: V at Oct. by ECMWF

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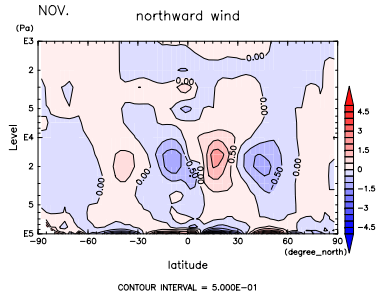
Figure 595: V at Nov. by dcpam

Figure 598: V at Dec. by dcpam

Figure 596: V at Nov. by NCEP

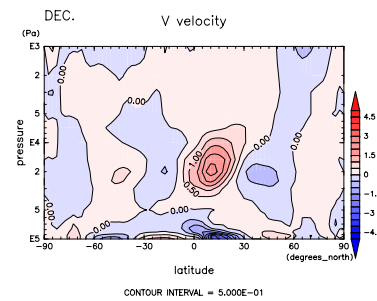Figure 599: V at Dec. by NCEP
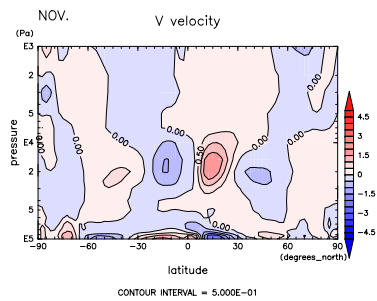
Figure 597: V at Nov. by ECMWF

Figure 600: V at Dec. by ECMWF
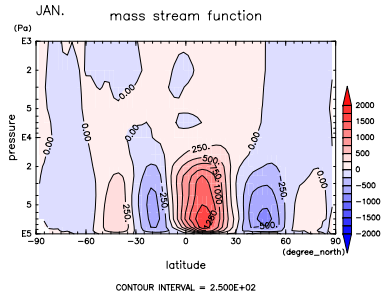
Figure 601: MSF at Jan. by dcpam
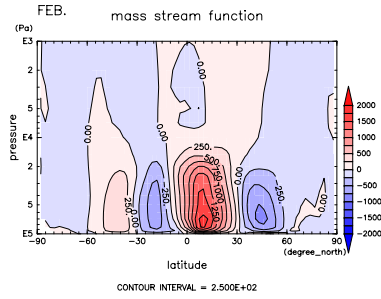
Figure 604: MSF at Feb. by dcpam
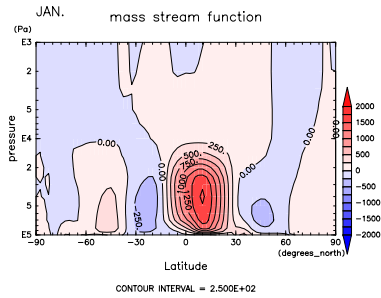
Figure 602: MSF at Jan. by NCEP
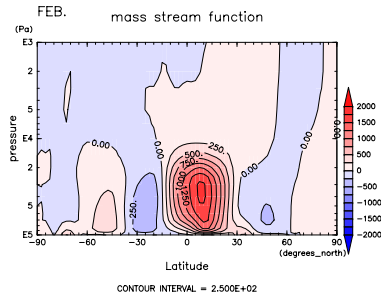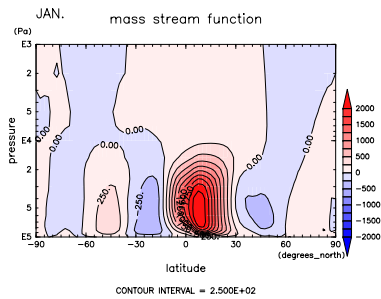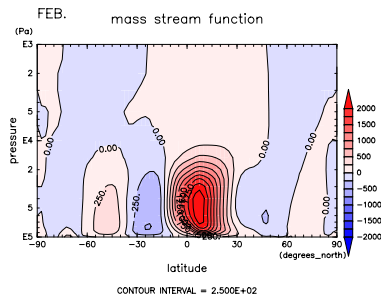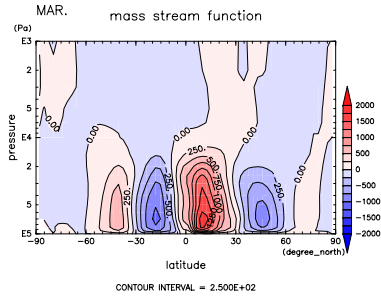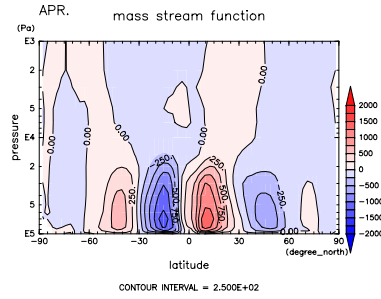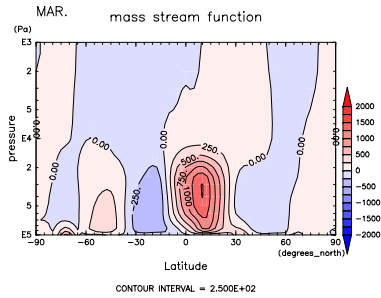

Figure 605: MSF at Feb. by NCEP

Figure 603: MSF at Jan. by ECMWF

Figure 606: MSF at Feb. by ECMWF

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Figure 607: MSF at Mar. by dcpam

Figure 610: MSF at Apr. by dcpam
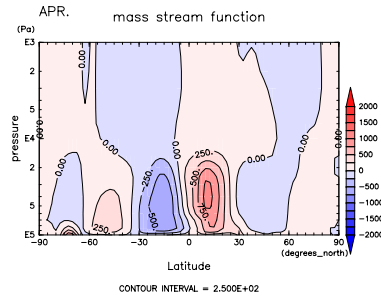

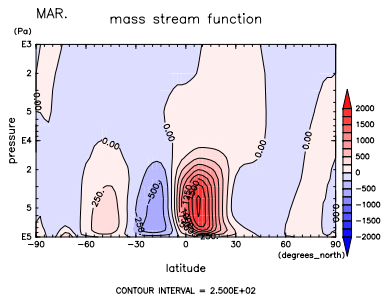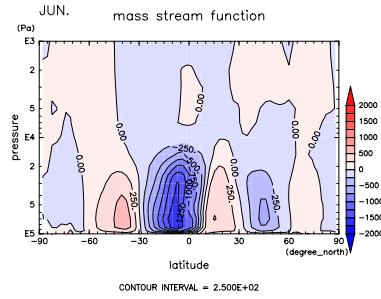Figure 608: MSF at Mar. by NCEP

Figure 611: MSF at Apr. by NCEP

Figure 609: MSF at Mar. by ECMWF
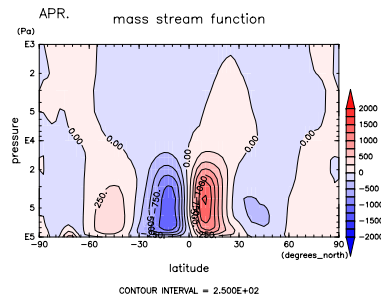
Figure 612: MSF at Apr. by ECMWF
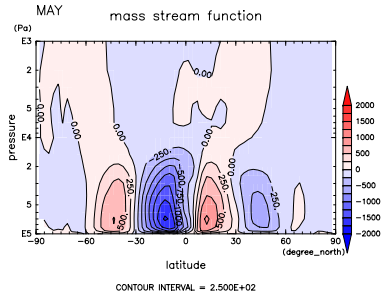
Figure 613: MSF at May by dcpam

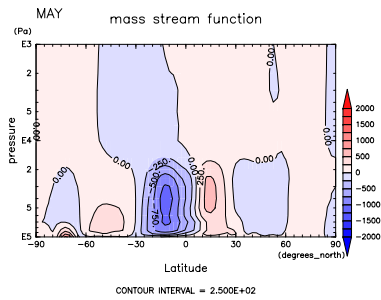Figure 616: MSF at Jun. by dcpam

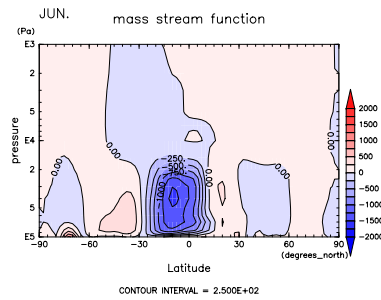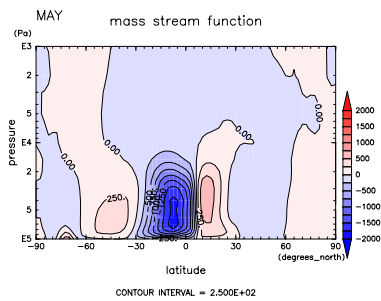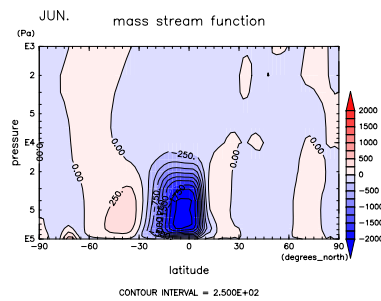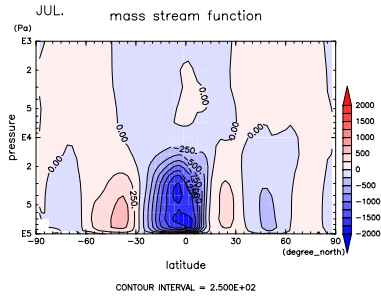Figure 614: MSF at May by NCEP

