



UNITED NATIONS
UNIVERSITY

UNU-GTP

Geothermal Training Programme

Orkustofnun, Grensasvegur 9,
IS-108 Reykjavik, Iceland

Reports 2015
Number 14

APPENDICES TO THE REPORT:
**PROCESSING AND JOINT 1D INVERSION OF
MT AND TEM DATA FROM ALALLOBEDA GEOTHERMAL FIELD
IN TENDAHO, NE-ETHIOPIA**

By

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Geological Survey of Ethiopia

P.O. Box 2302

Addis Ababa

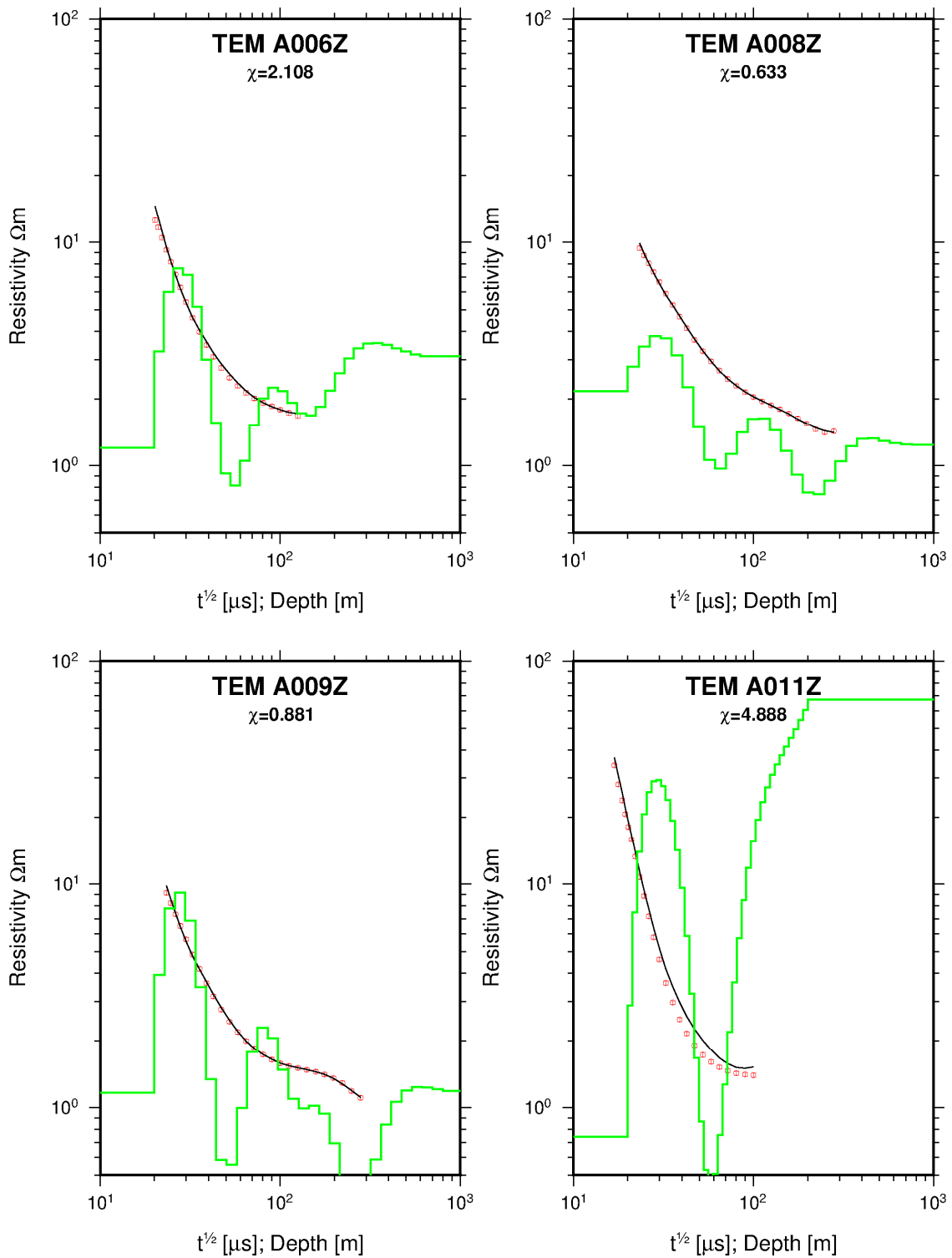
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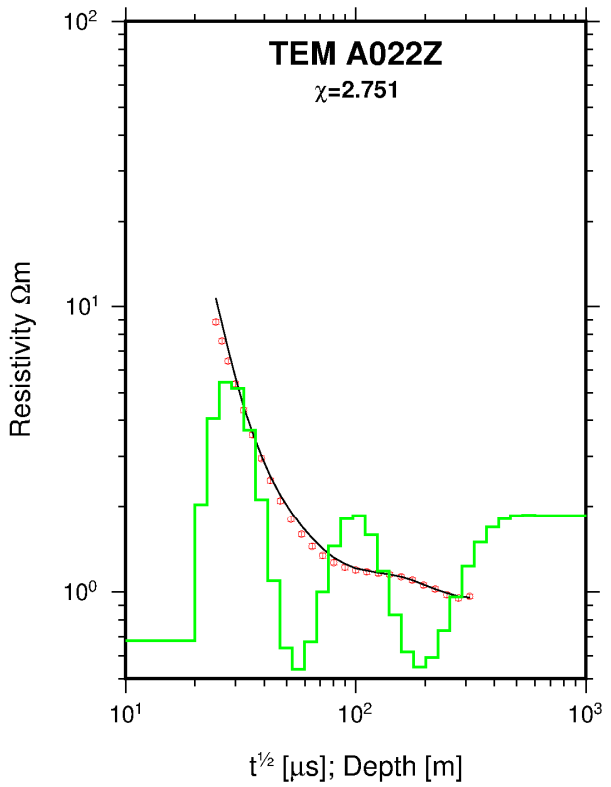
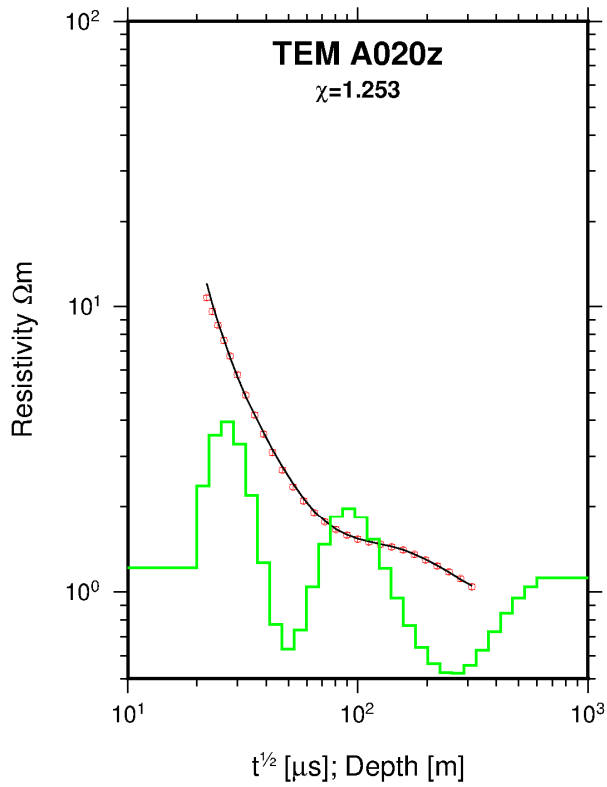
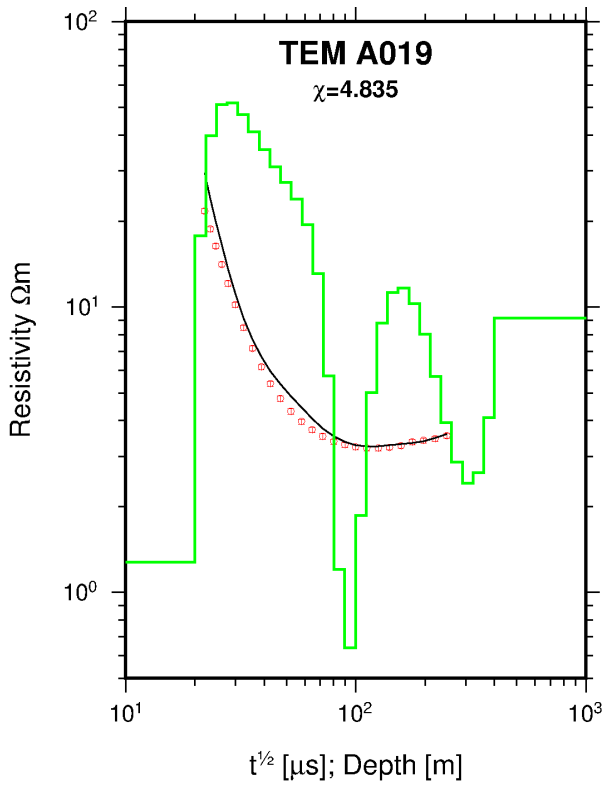
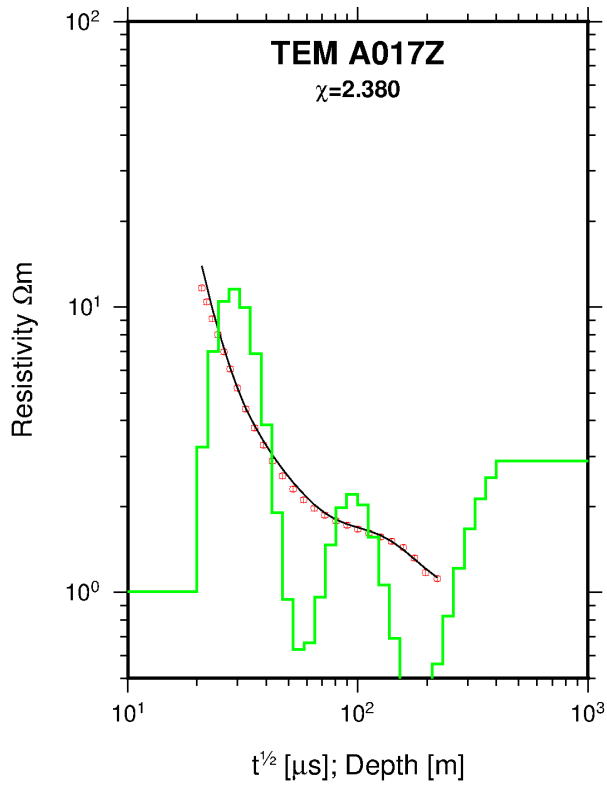
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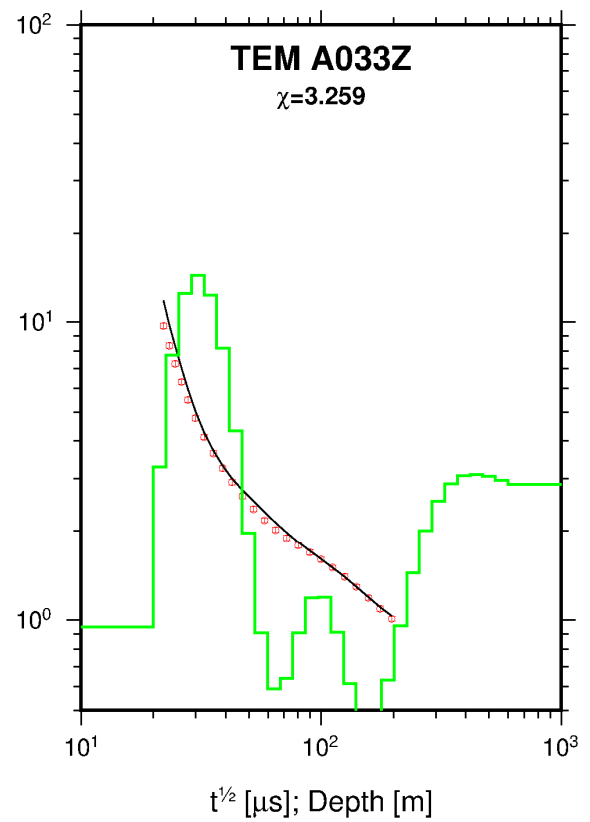
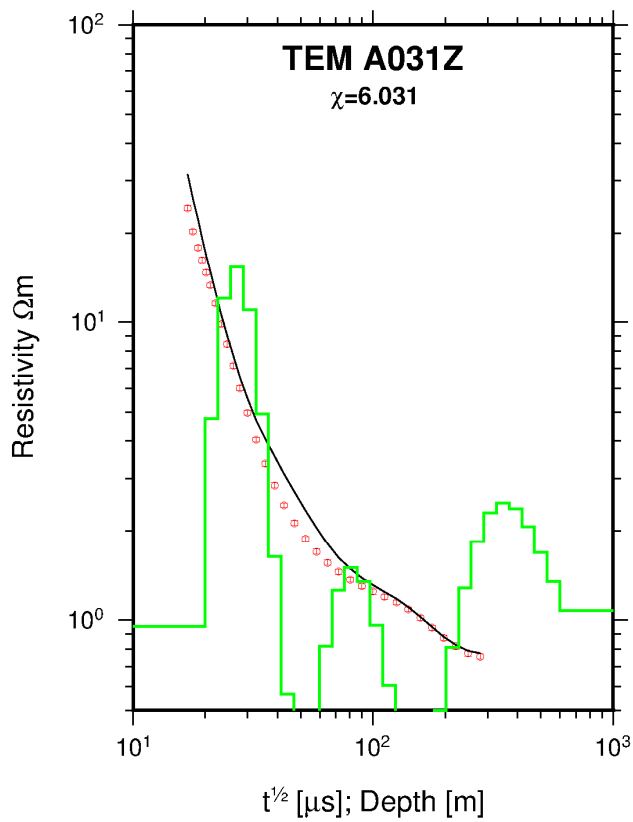
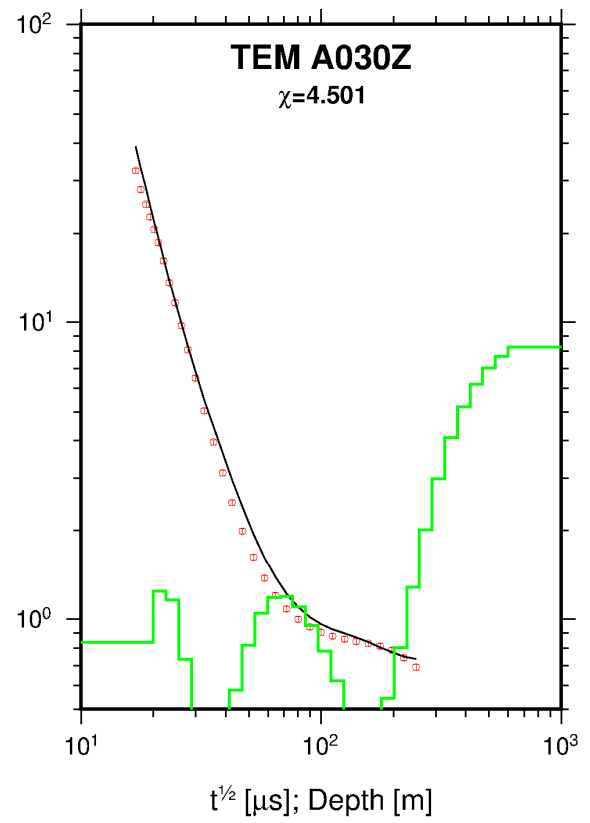
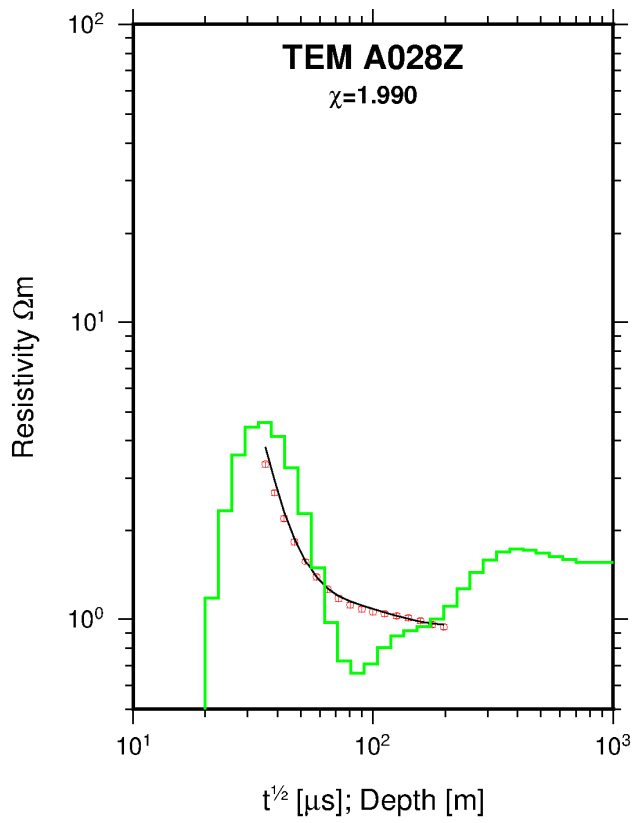
United Nation University
Geothermal Training Programme
Reykjavík, Iceland
2015

