Interannual variability of the occurrence of MJO at different phases and its association with two ENSO modes

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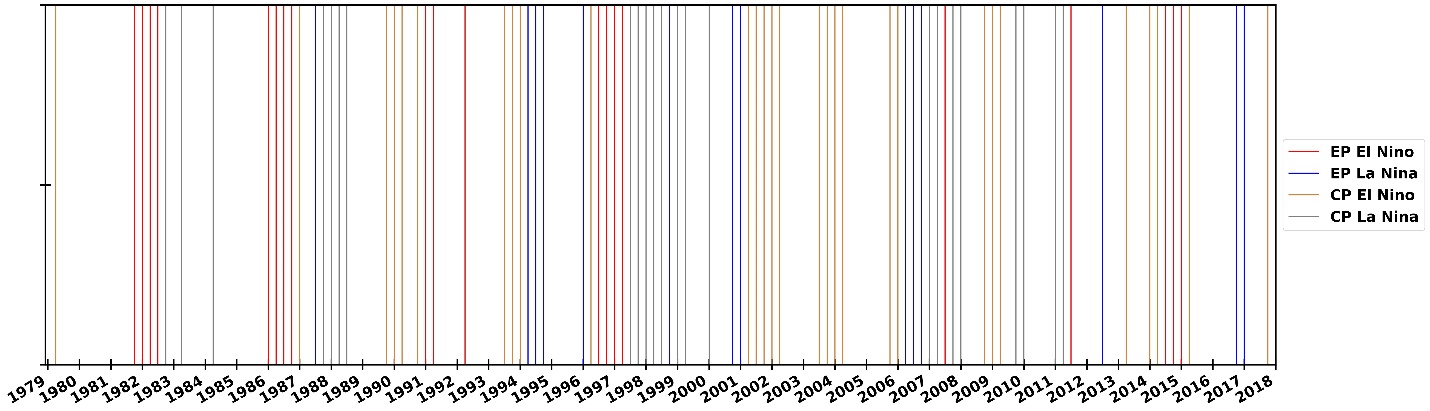
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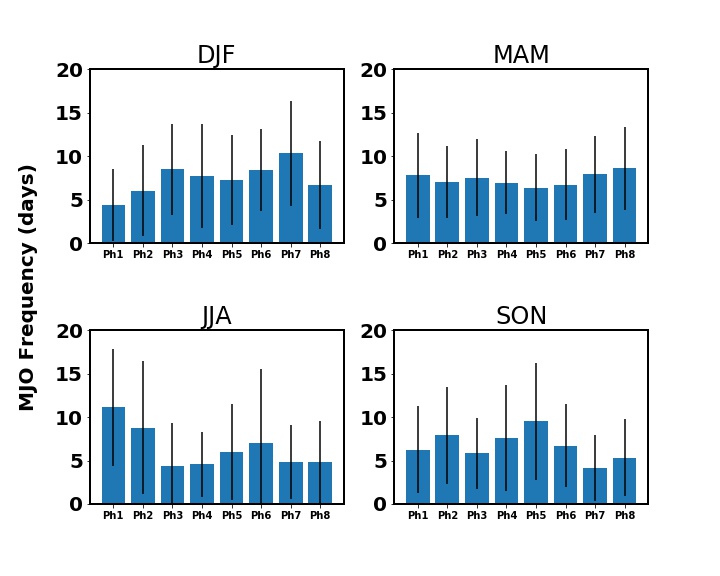
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## Supplementary Figures