Figure 617: MSF at Jun. by NCEP

Figure 615: MSF at May by ECMWF

Figure 618: MSF at Jun. by ECMWF
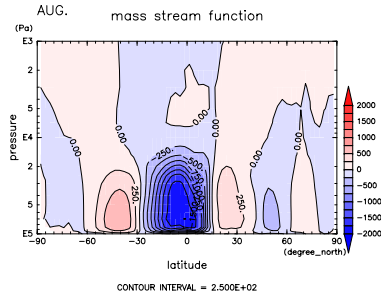
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Figure 619: MSF at Jul. by dcpam

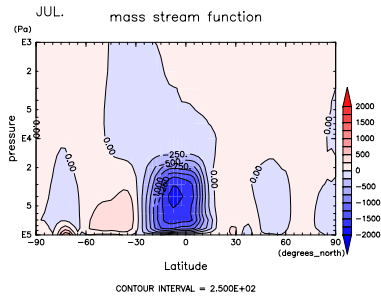Figure 622: MSF at Aug. by dcpam

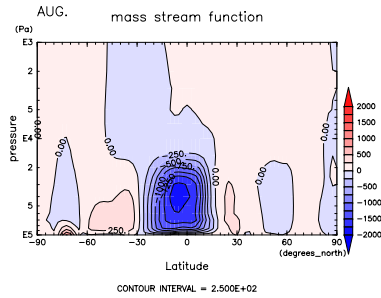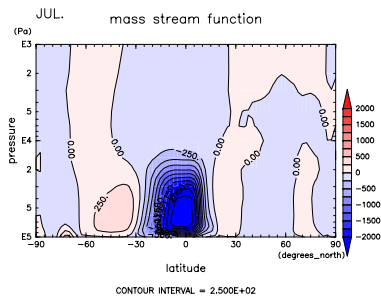Figure 620: MSF at Jul. by NCEP

Figure 623: MSF at Aug. by NCEP

Figure 621: MSF at Jul. by ECMWF
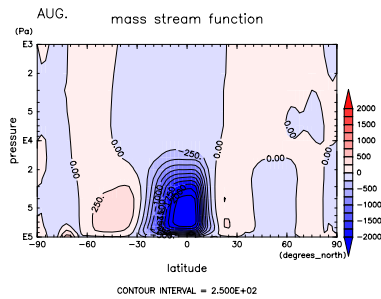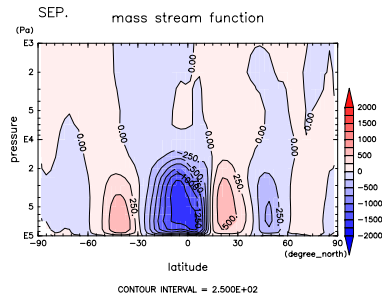

Figure 624: MSF at Aug. by ECMWF
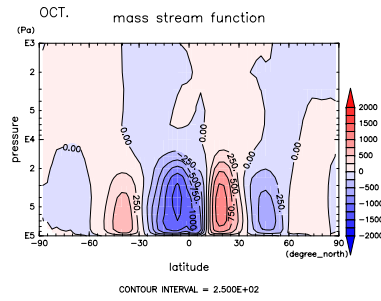
Figure 625: MSF at Sep. by dcpam

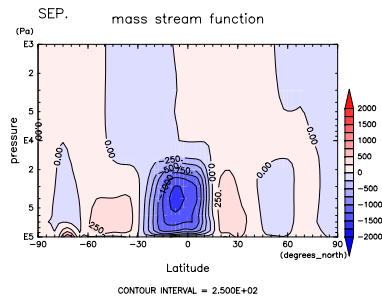Figure 628: MSF at Oct. by dcpam

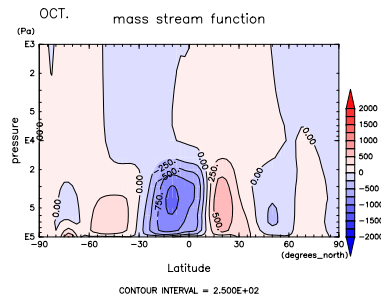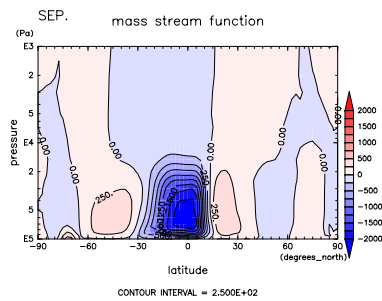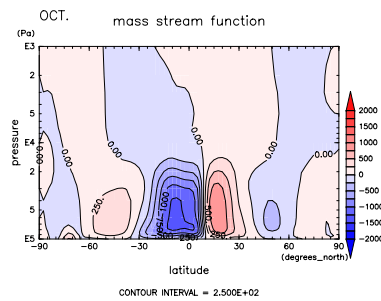Figure 626: MSF at Sep. by NCEP

Figure 629: MSF at Oct. by NCEP

Figure 627: MSF at Sep. by ECMWF
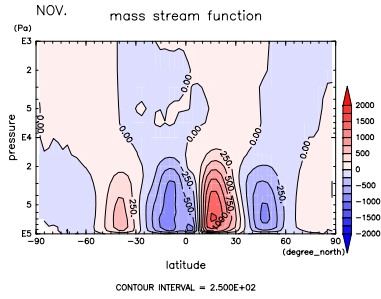

Figure 630: MSF at Oct. by ECMWF
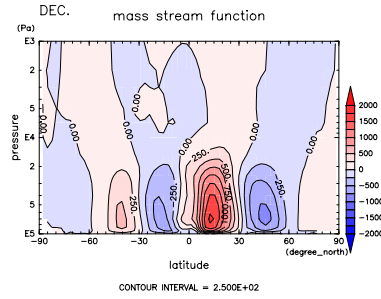
Figure 631: MSF at Nov. by dcpam

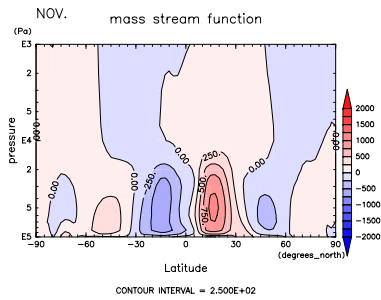Figure 634: MSF at Dec. by dcpam

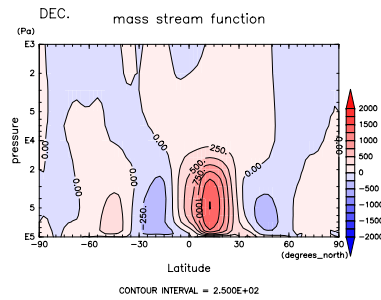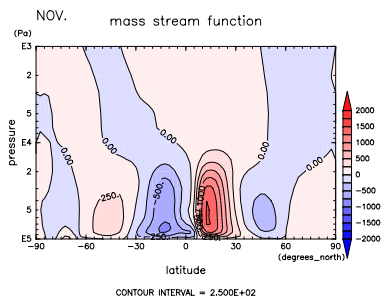Figure 632: MSF at Nov. by NCEP

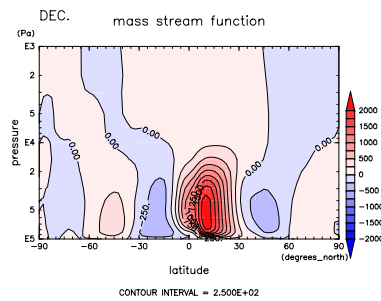Figure 635: MSF at Dec. by NCEP

Figure 633: MSF at Nov. by ECMWF
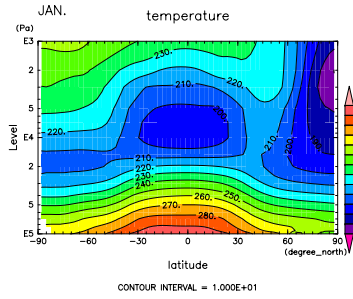

Figure 636: MSF at Dec. by ECMWF
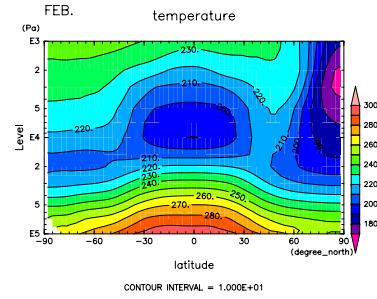
Figure 637: T at Jan. by dcpam
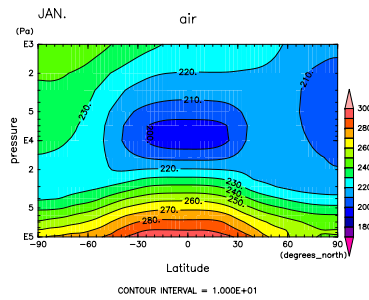