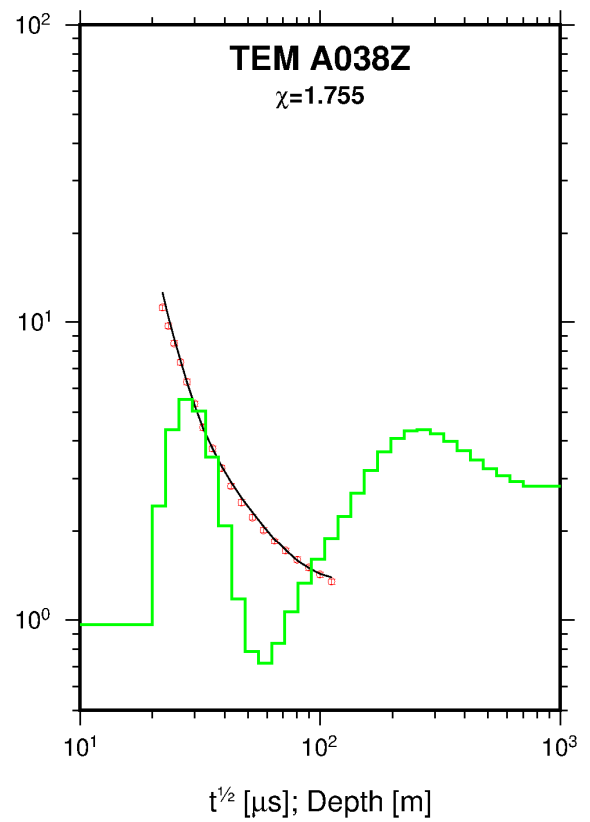
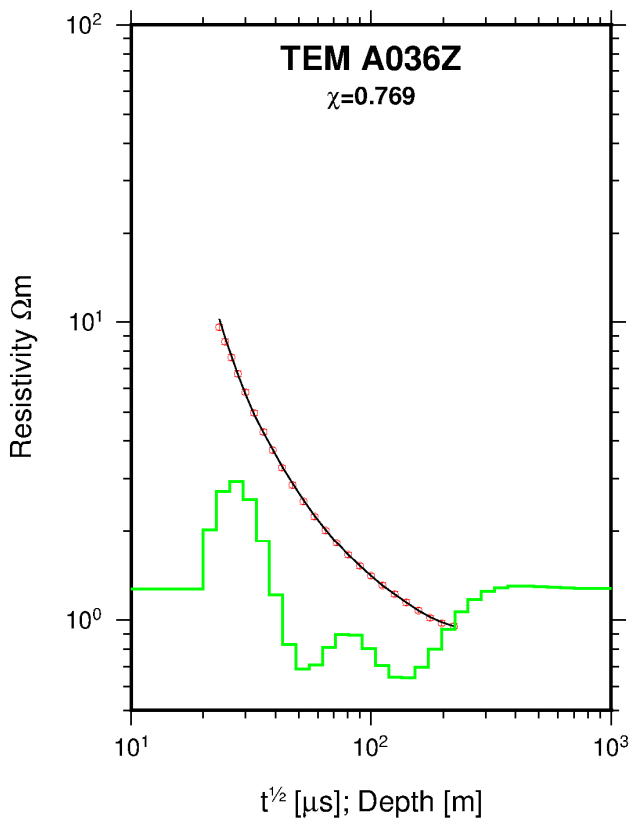
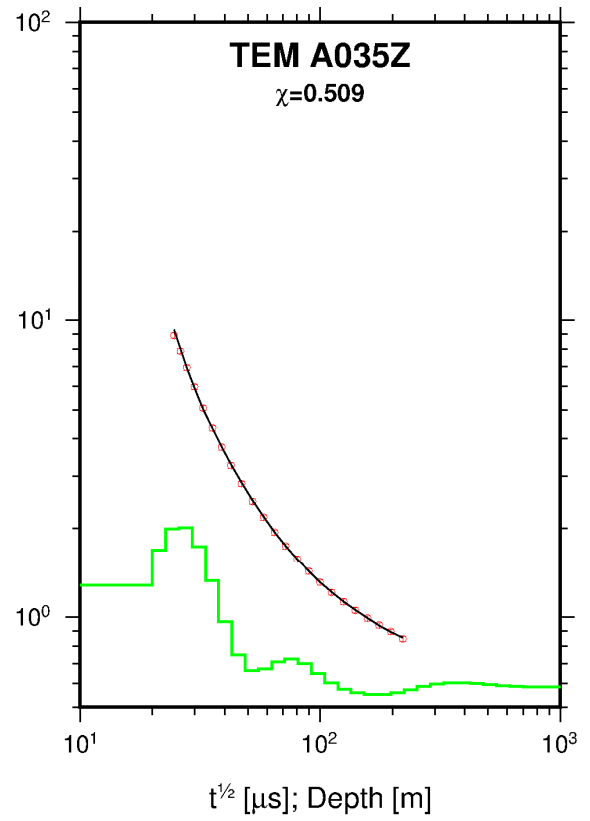
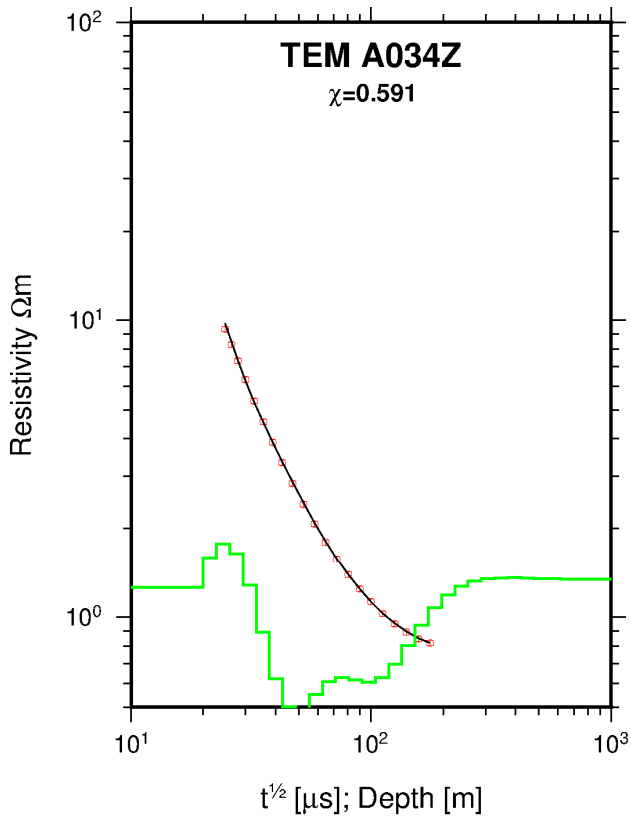
These are the appendices to the report: “*Processing and joint 1D inversion of MT and TEM data from Alallobeda geothermal field in Tendaho, NE-Ethiopia*” by Getenesh Hailegiorgis at the UNU Geothermal Training Programme in 2015. Appendix I shows the TEM data and the associated 1D models. Appendix II shows the processed data for all the MT soundings. Appendix III shows the 1D models of the joint inversion for all TEM and MT data. Appendix IV shows additional resistivity cross-sections and iso-depth-resistivity maps. Appendix V shows maps of the rose diagram of the Zstrike and induction arrows for different periods.