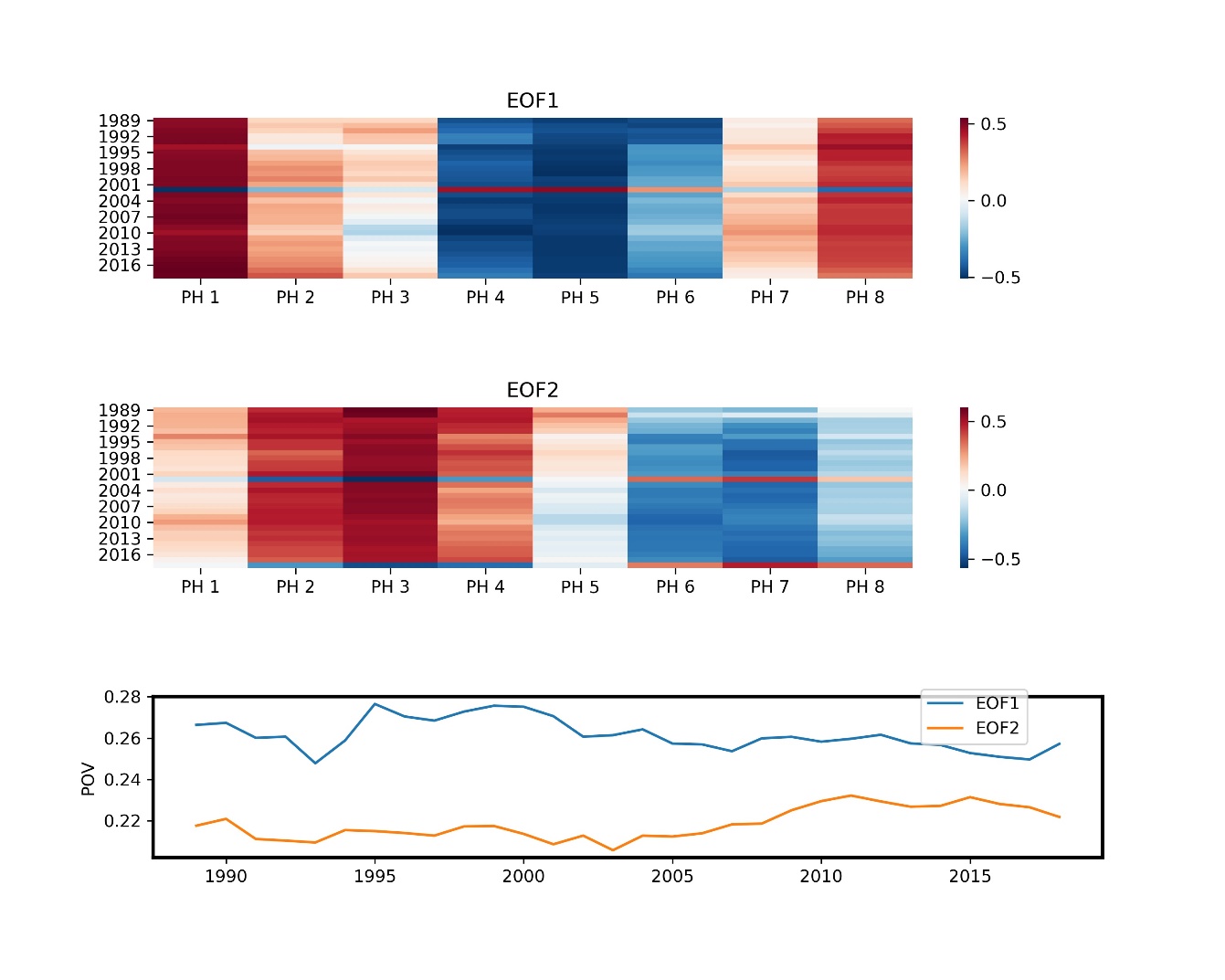


**Supplementary Figure 1**. CP type and EP type ENSO seasons from 1979-2018. Each bar represents a three-month season (i.e., DJF, MAM, JJA, SON).

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**Supplementary Figure 2**. Mean and standard deviation of MJO frequency in DJF, MAM, JJA and SON.



**Supplementary Figure 3.** **(a)** Time evolution of EOF1 of MJO frequency from 1979-1989 to 1979-2018. **(b)** Time evolution of EOF2 of MJO frequency from 1979-1989 to 1979-2018. (c) Time evolution of percentage of variance explained by EOF1 and EOF2 from 1979-1989 to 1979-2018.

**Supplementary Table 1:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Positive CP ENSO** | **Negative CP ENSO** | **Positive EP ENSO** | **Negative EP ENSO** |
| 1980-MAM,  1987-DJF,  1990-SON,  1990-DJF,  1991-MAM,  1991-SON,  1994-JJA,  1994-SON,  1994-DJF,  1997-MAM,  2002-MAM,  2002-JJA,  2002-SON,  2002-DJF,  2003-MAM,  2004-JJA,  2004-SON,  2004-DJF,  2005-MAM,  2006-SON,  2006-DJF,  2009-SON,  2009-DJF,  2010-MAM,  2014-MAM,  2014-DJF,  2015-MAM,  2016-MAM,  2018-SON | 1983-SON,  1984-MAM,  1985-MAM,  1988-SON,  1988-DJF,  1989-MAM,  1989-JJA,  1998-JJA,  1998-SON,  1998-DJF,  1999-MAM,  1999-JJA,  1999-DJF,  2000-MAM,  2000-DJF,  2007-DJF,  2008-MAM,  2008-SON,  2008-DJF,  2010-SON,  2010-DJF,  2011-DJF,  2012-MAM | 1982-SON,  1982-DJF,  1983-MAM,  1983-JJA,  1986-DJF,  1987-MAM,  1987-JJA,  1987-SON,  1991-DJF,  1992-MAM,  1993-MAM,  1997-JJA,  1997-SON,  1997-DJF,  1998-MAM,  2008-JJA,  2012-JJA,  2015-JJA,  2015-SON,  2015-DJF | 1988-JJA,  1995-MAM,  1995-JJA,  1995-SON,  1996-DJF,  1999-SON,  2001-SON,  2001-DJF,  2007-MAM,  2007-JJA,  2007-SON,  2013-JJA,  2017-SON,  2017-DJF |