Figure 640: T at Feb. by dcpam

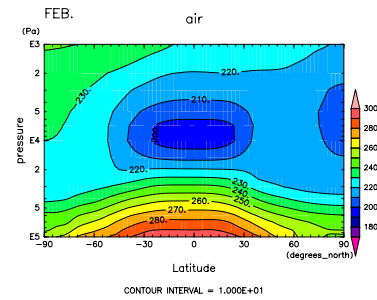Figure 638: T at Jan. by NCEP

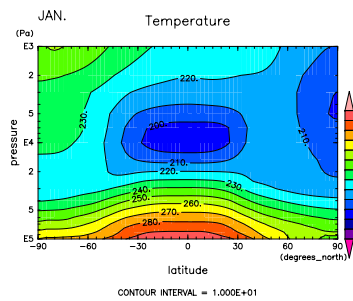Figure 641: T at Feb. by NCEP

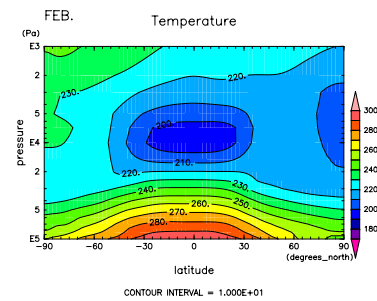Figure 639: T at Jan. by ECMWF

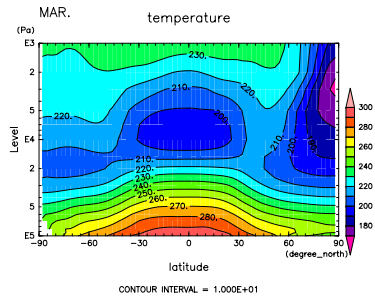Figure 642: T at Feb. by ECMWF
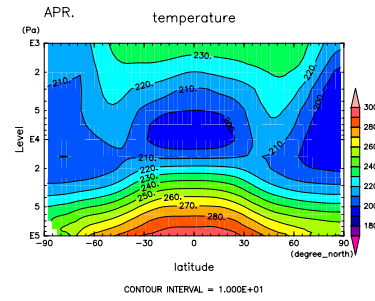
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Figure 643: T at Mar. by dcpam
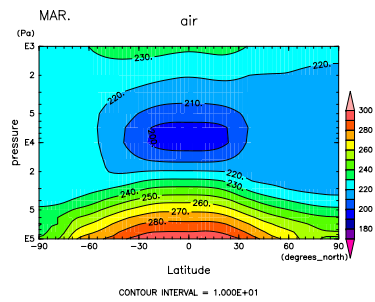

Figure 646: T at Apr. by dcpam
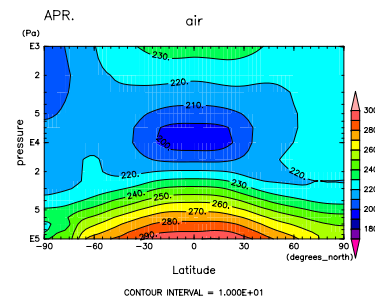

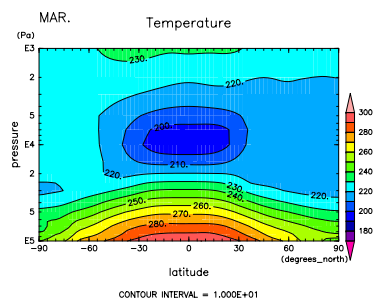Figure 644: T at Mar. by NCEP

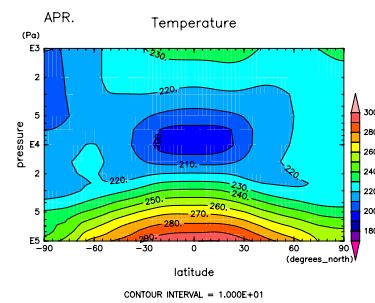Figure 647: T at Apr. by NCEP

Figure 645: T at Mar. by ECMWF

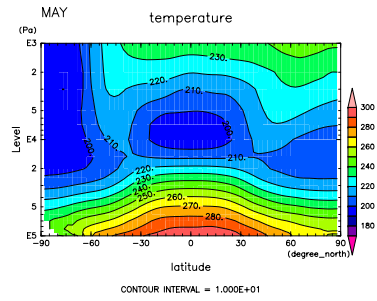Figure 648: T at Apr. by ECMWF

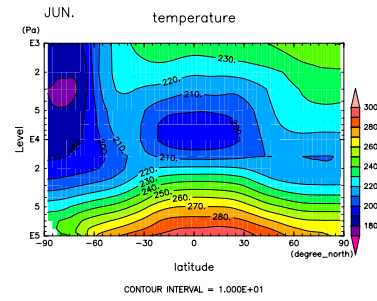Figure 649: T at May by dcpam

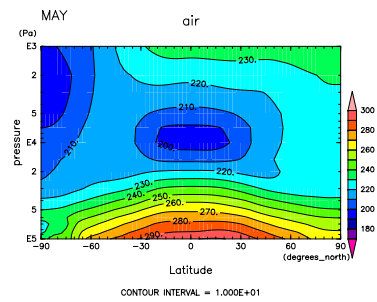

Figure 652: T at Jun. by dcpam
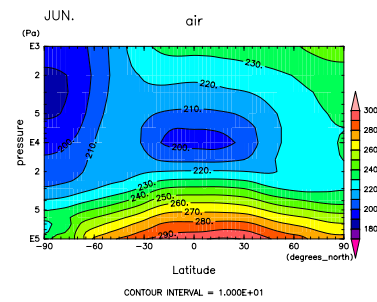

Figure 650: T at May by NCEP
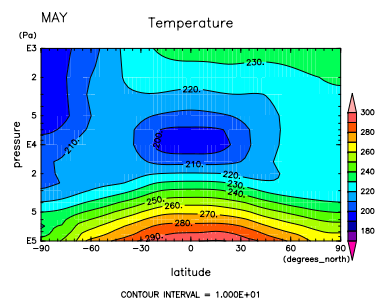

Figure 653: T at Jun. by NCEP
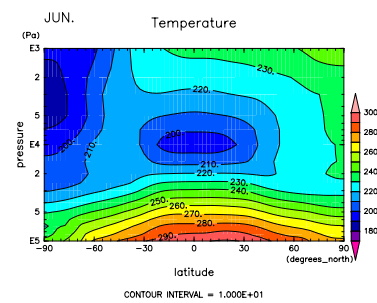

Figure 651: T at May by ECMWF
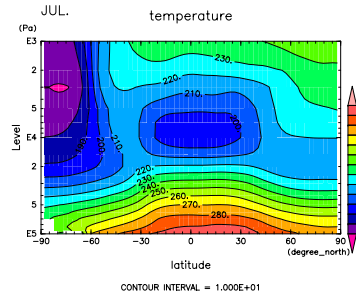

Figure 654: T at Jun. by ECMWF
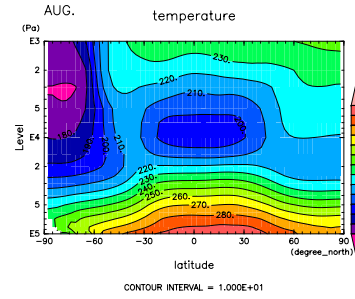
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Figure 655: T at Jul. by dcpam
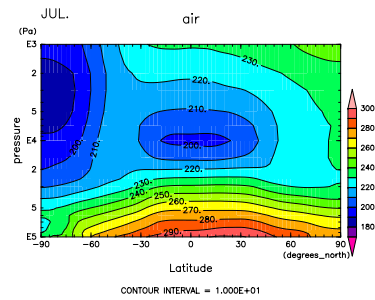

Figure 658: T at Aug. by dcpam
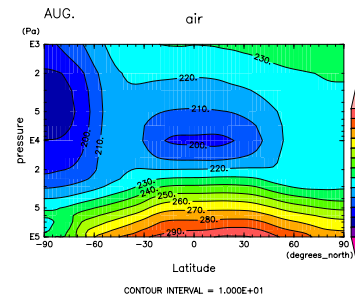

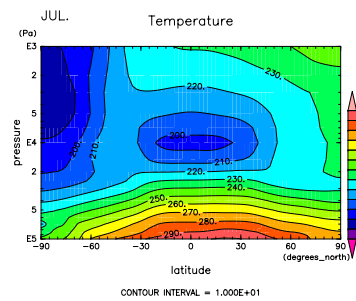Figure 656: T at Jul. by NCEP

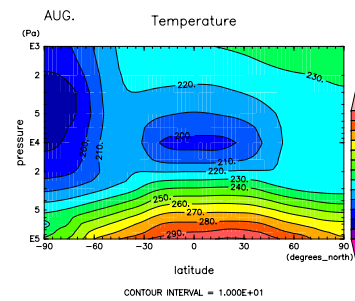Figure 659: T at Aug. by NCEP

Figure 657: T at Jul. by ECMWF

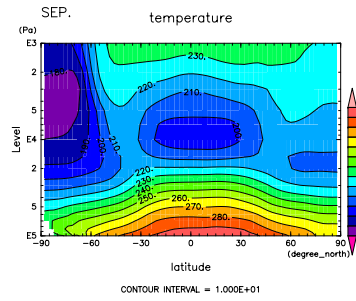Figure 660: T at Aug. by ECMWF

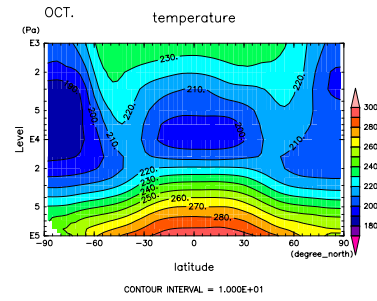Figure 661: T at Sep. by dcpam
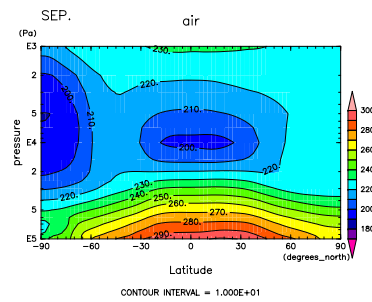