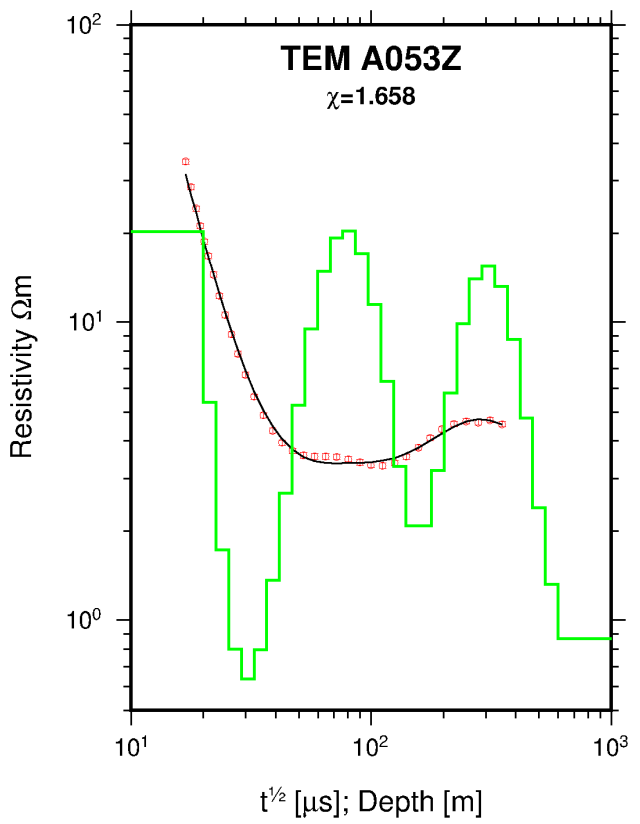
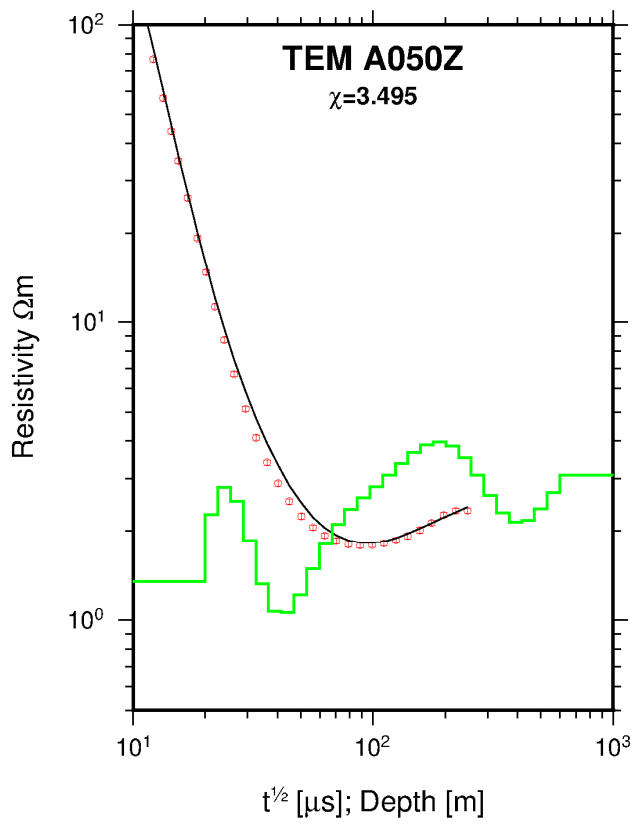
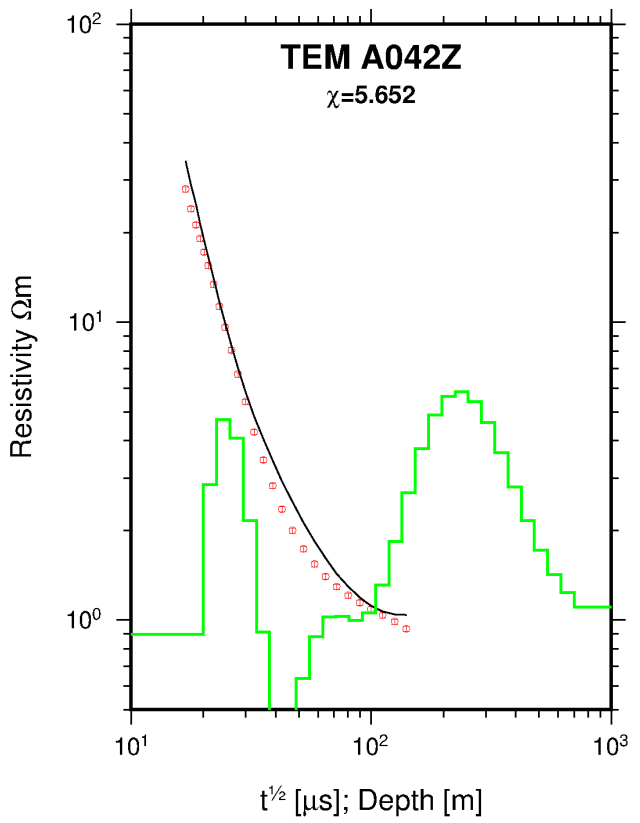
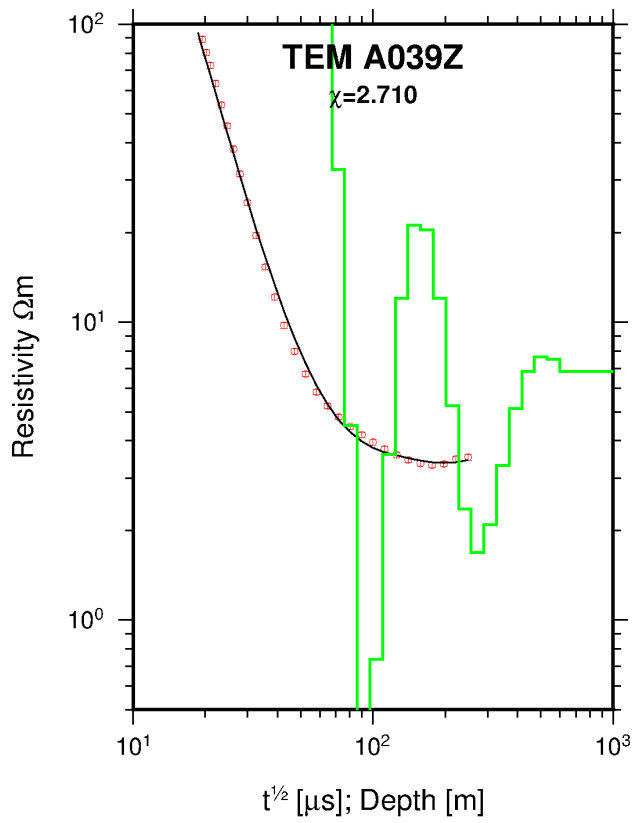
APPENDIX I: TEM data and the associated 1D models

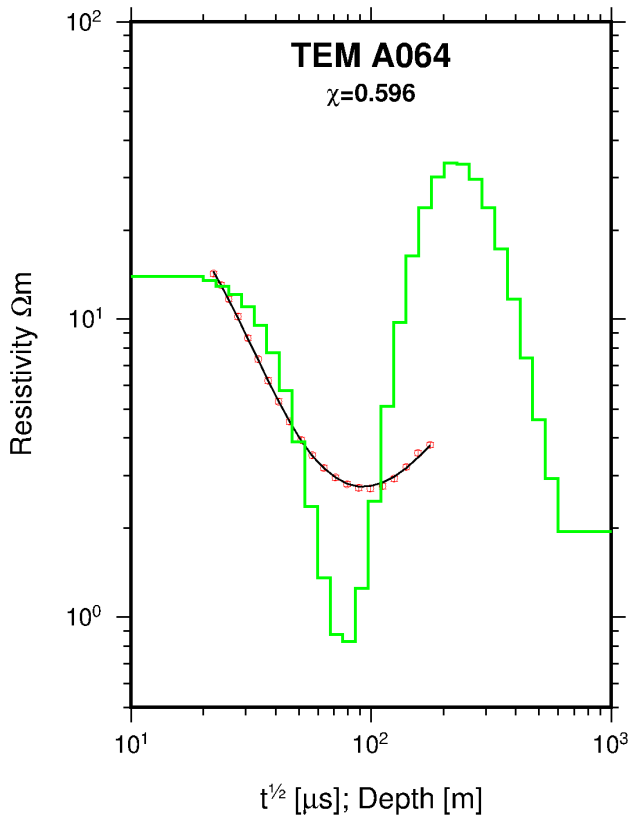
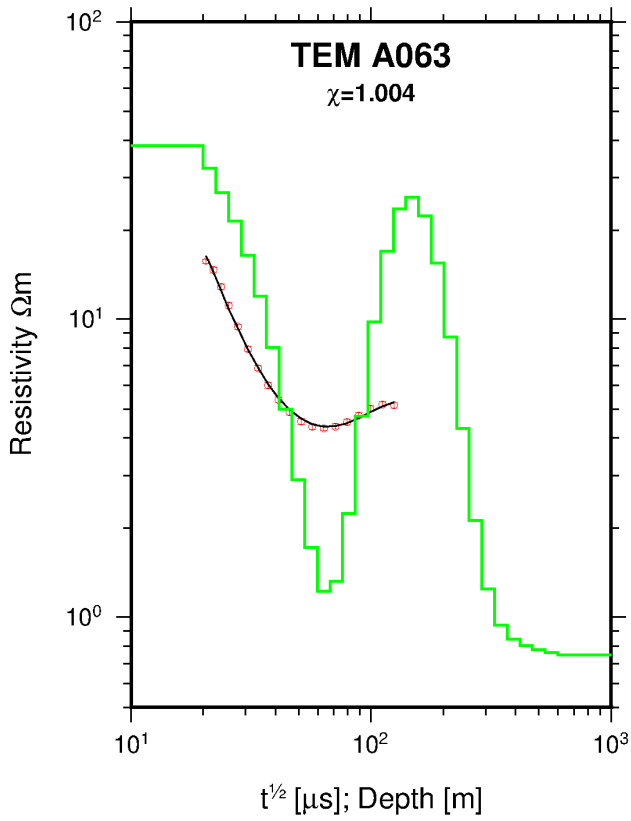
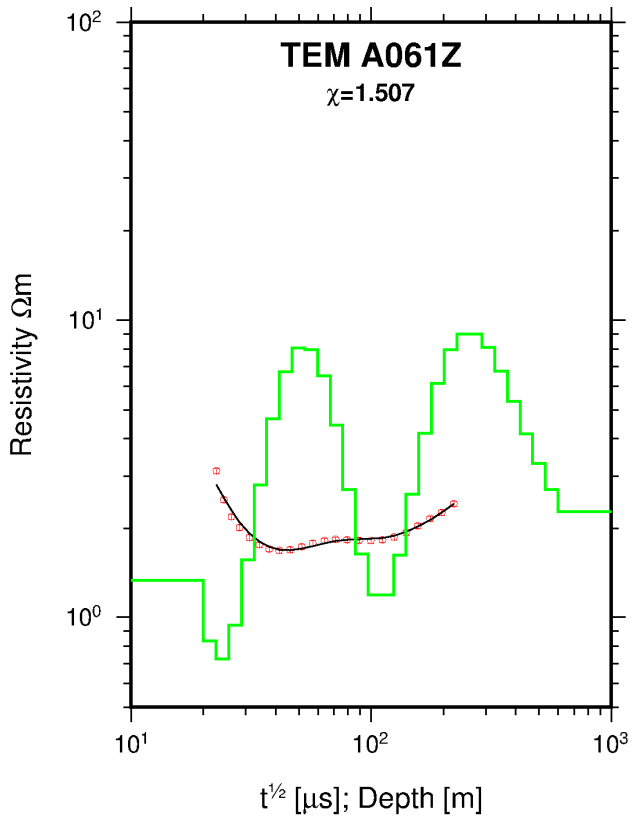
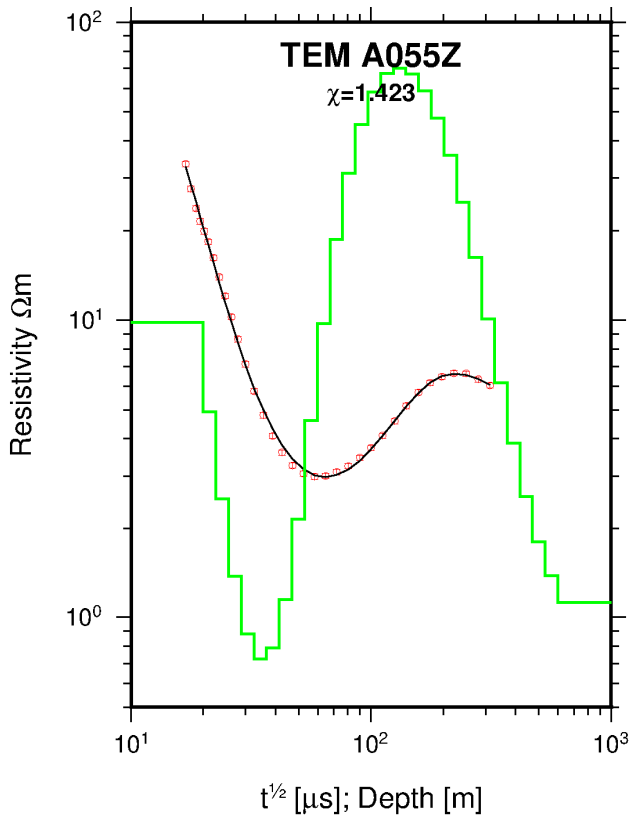


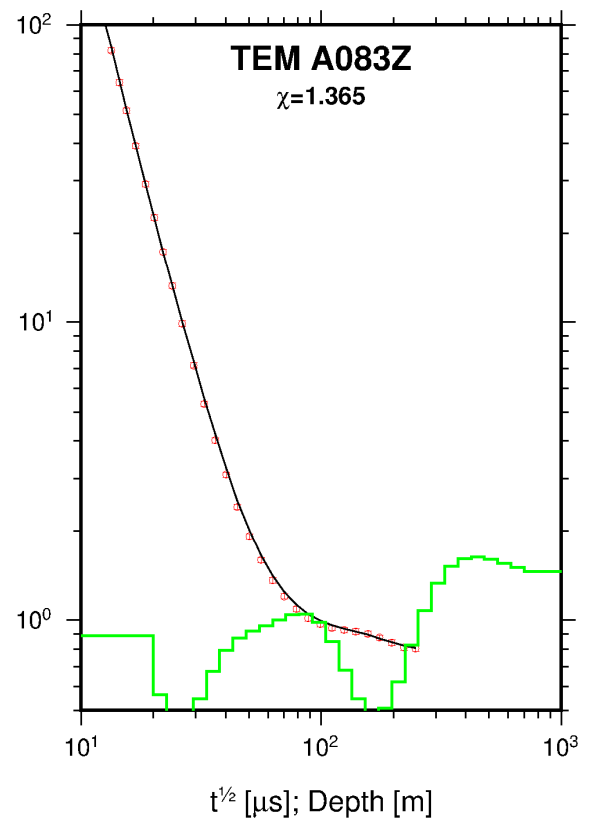
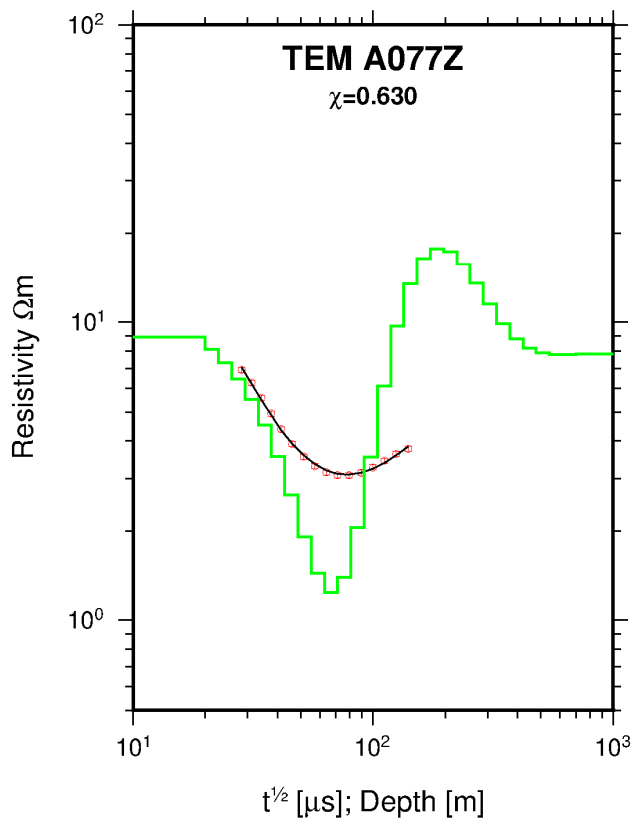
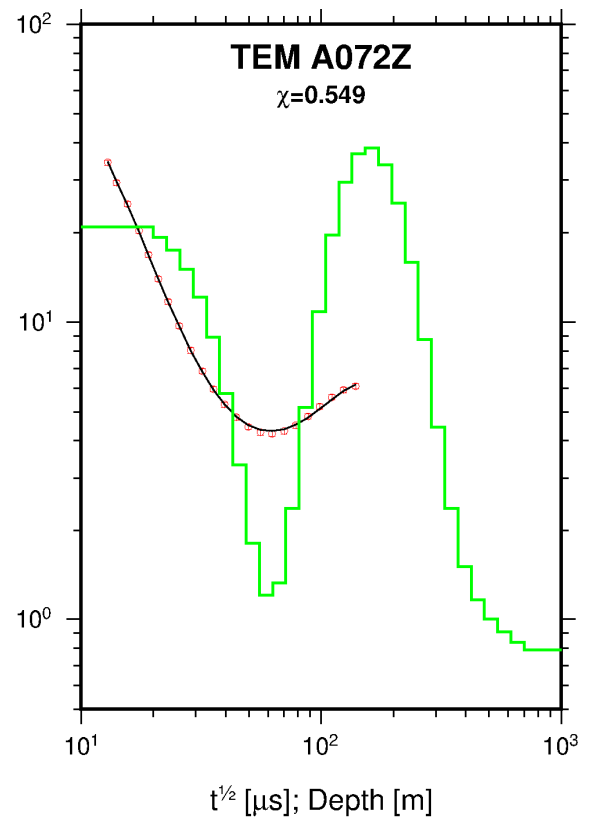
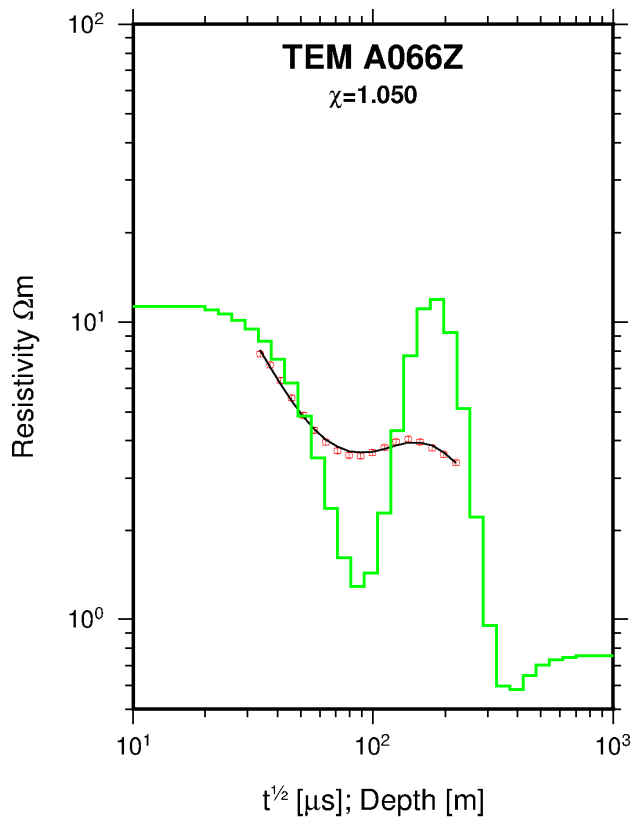