Figure 664: T at Oct. by dcpam
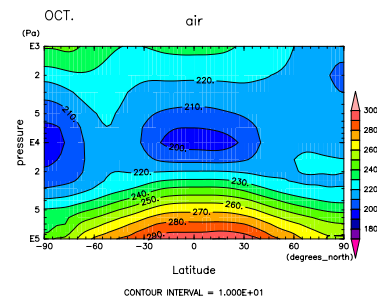

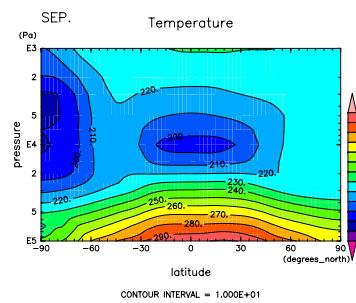Figure 662: T at Sep. by NCEP

Figure 665: T at Oct. by NCEP

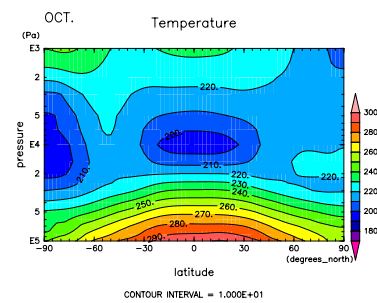Figure 663: T at Sep. by ECMWF

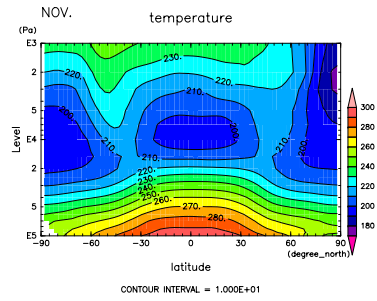Figure 666: T at Oct. by ECMWF

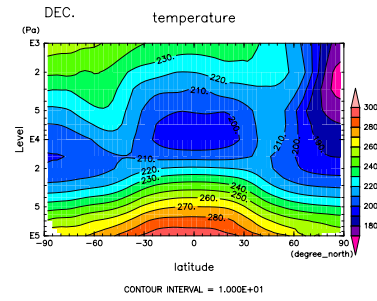147

Figure 667: T at Nov. by dcpam
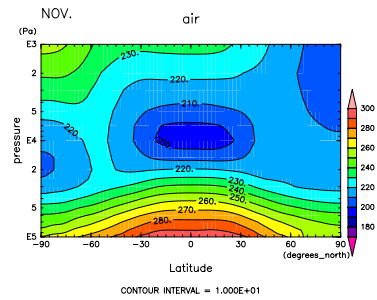

Figure 670: T at Dec. by dcpam
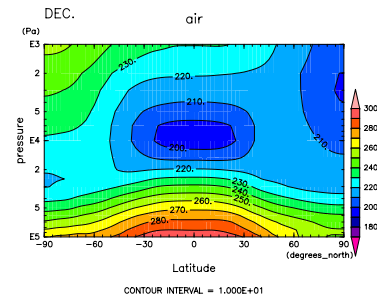

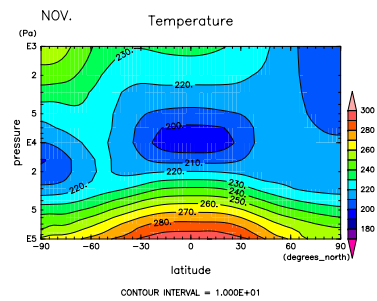Figure 668: T at Nov. by NCEP

Figure 671: T at Dec. by NCEP

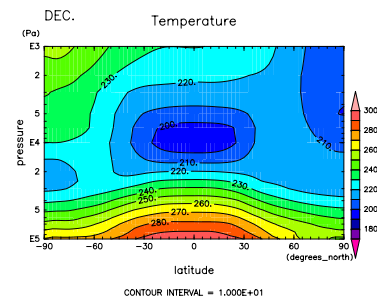Figure 669: T at Nov. by ECMWF

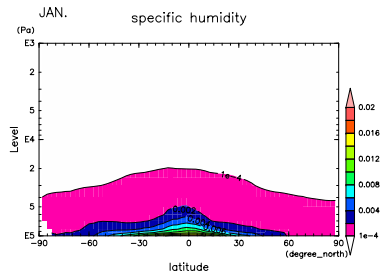Figure 672: T at Dec. by ECMWF

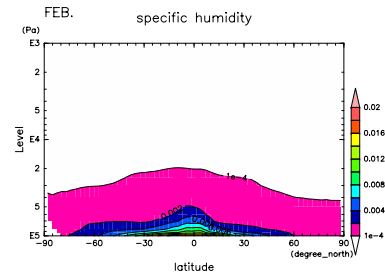148

Figure 673: q at Jan. by dcpam
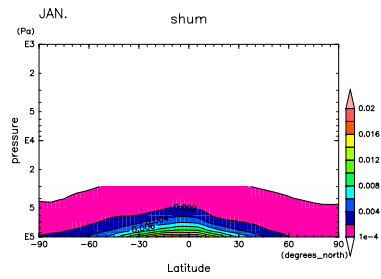

Figure 676: q at Feb. by dcpam
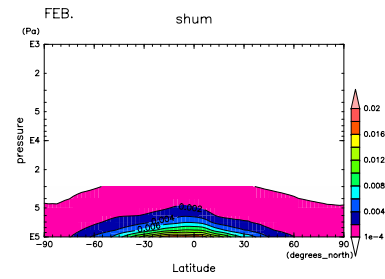

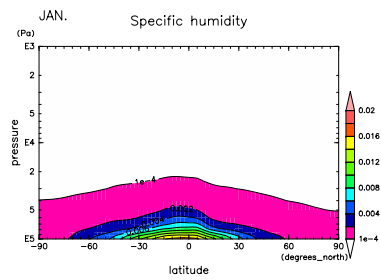Figure 674: q at Jan. by NCEP

Figure 677: q at Feb. by NCEP

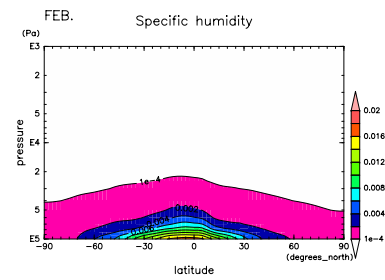Figure 675: q at Jan. by ECMWF

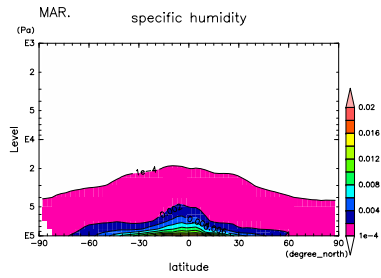Figure 678: q at Feb. by ECMWF
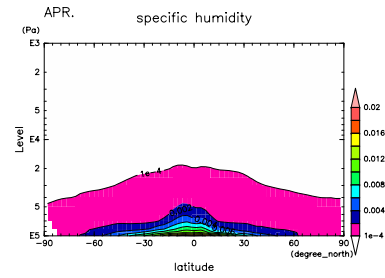
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Figure 679: q at Mar. by dcpam
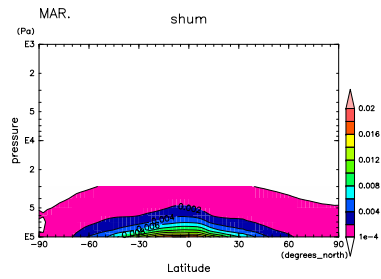

Figure 682: q at Apr. by dcpam
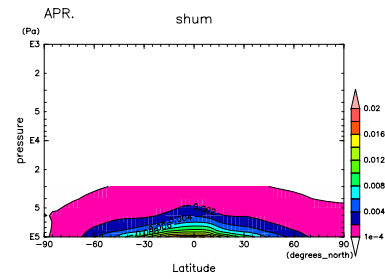

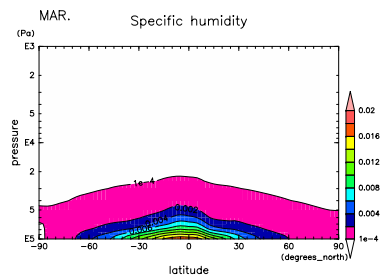Figure 680: q at Mar. by NCEP

Figure 683: q at Apr. by NCEP

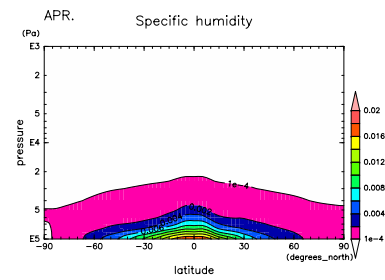Figure 681: q at Mar. by ECMWF

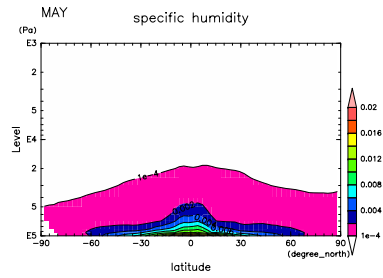

Figure 684: q at Apr. by ECMWF
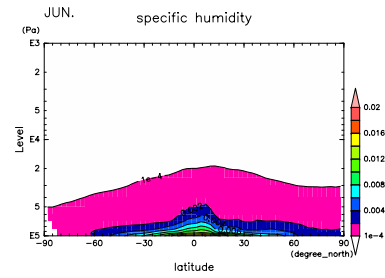
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Figure 685: q at May by dcpam
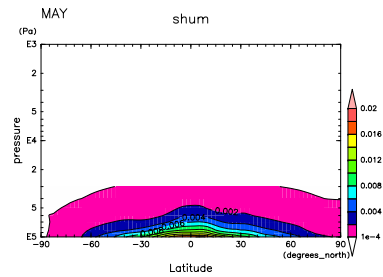