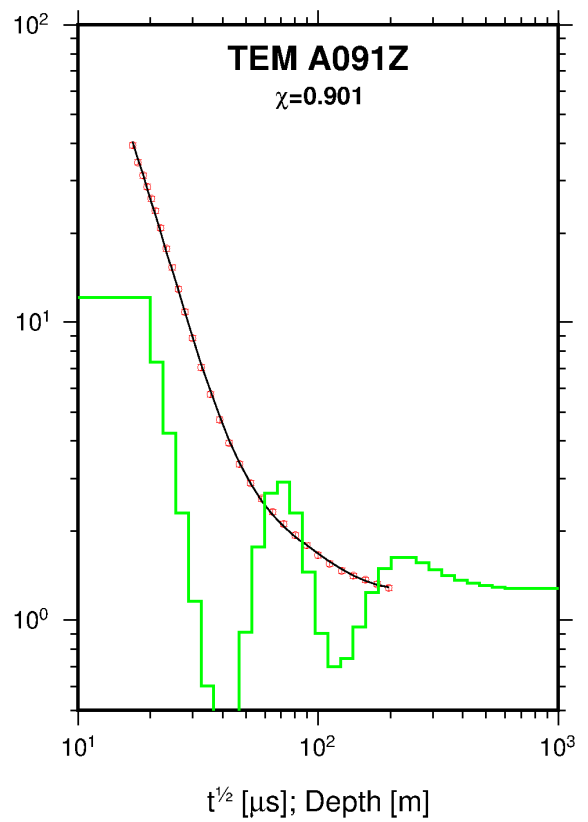
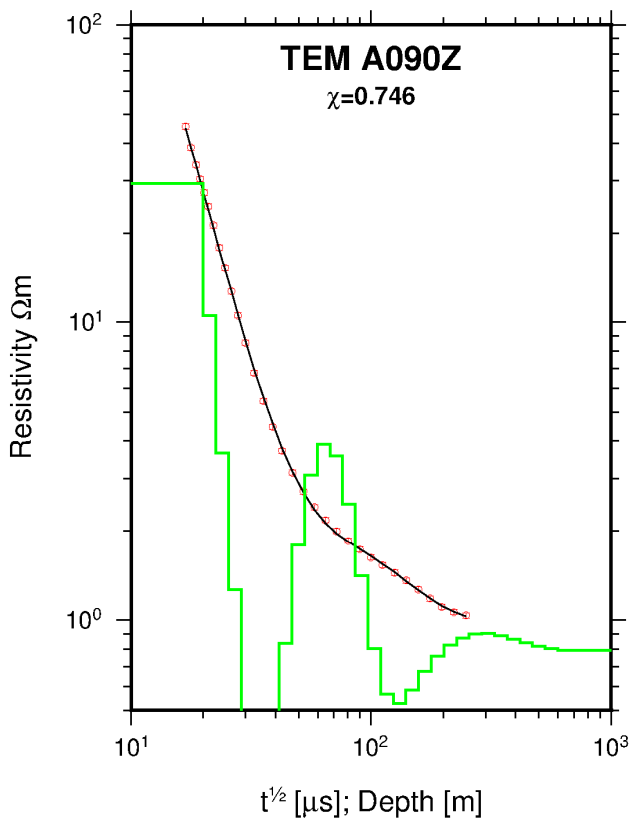
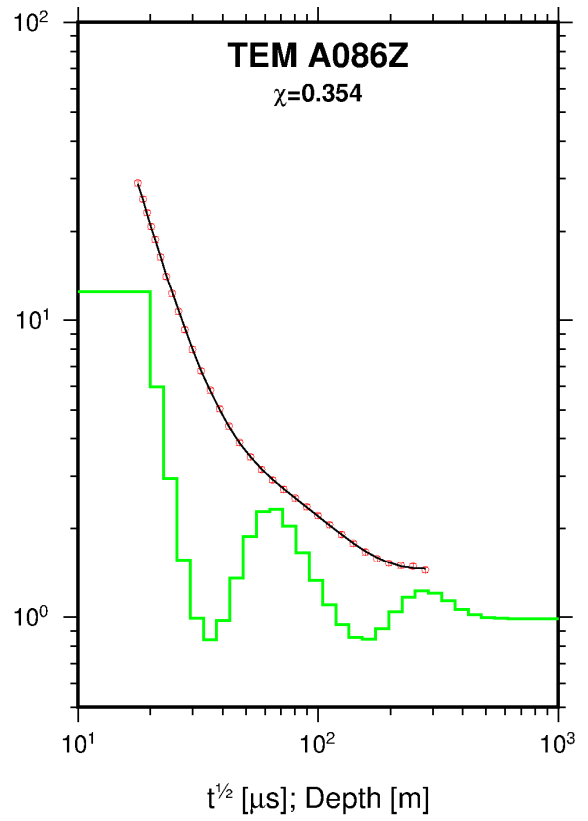
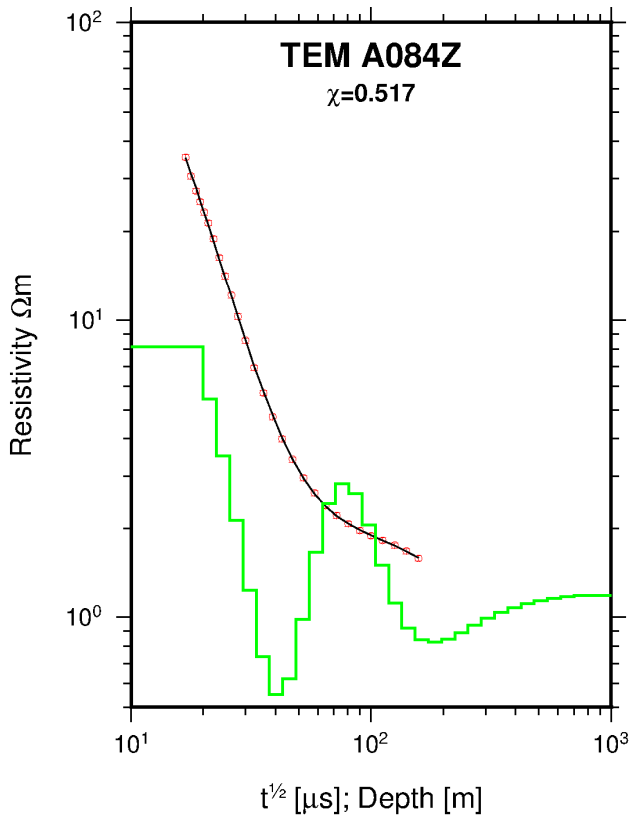


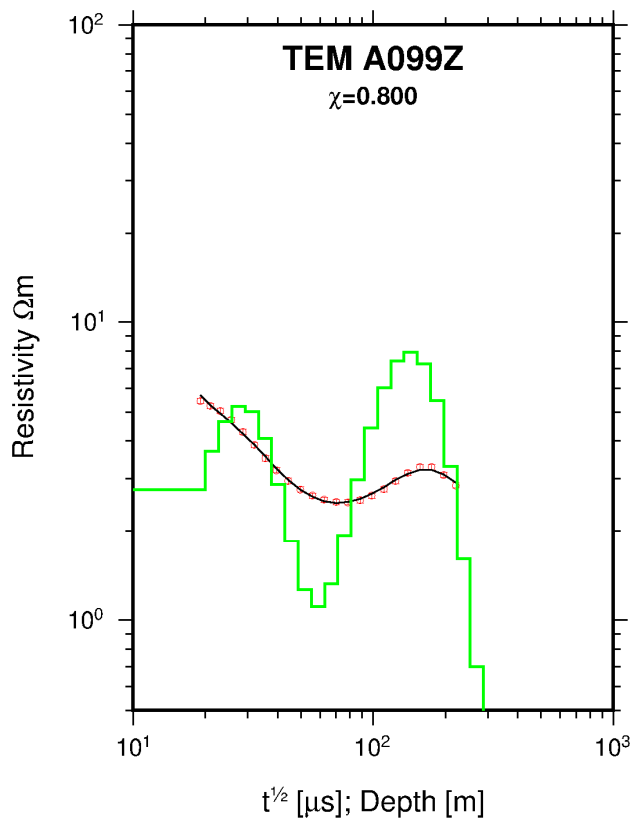
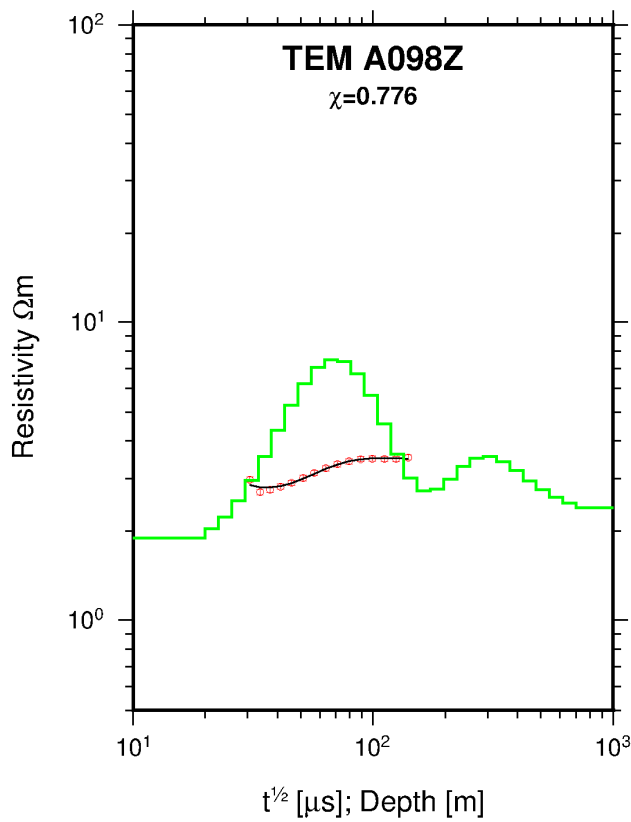
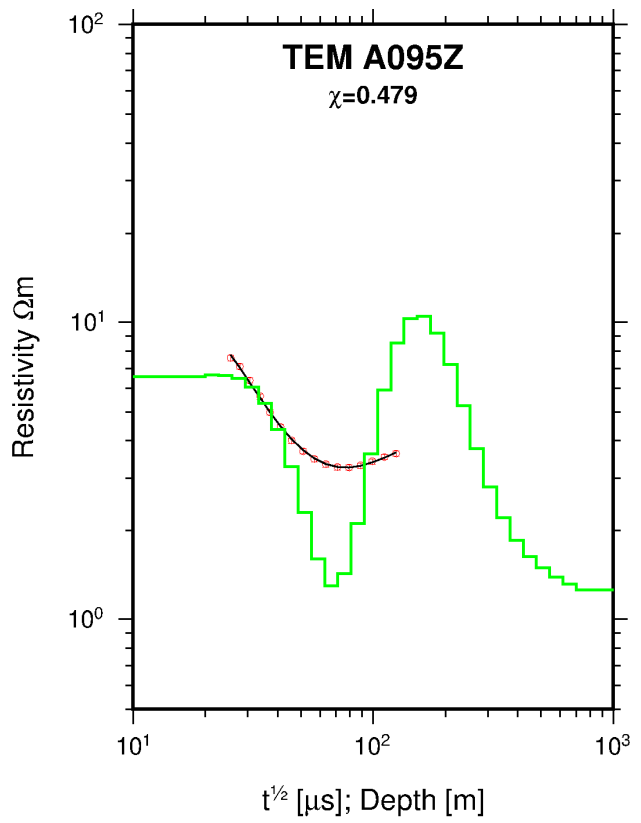
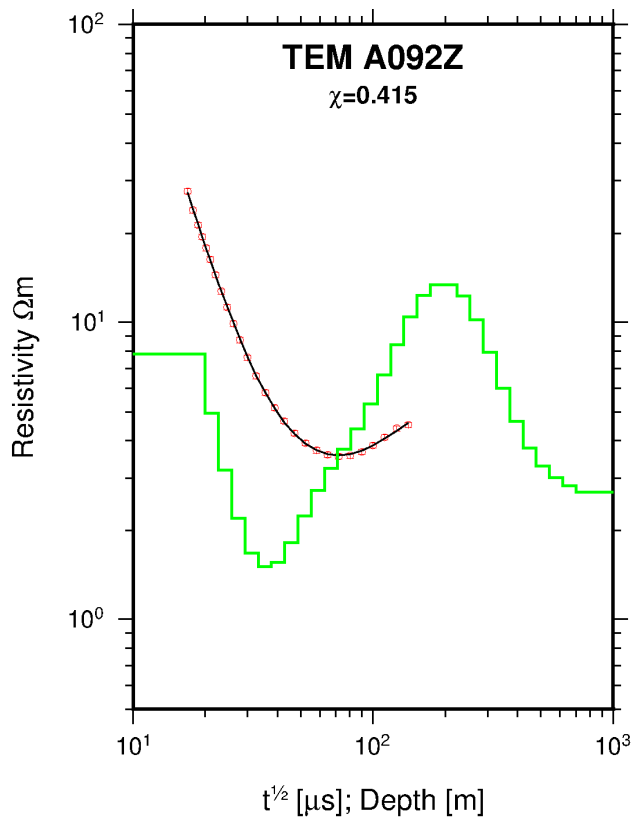