Figure 688: q at Jun. by dcpam
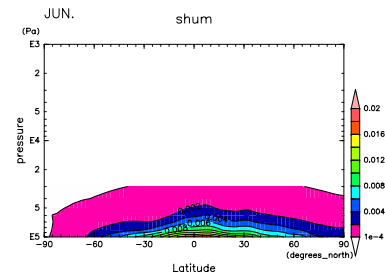

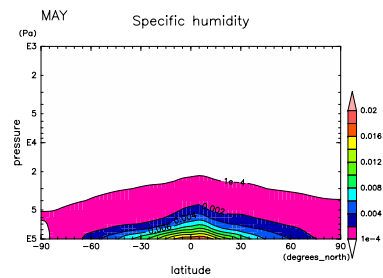Figure 686: q at May by NCEP

Figure 689: q at Jun. by NCEP

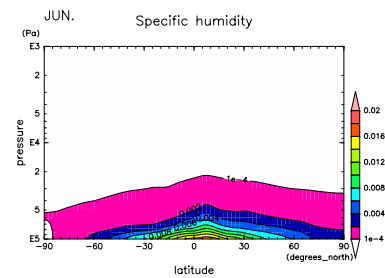Figure 687: q at May by ECMWF

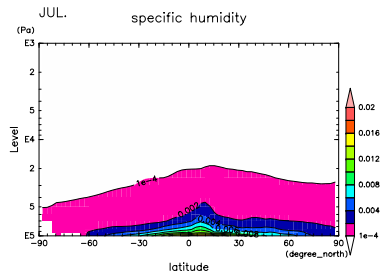

Figure 690: q at Jun. by ECMWF
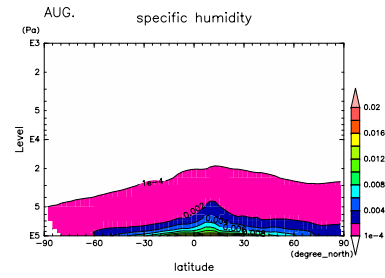
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Figure 691: q at Jul. by dcpam
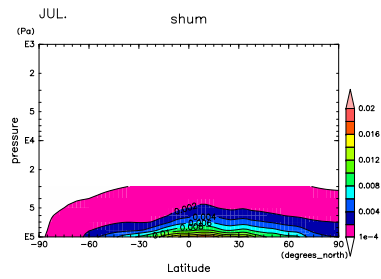

Figure 694: q at Aug. by dcpam
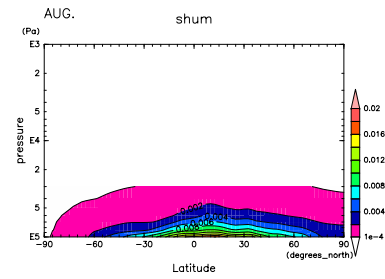

Figure 692: q at Jul. by NCEP

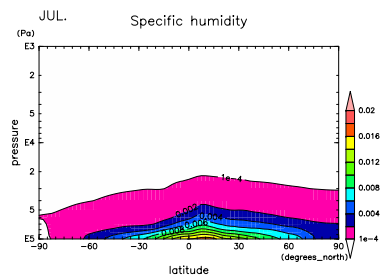Figure 695: q at Aug. by NCEP

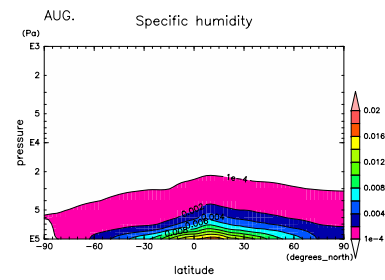Figure 693: q at Jul. by ECMWF

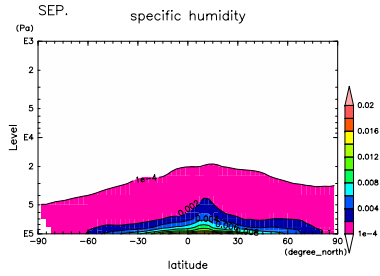

Figure 696: q at Aug. by ECMWF
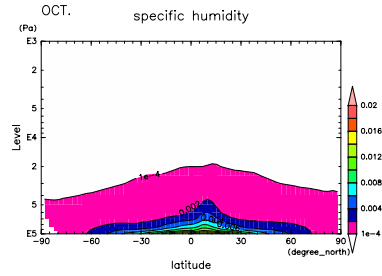
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Figure 697: q at Sep. by dcpam
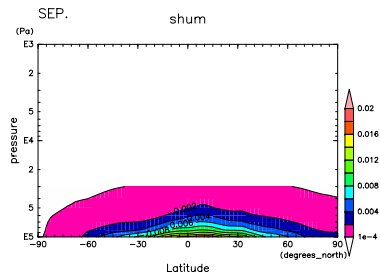

Figure 700: q at Oct. by dcpam

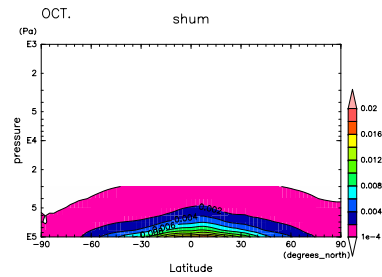Figure 698: q at Sep. by NCEP

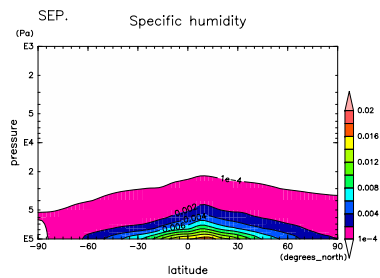Figure 701: q at Oct. by NCEP

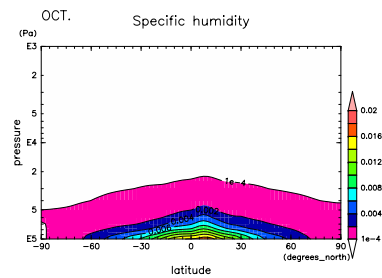Figure 699: q at Sep. by ECMWF

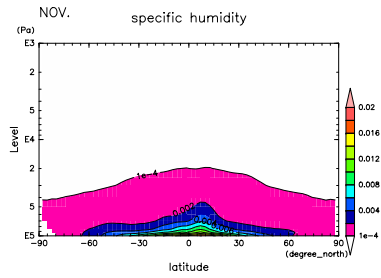

Figure 702: q at Oct. by ECMWF
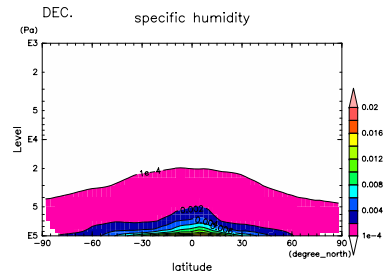
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Figure 703: q at Nov. by dcpam

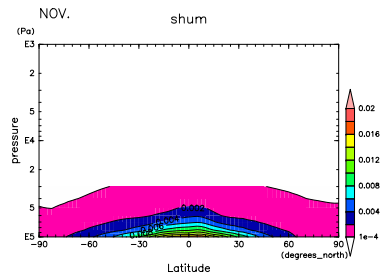Figure 706: q at Dec. by dcpam

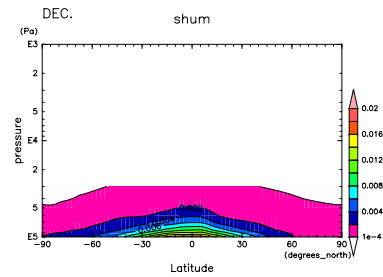Figure 704: q at Nov. by NCEP

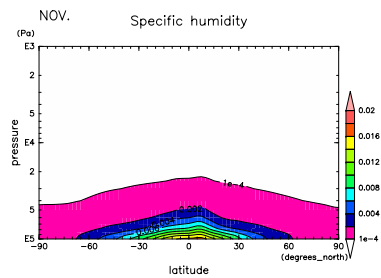Figure 707: q at Dec. by NCEP
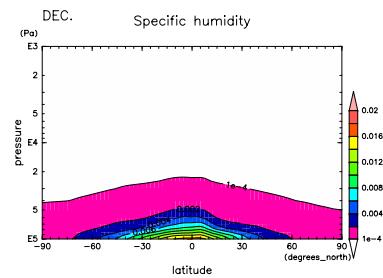

Figure 705: q at Nov. by ECMWF
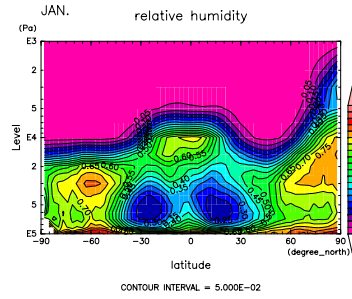

Figure 708: q at Dec. by ECMWF
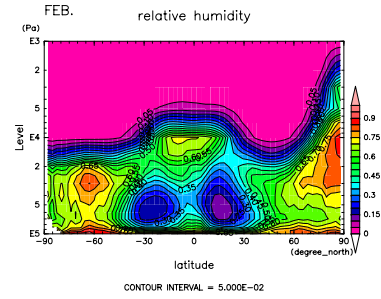
Figure 709: RH at Jan. by dcpam
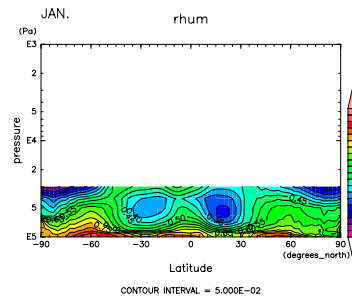

Figure 712: RH at Feb. by dcpam
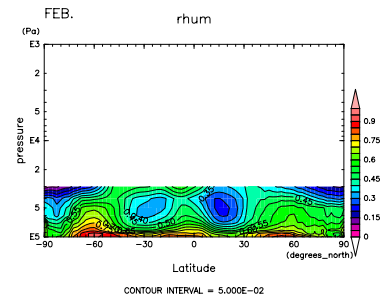

Figure 710: RH at Jan. by NCEP

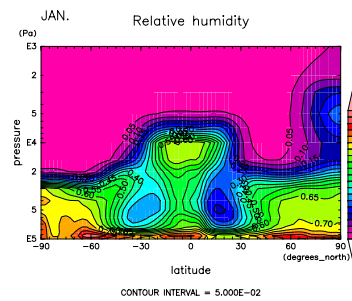Figure 713: RH at Feb. by NCEP

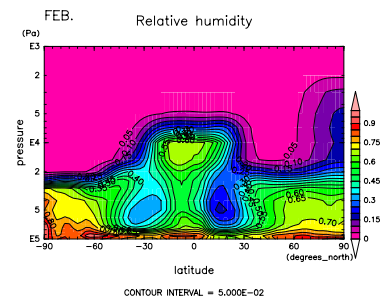Figure 711: RH at Jan. by ECMWF
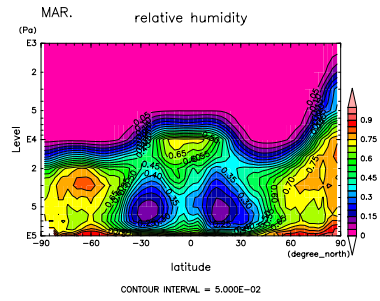

Figure 714: RH at Feb. by ECMWF
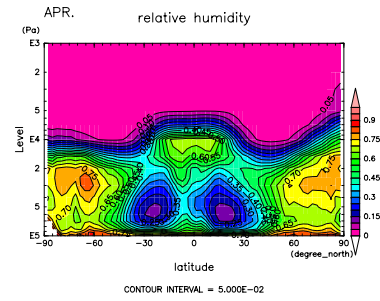
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Figure 715: RH at Mar. by dcpam
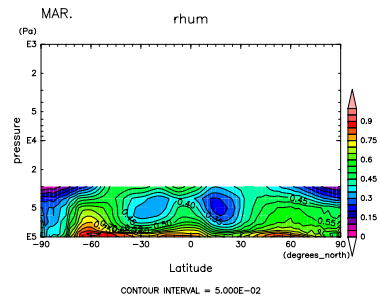

Figure 718: RH at Apr. by dcpam

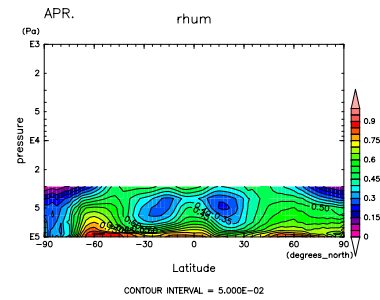Figure 716: RH at Mar. by NCEP

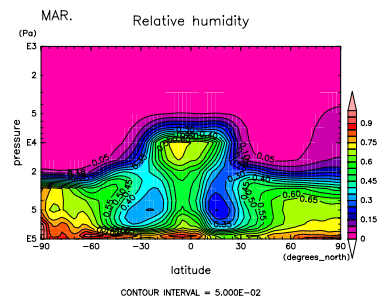Figure 719: RH at Apr. by NCEP
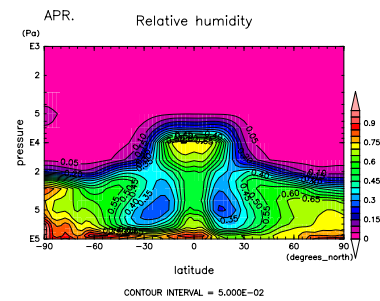

Figure 717: RH at Mar. by ECMWF
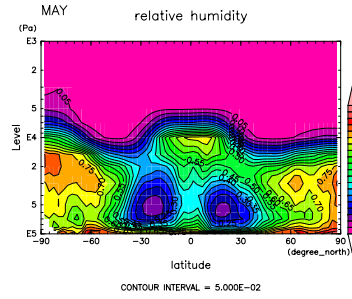

Figure 720: RH at Apr. by ECMWF
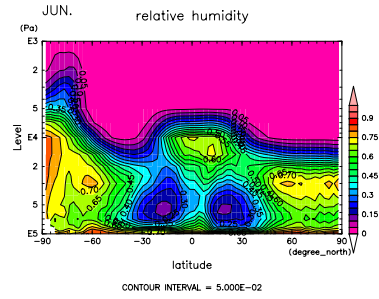
Figure 721: RH at May by dcpam

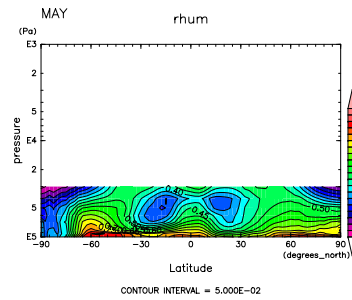Figure 724: RH at Jun. by dcpam

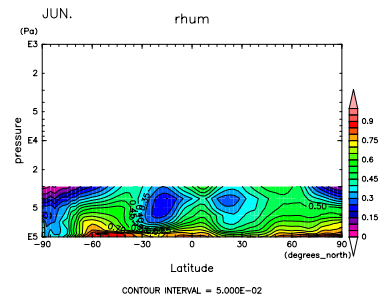Figure 722: RH at May by NCEP

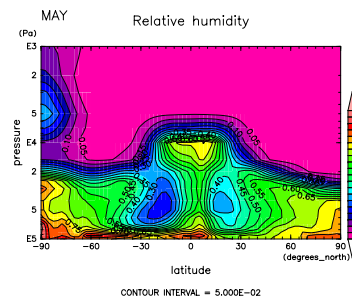Figure 725: RH at Jun. by NCEP

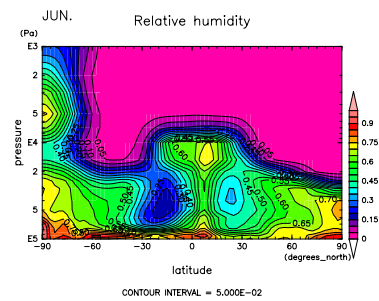
Figure 723: RH at May by ECMWF
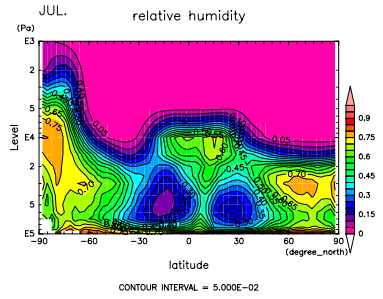

Figure 726: RH at Jun. by ECMWF
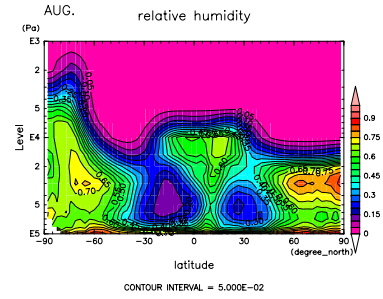
Figure 727: RH at Jul. by dcpam
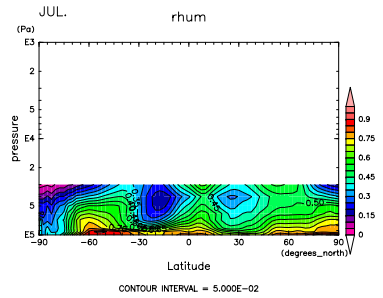

Figure 730: RH at Aug. by dcpam
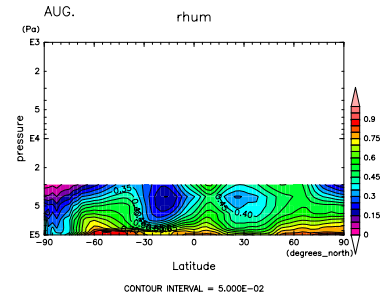

Figure 728: RH at Jul. by NCEP

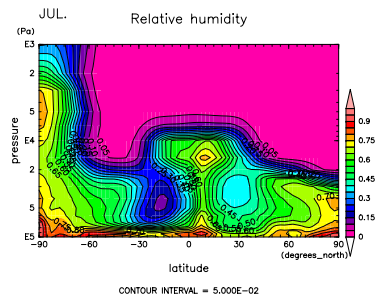Figure 731: RH at Aug. by NCEP

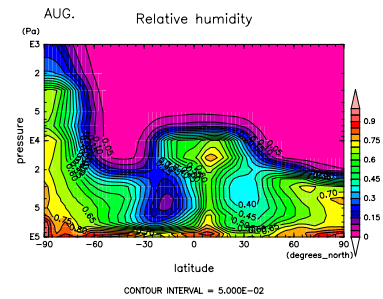Figure 729: RH at Jul. by ECMWF

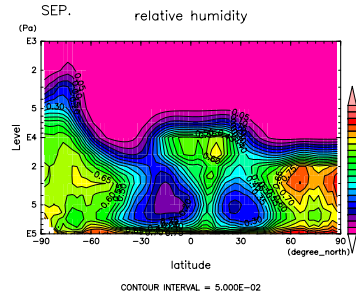Figure 732: RH at Aug. by ECMWF
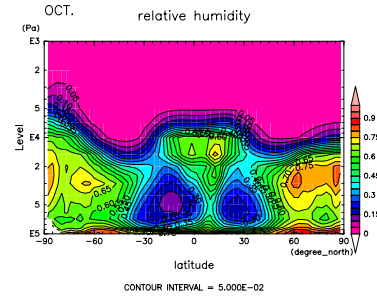
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Figure 733: RH at Sep. by dcpam
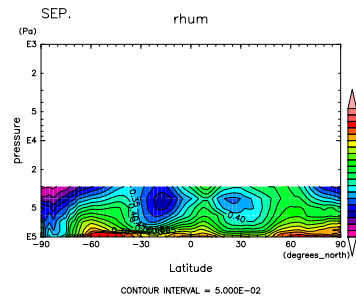