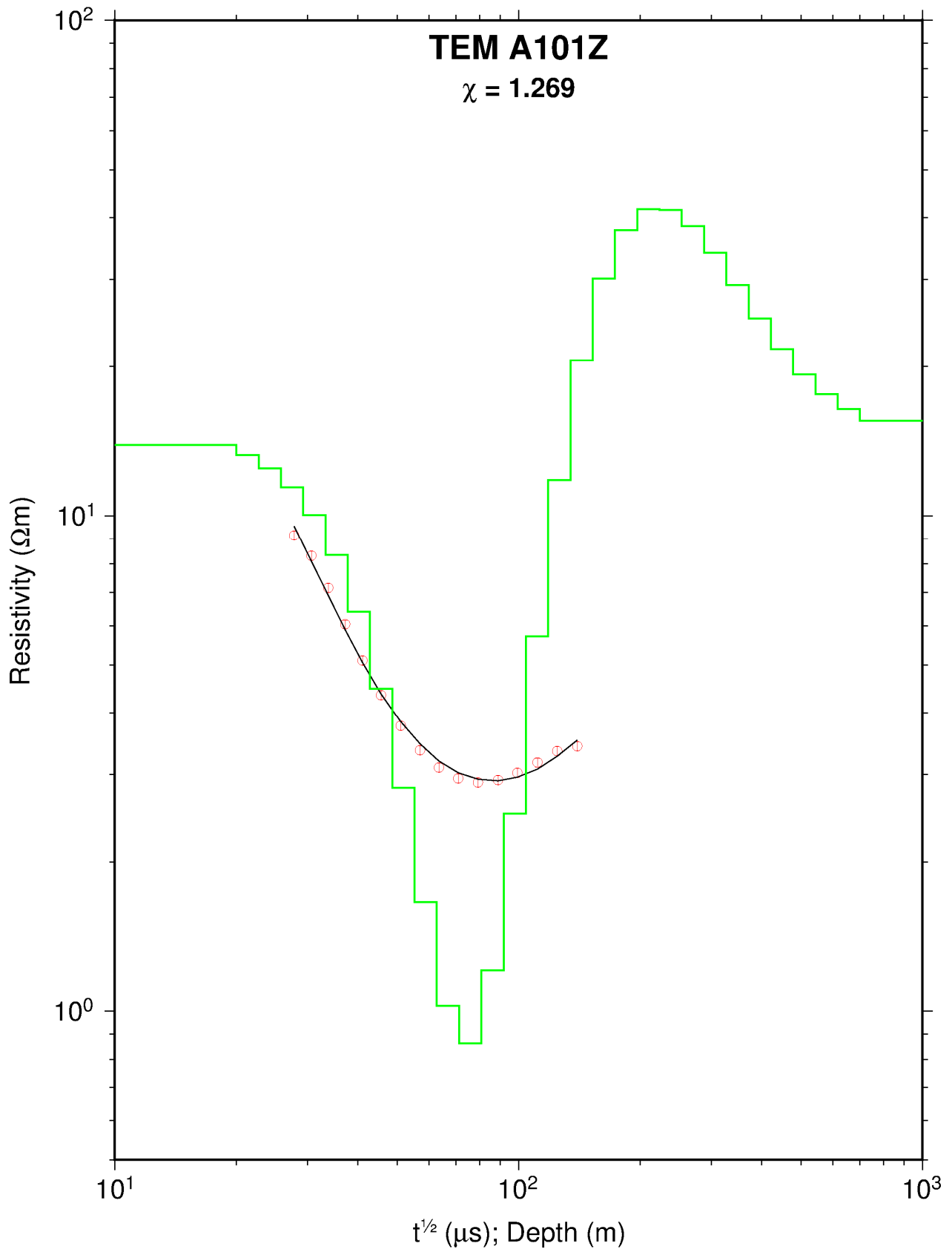


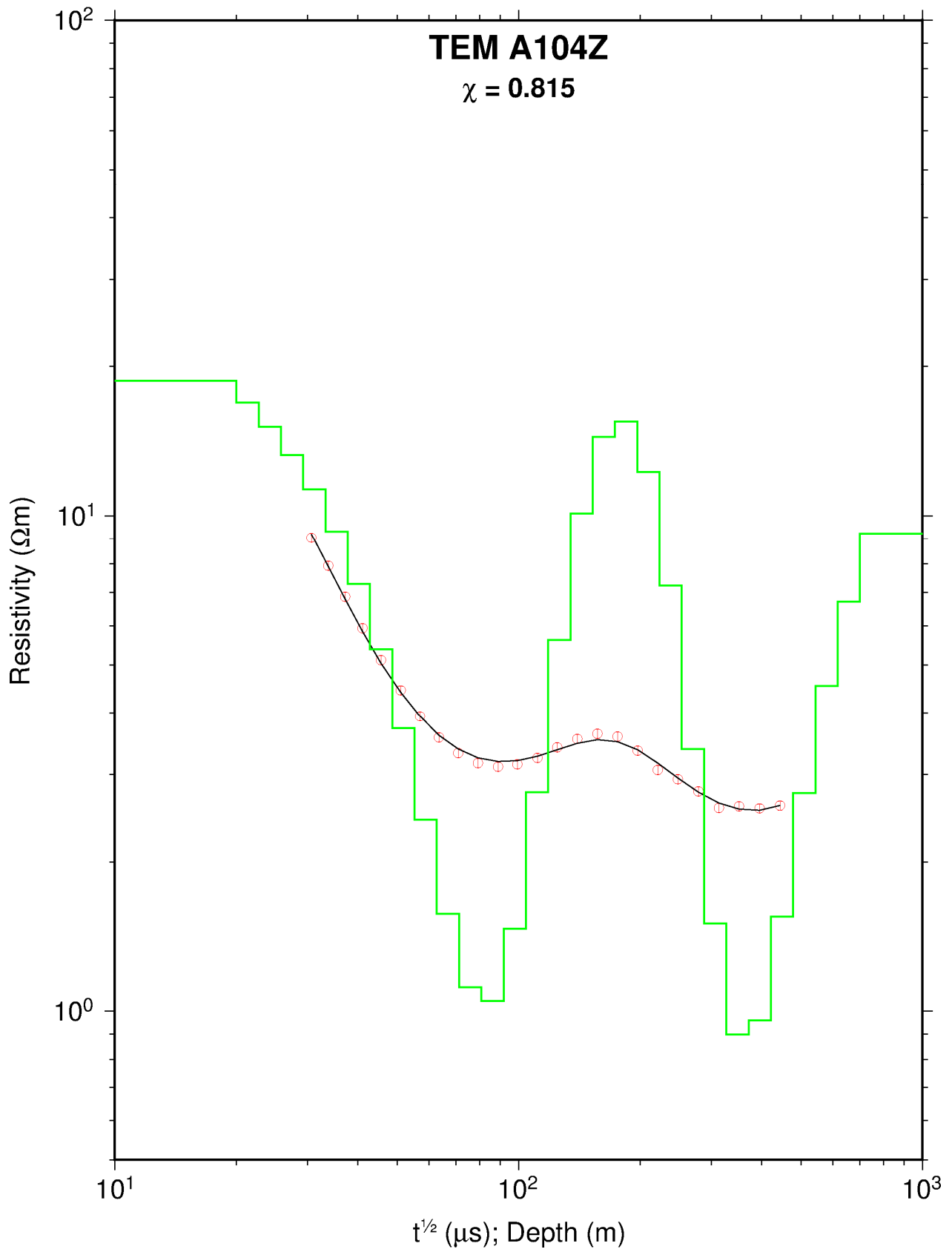








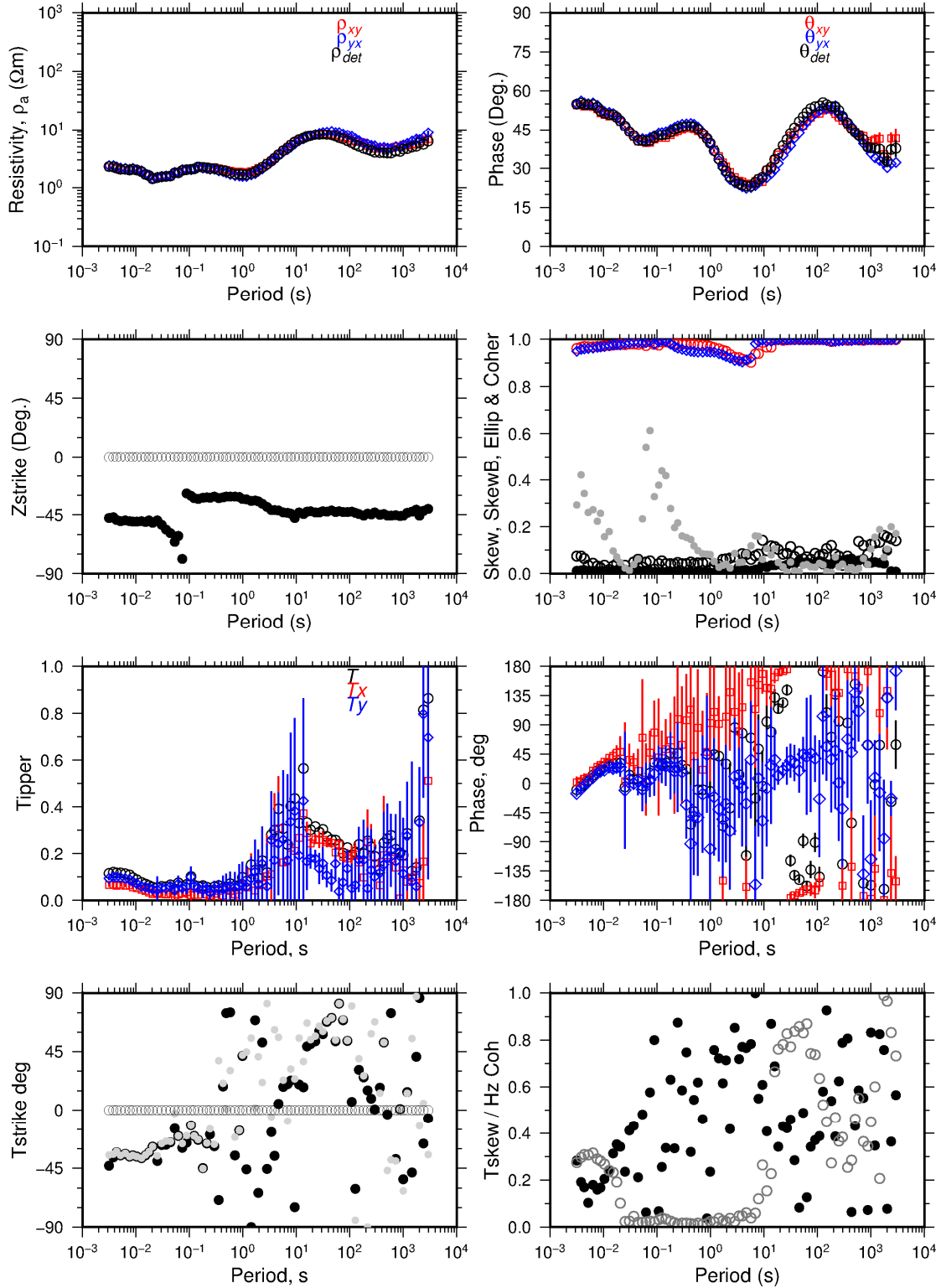




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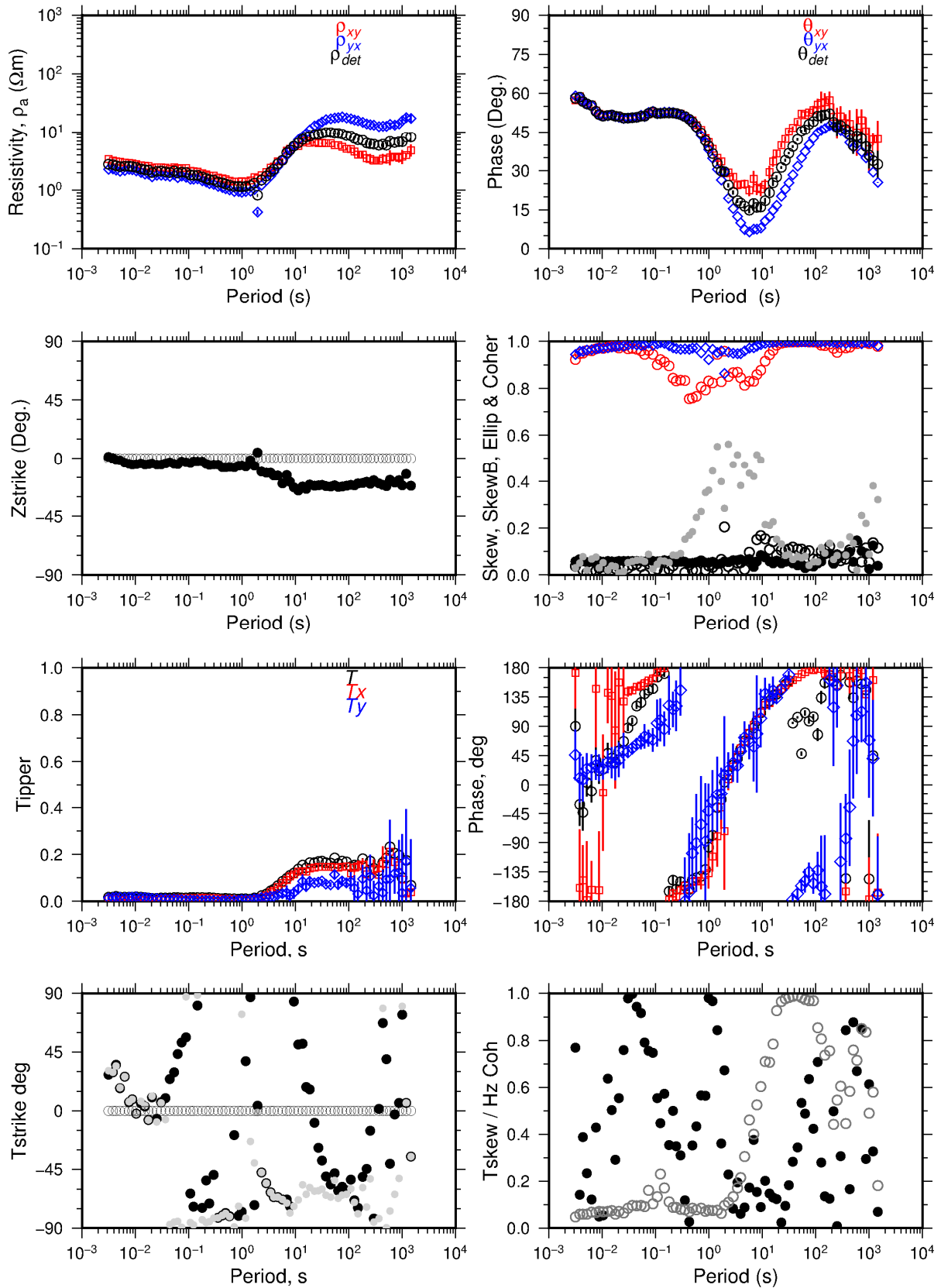
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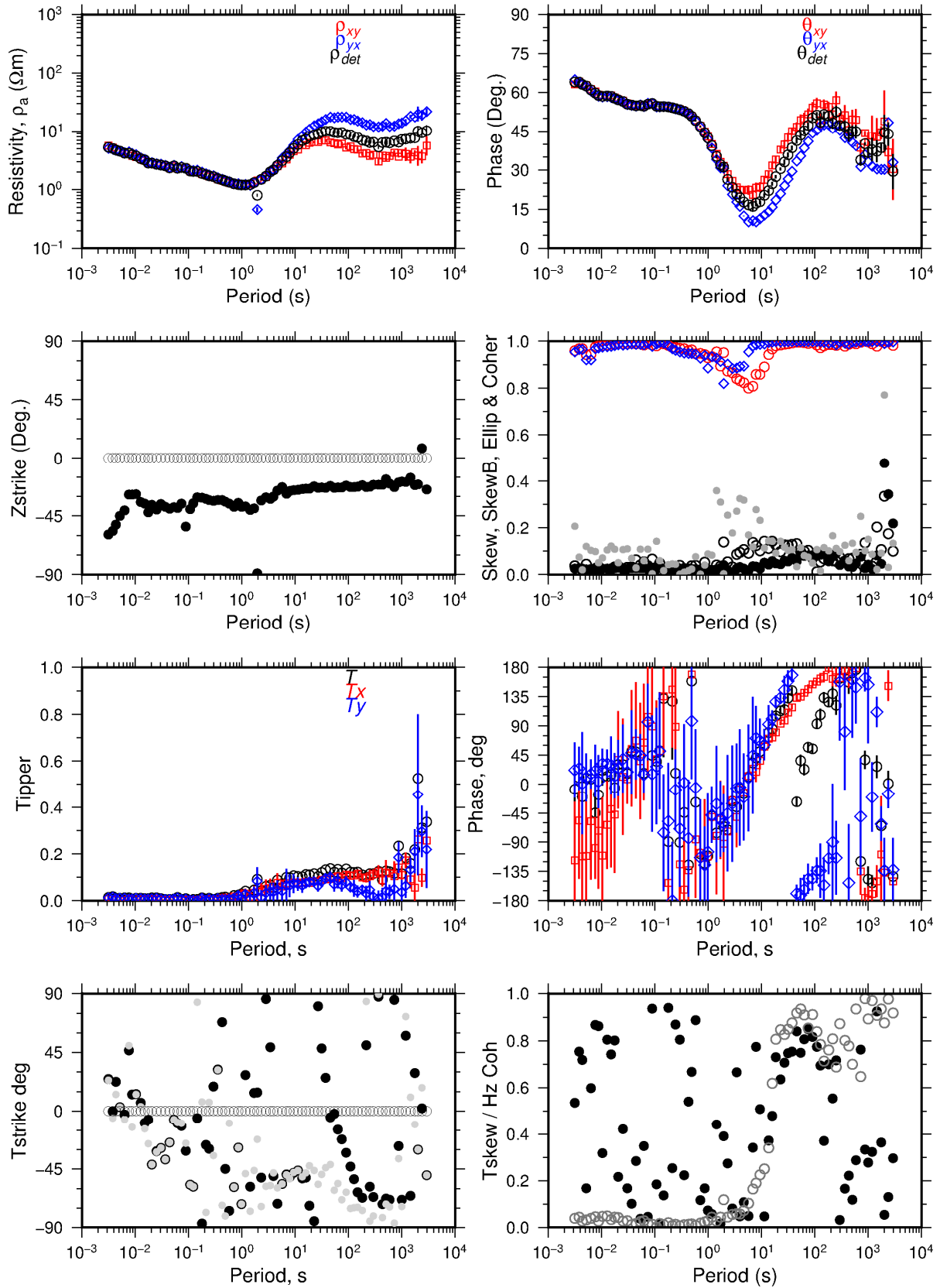
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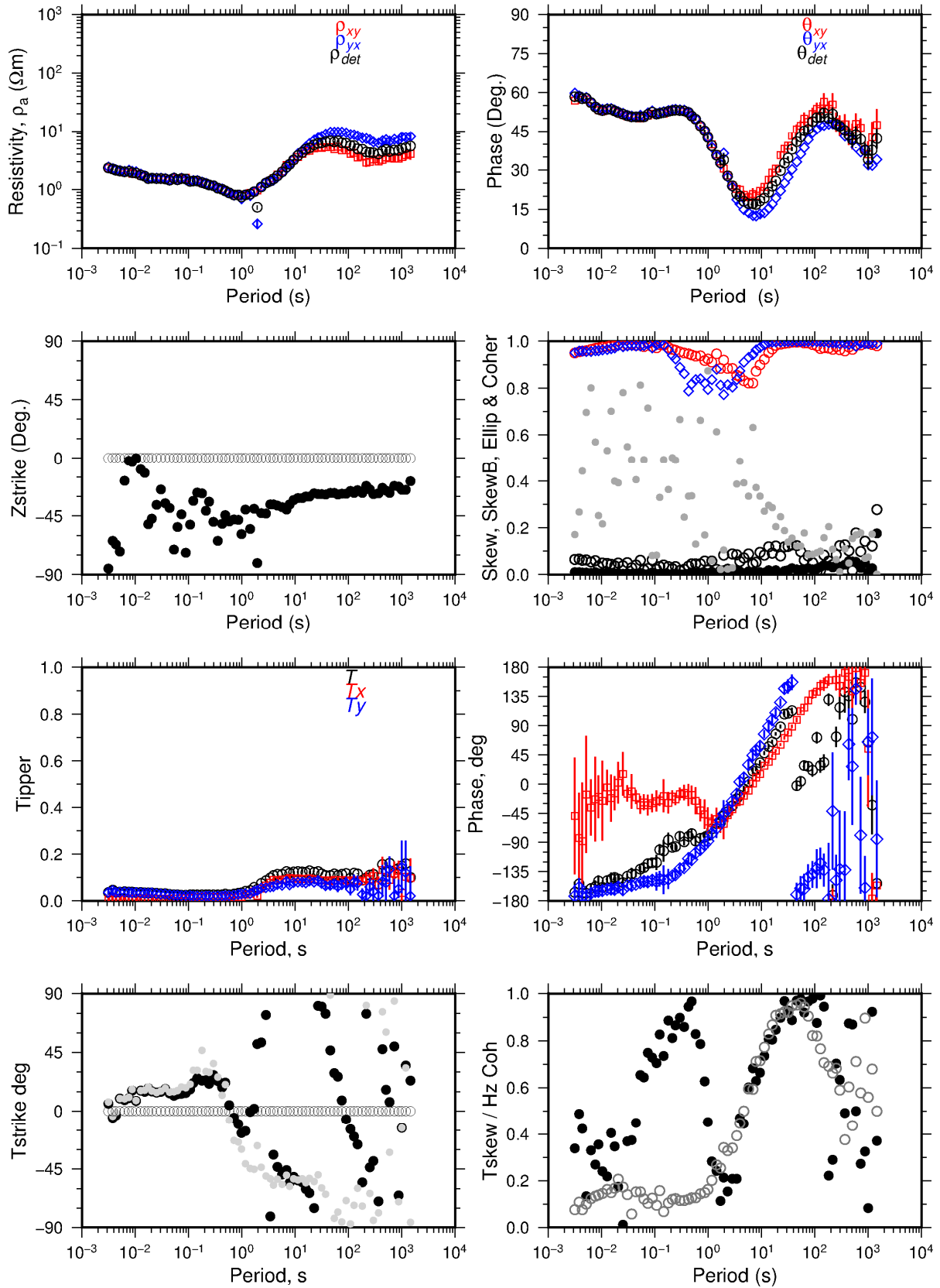
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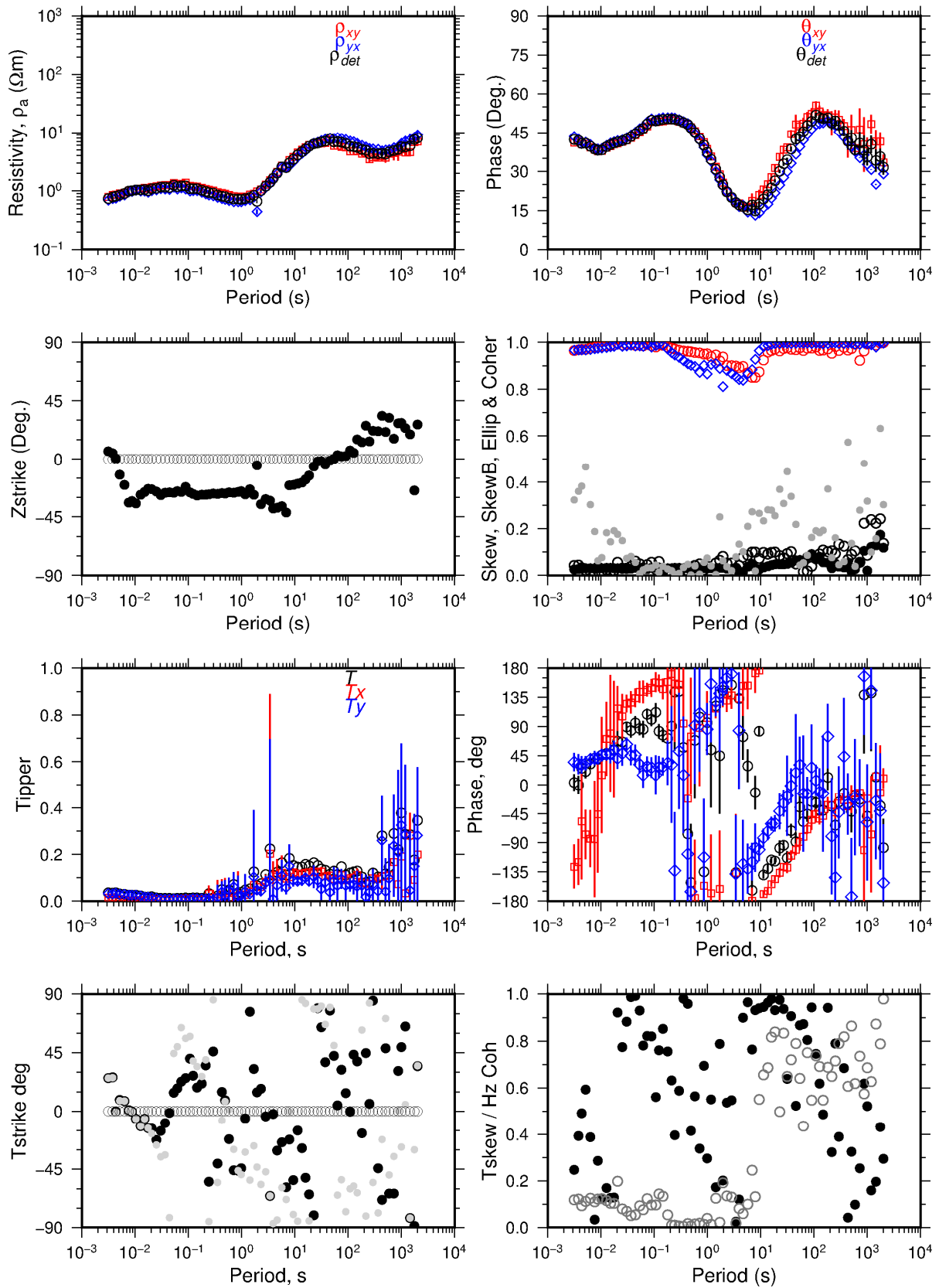
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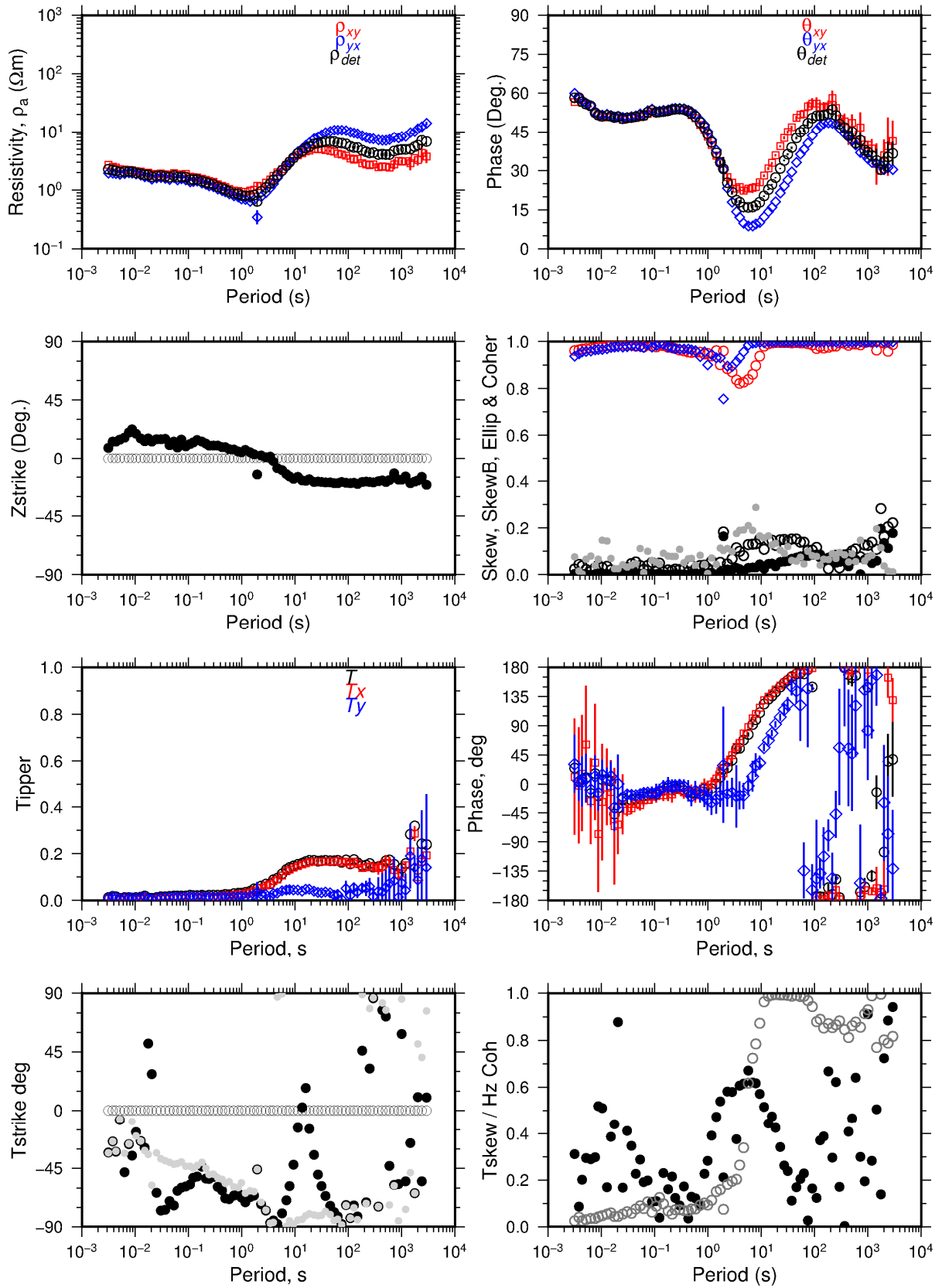
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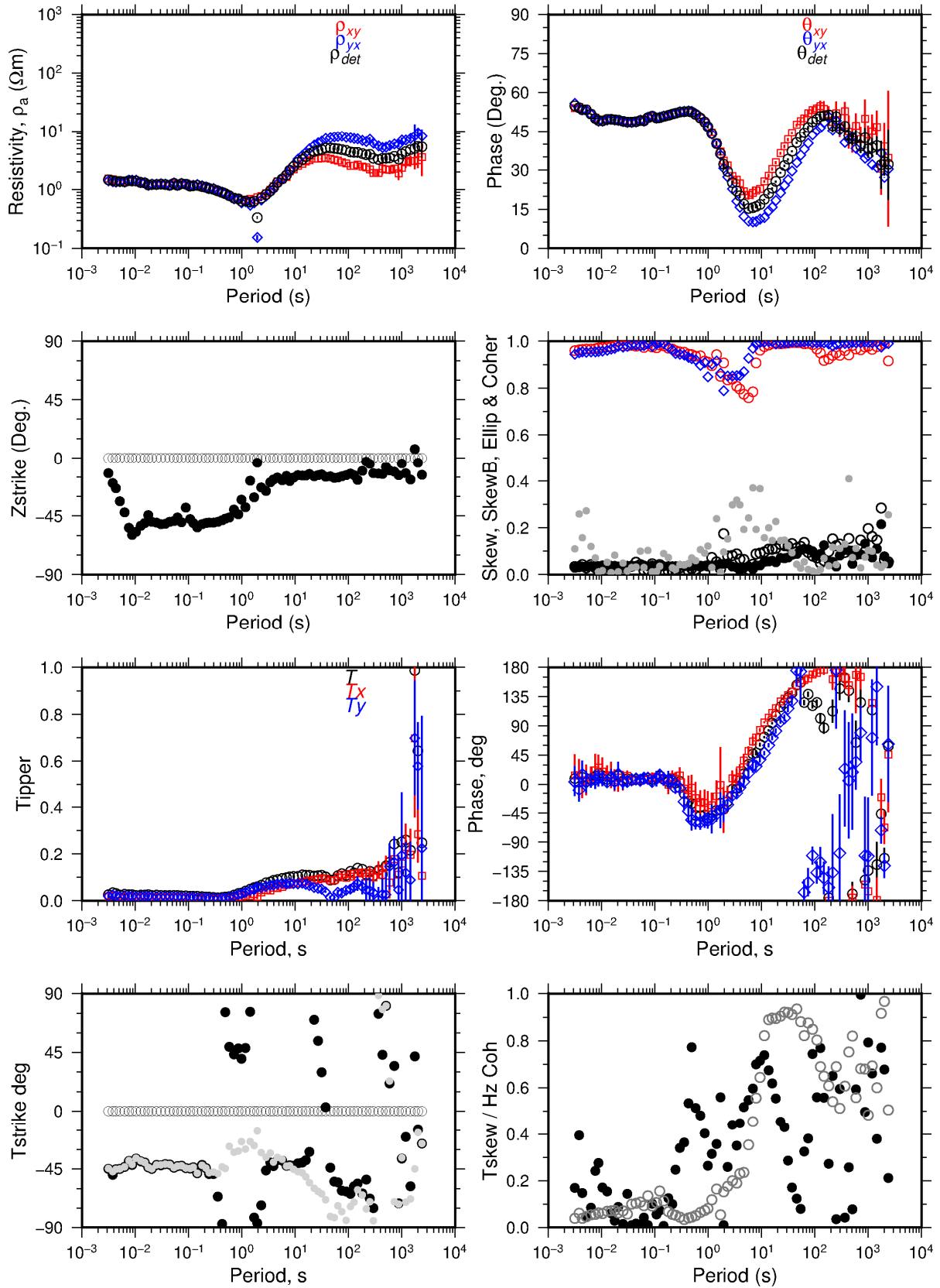