Figure 736: RH at Oct. by dcpam

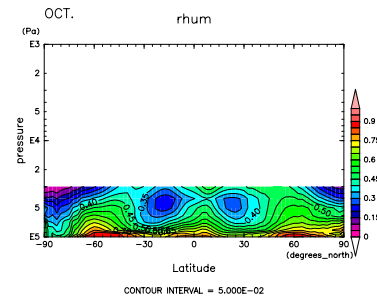Figure 734: RH at Sep. by NCEP
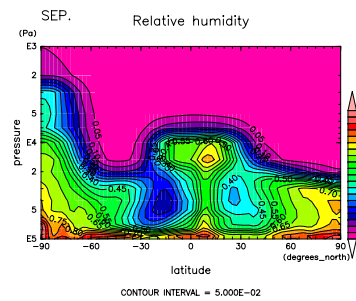

Figure 737: RH at Oct. by NCEP
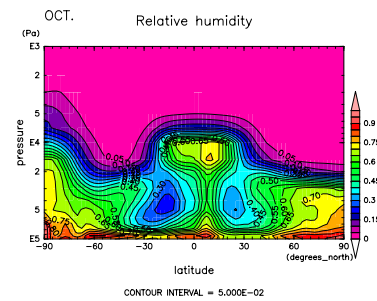

Figure 735: RH at Sep. by ECMWF

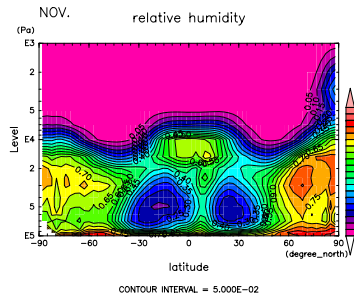Figure 738: RH at Oct. by ECMWF

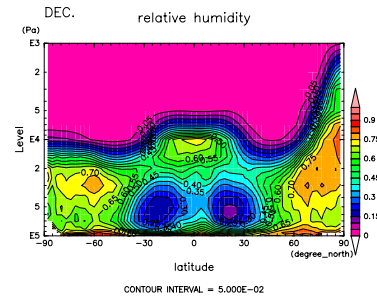159

Figure 739: RH at Nov. by dcpam

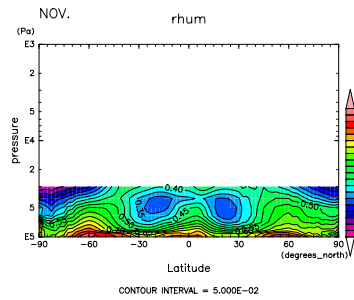Figure 742: RH at Dec. by dcpam

Figure 740: RH at Nov. by NCEP

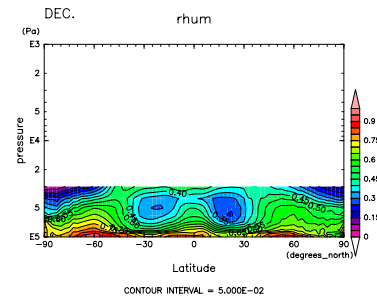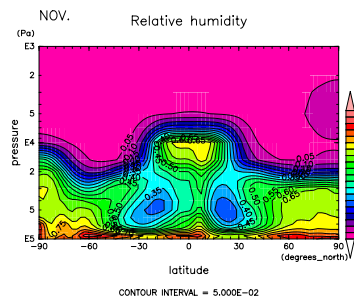Figure 743: RH at Dec. by NCEP

Figure 741: RH at Nov. by ECMWF

Figure 744: RH at Dec. by ECMWF
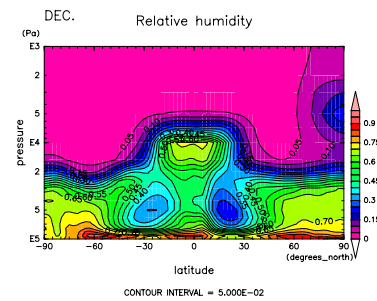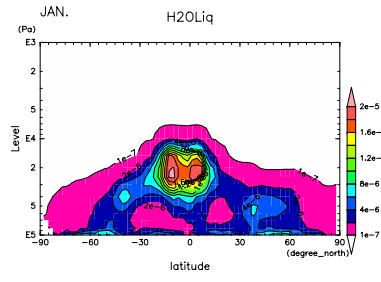
Figure 745: q_l at Jan. by dcpam
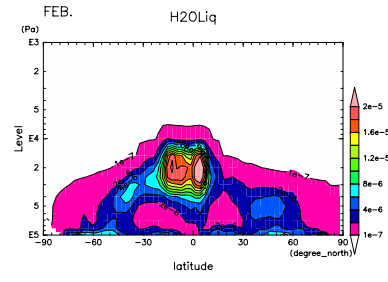
Figure 746: q_l at Feb. by dcpam

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Figure 747: q_l at Mar. by dcpam
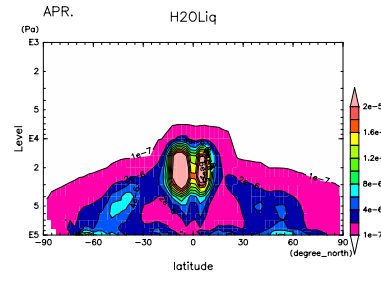
Figure 748: q_l at Apr. by dcpam

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Figure 749: q_l at May by dcpam

Figure 750: q_l at Jun. by dcpam

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Figure 751: q_l at Jul. by dcpam

Figure 752: q_l at Aug. by dcpam
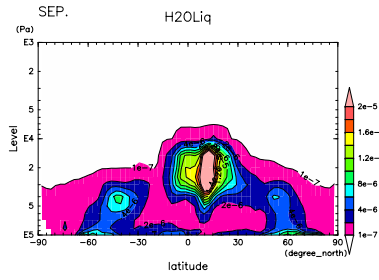
Figure 753: q_l at Sep. by dcpam
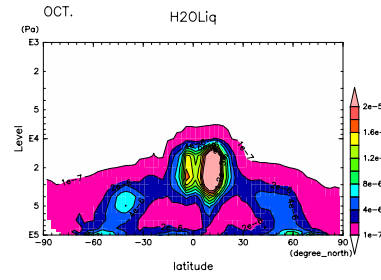
Figure 754: q_l at Oct. by dcpam

Figure 755: q_l at Nov. by dcpam

Figure 756: q_l at Dec. by dcpam
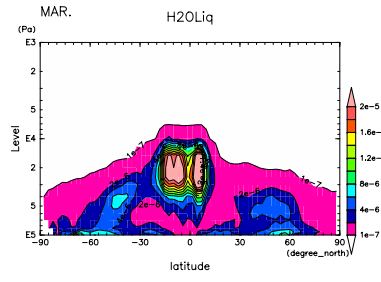
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Figure 757: q_i at Jan. by dcpam

Figure 758: q_i at Feb. by dcpam
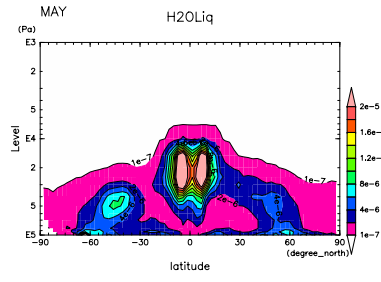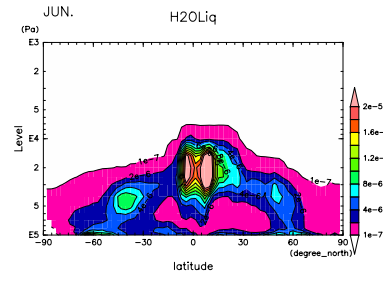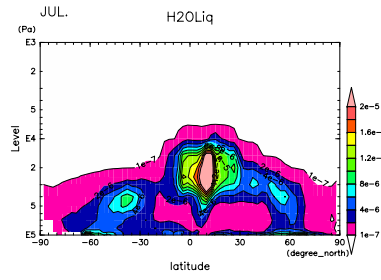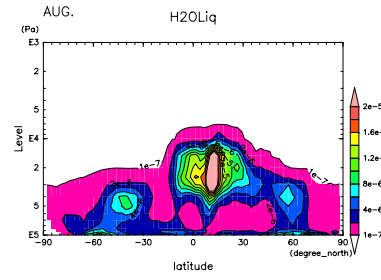
Figure 759: q_i at Mar. by dcpam

Figure 760: q_i at Apr. by dcpam

Figure 761: q_i at May by dcpam

Figure 762: q_i at Jun. by dcpam

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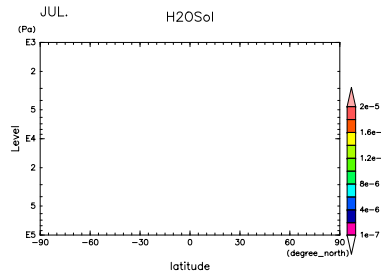
Figure 763: q_i at Jul. by dcpam
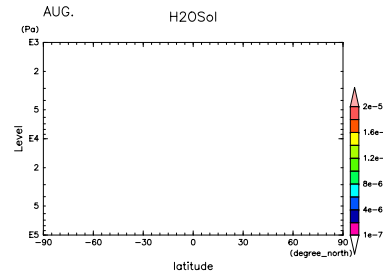
Figure 764: q_i at Aug. by dcpam

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SEP.   H2OSol
(Pa)
E3
2

5

E4
Level
2

5

E5
   -90   -60   -30   0   30   60   90
                                    (degree_north)
              latitude

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7

OCT.   H2OSol
(Pa)
E3
2

5

E4
Level
2

5

E5
   -90   -60   -30   0   30   60   90
                                    (degree_north)
              latitude