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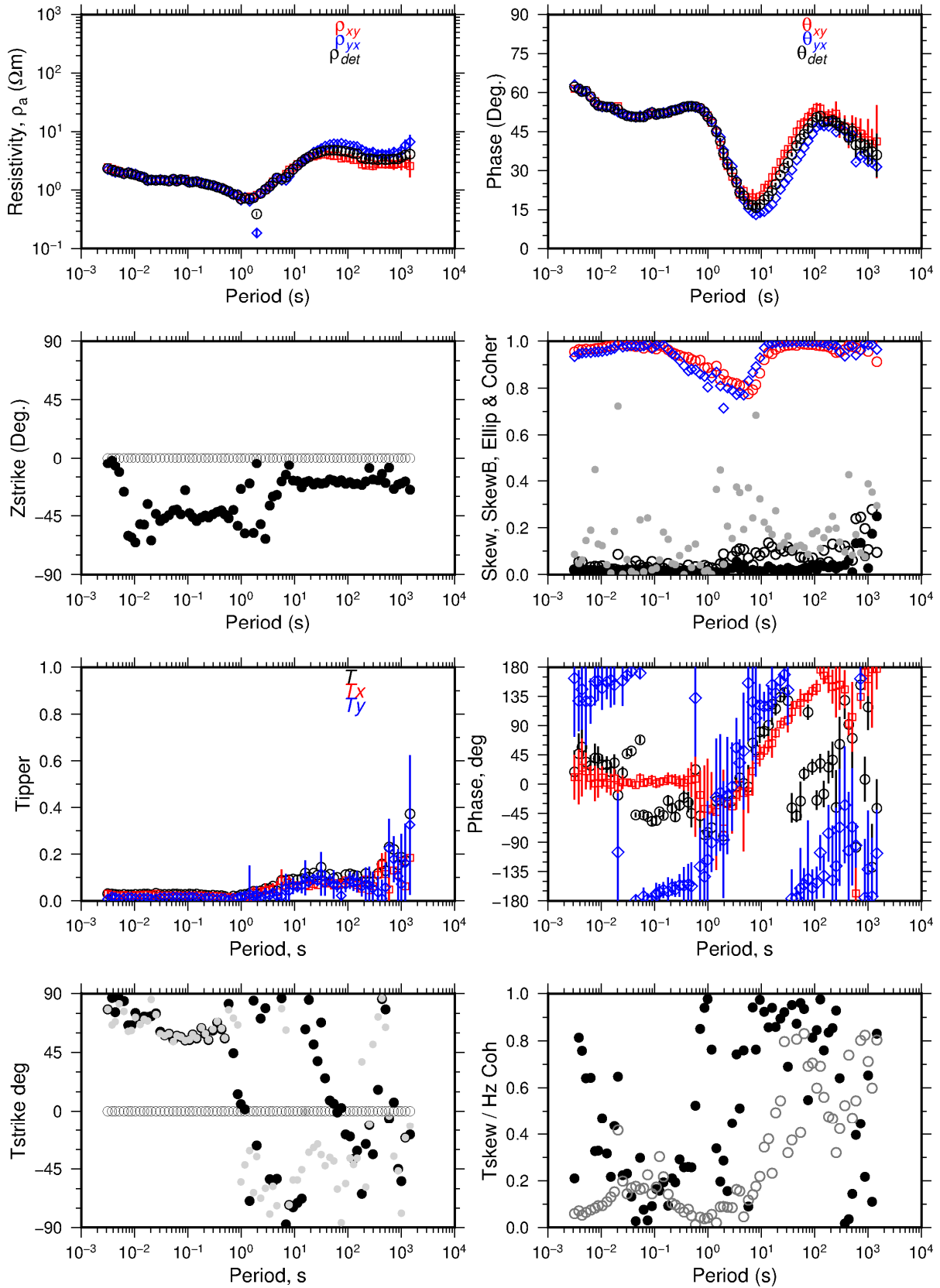
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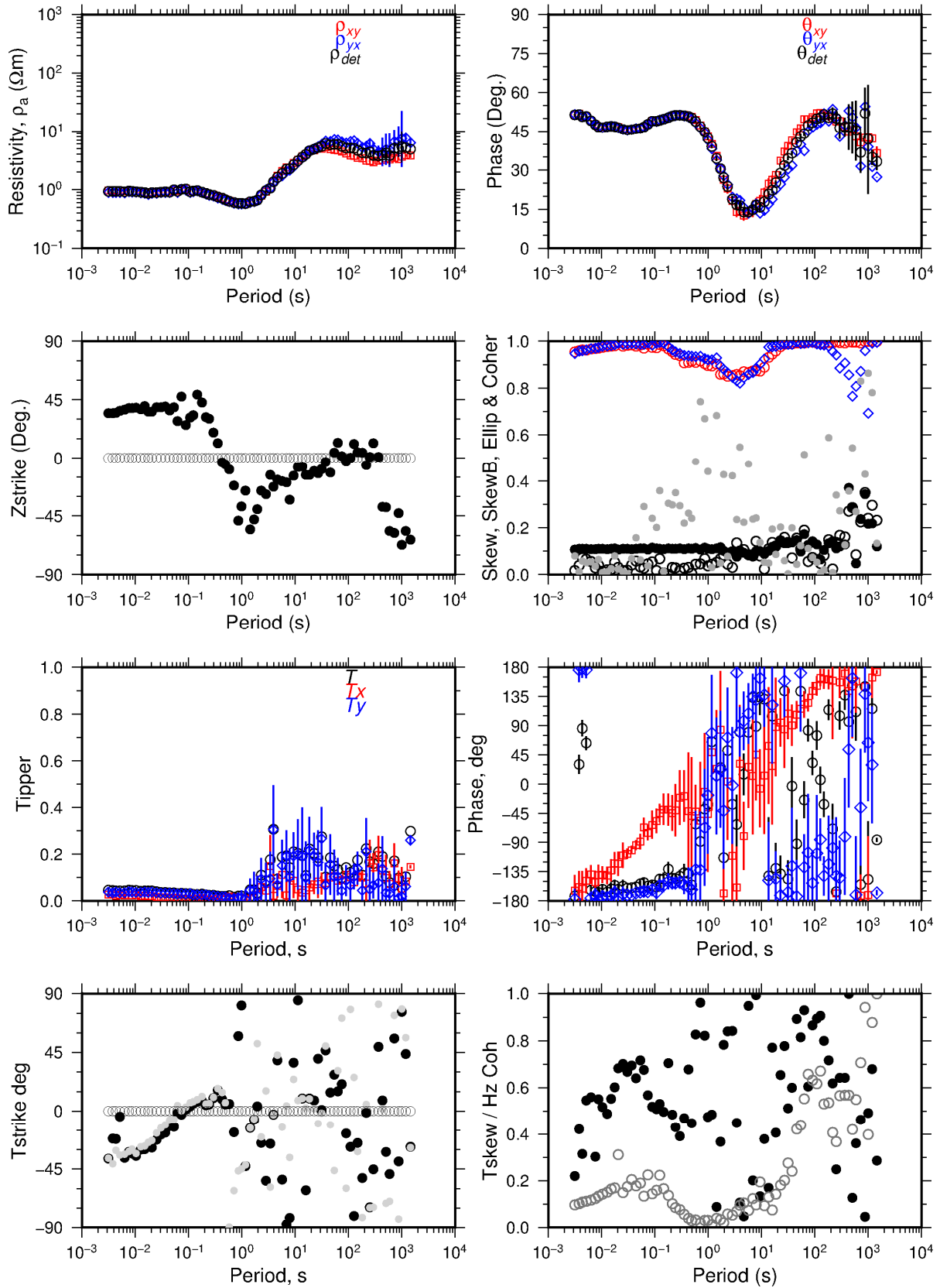
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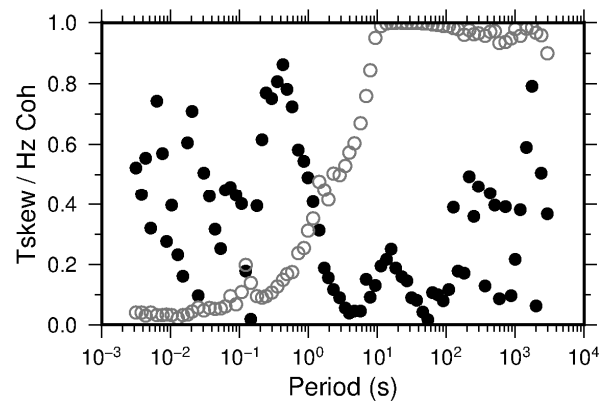
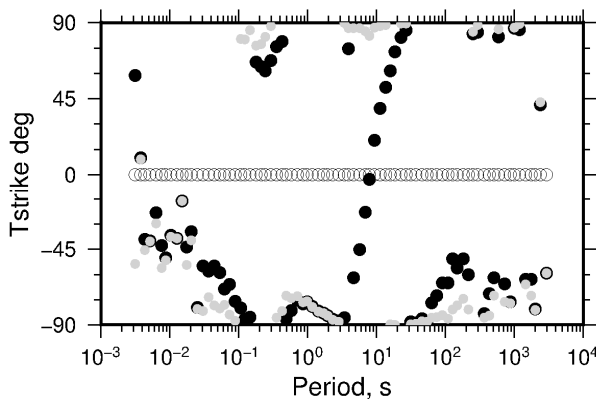
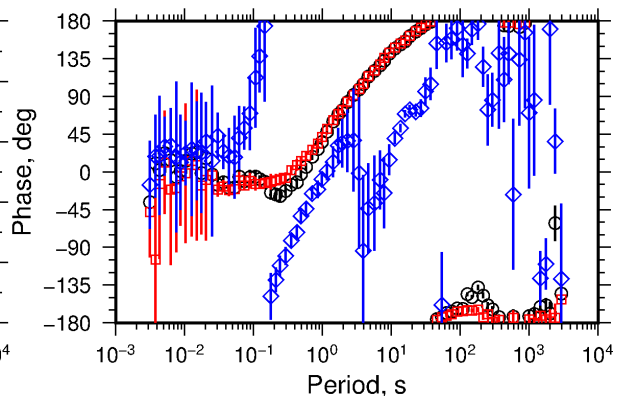