2e-5
1.6e-5
1.2e-5
8e-6
4e-6
1e-7
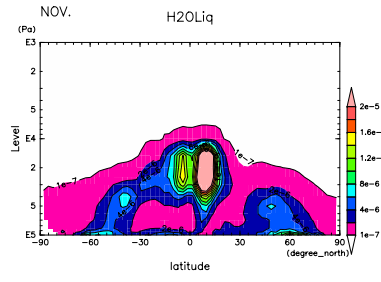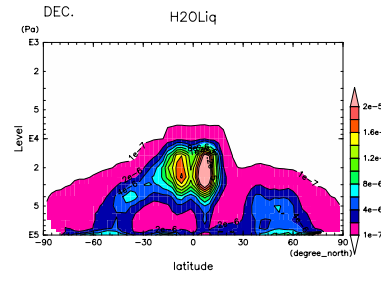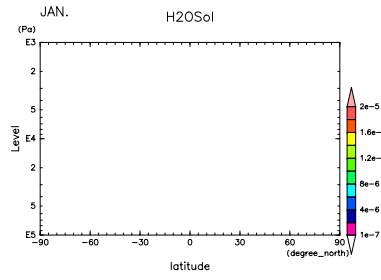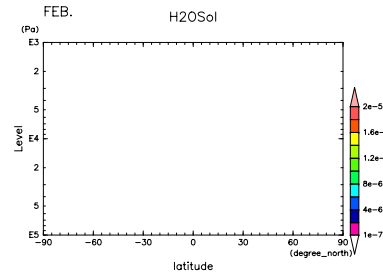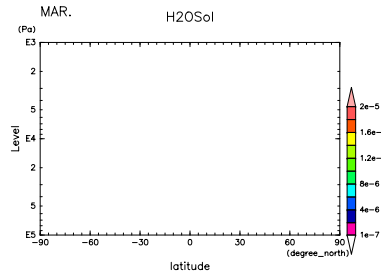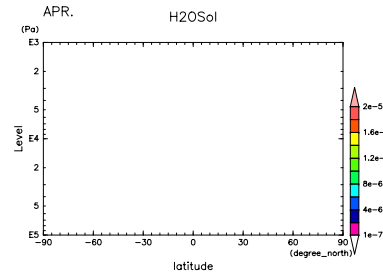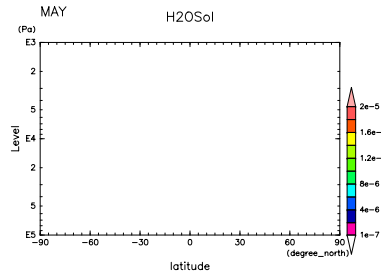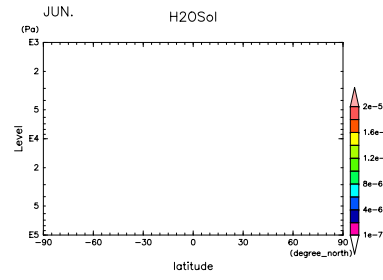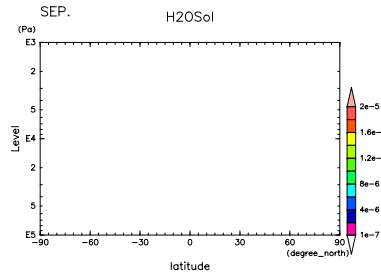
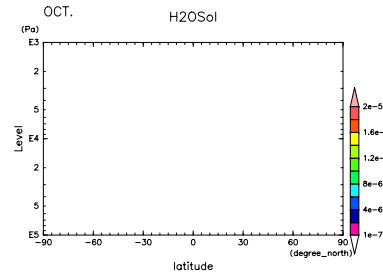Figure 765: q_i at Sep. by dcpam   Figure 766: q_i at Oct. by dcpam
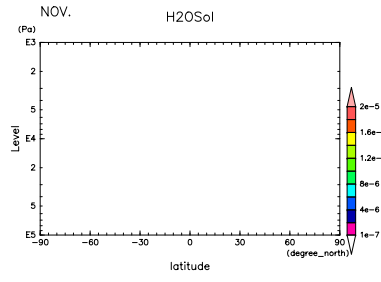
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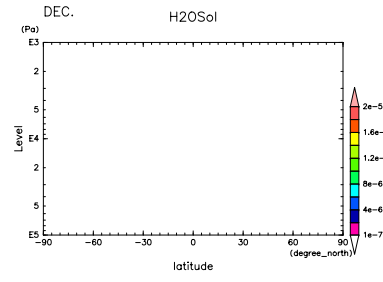Figure 767: q_i at Nov. by dcpam
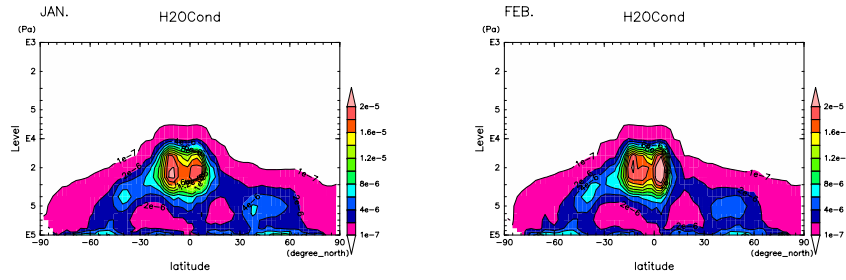

Figure 768: q_i at Dec. by dcpam

Figure 769: $q_l + q_i$ at Jan. by dcpam   Figure 770: $q_l + q_i$ at Feb. by dcpam
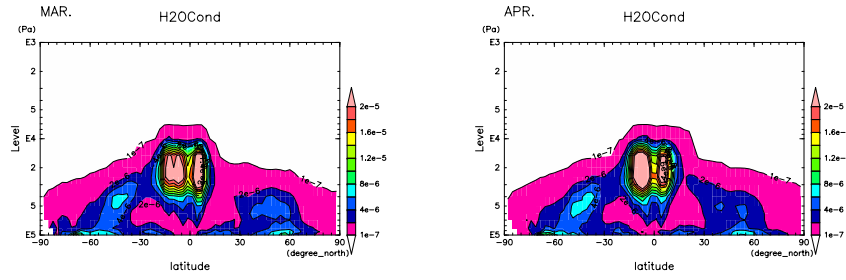
Figure 771: $q_l + q_i$ at Mar. by dcpam   Figure 772: $q_l + q_i$ at Apr. by dcpam
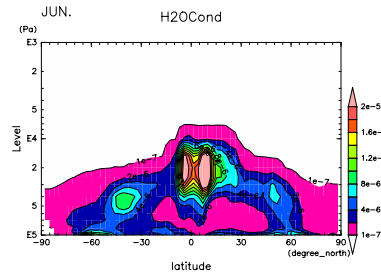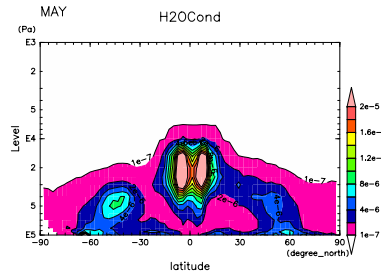
Figure 773: $q_l + q_i$ at May by dcpam   Figure 774: $q_l + q_i$ at Jun. by dcpam
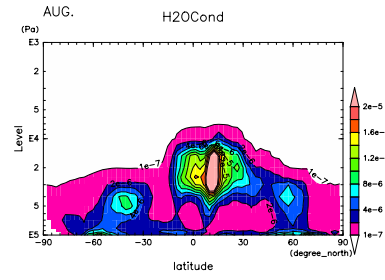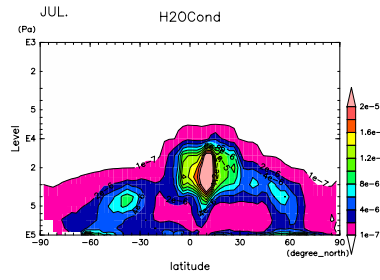
Figure 775: $q_l + q_i$ at Jul. by dcpam

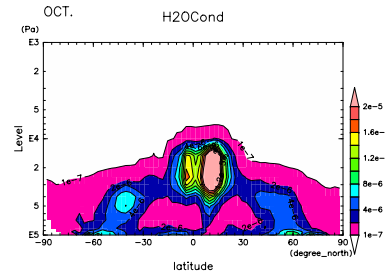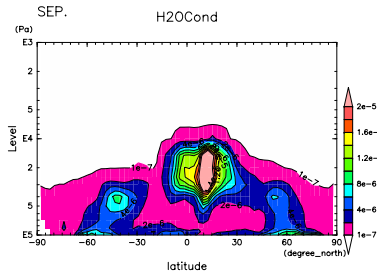Figure 776: $q_l + q_i$ at Aug. by dcpam

Figure 777: $q_l + q_i$ at Sep. by dcpam   Figure 778: $q_l + q_i$ at Oct. by dcpam
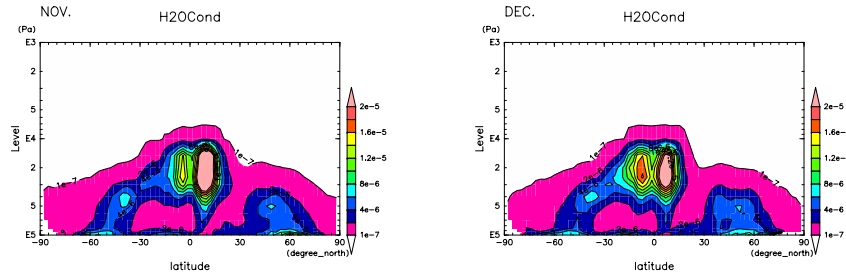
Figure 779: $q_l + q_i$ at Nov. by dcpam   Figure 780: $q_l + q_i$ at Dec. by dcpam