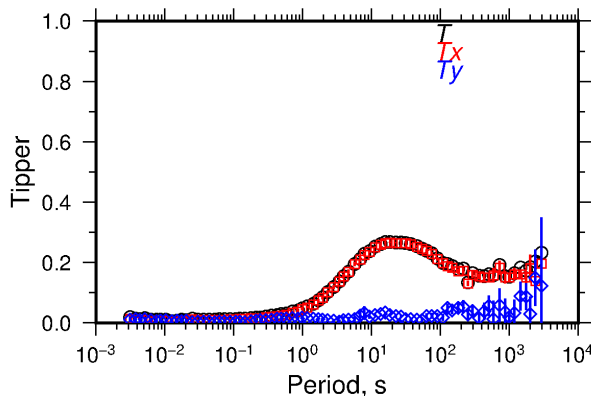
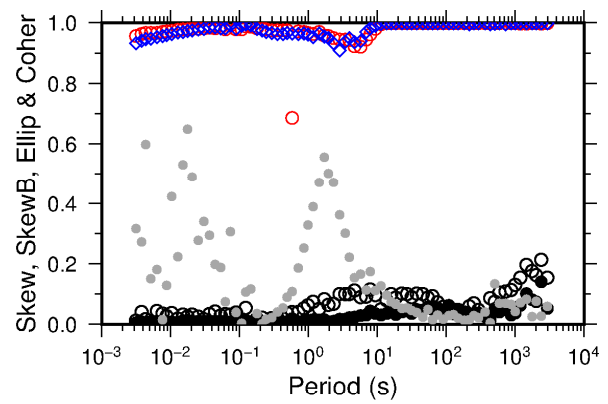
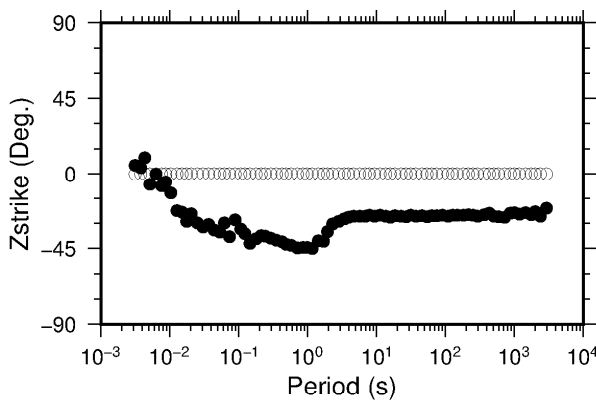
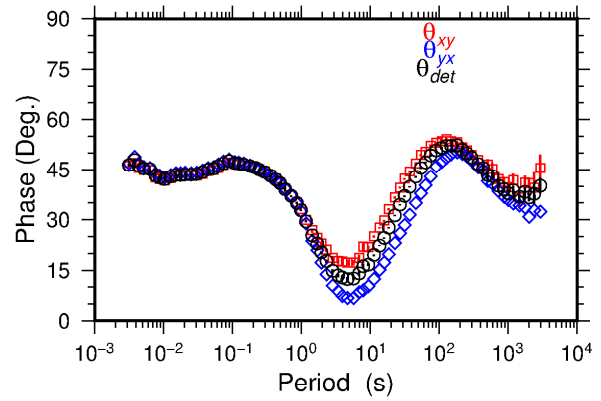
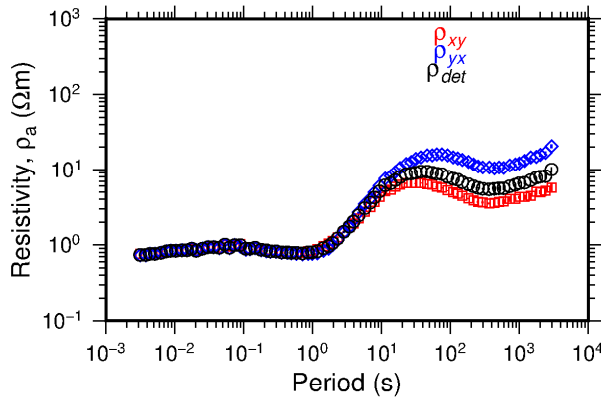
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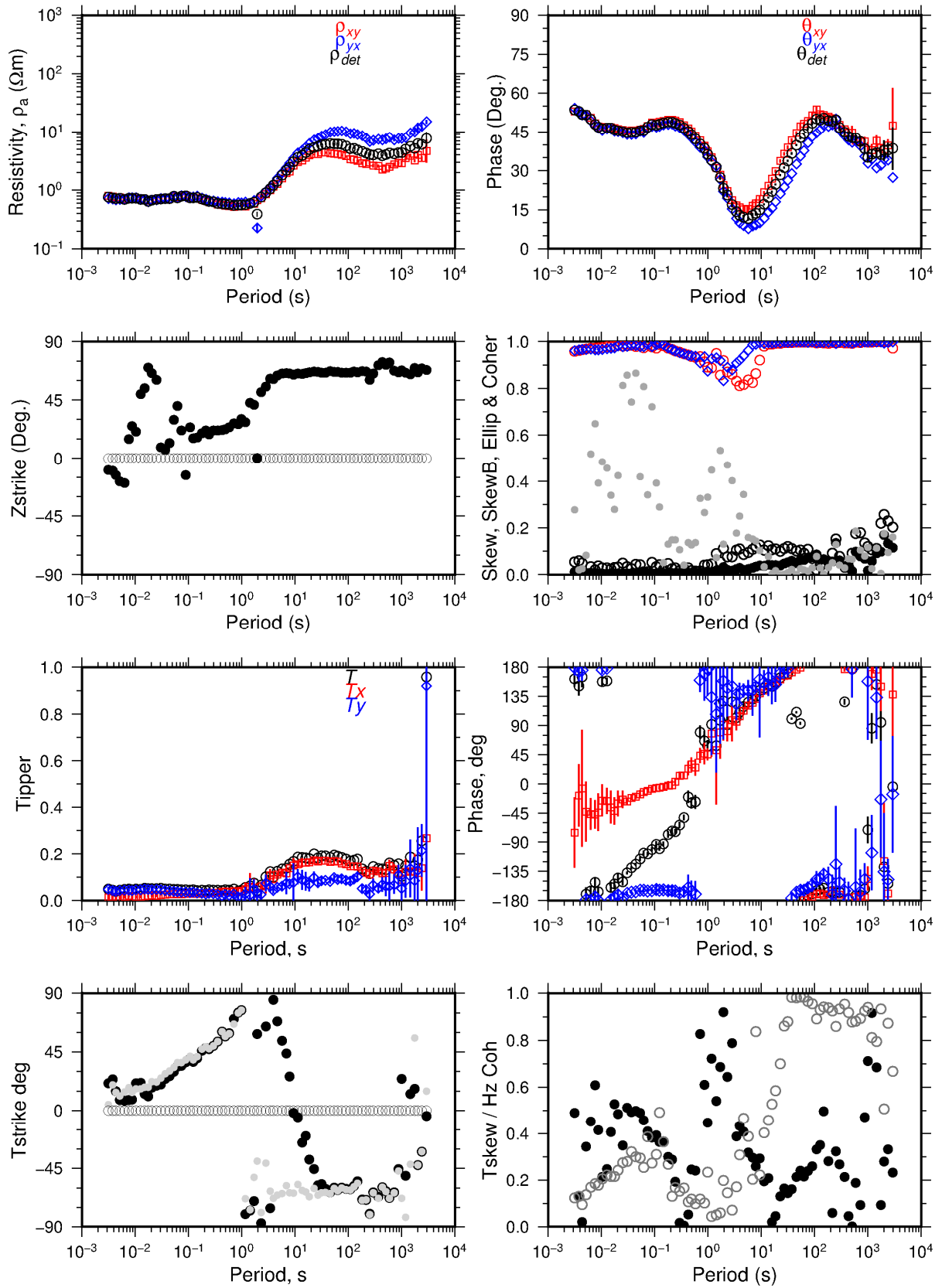
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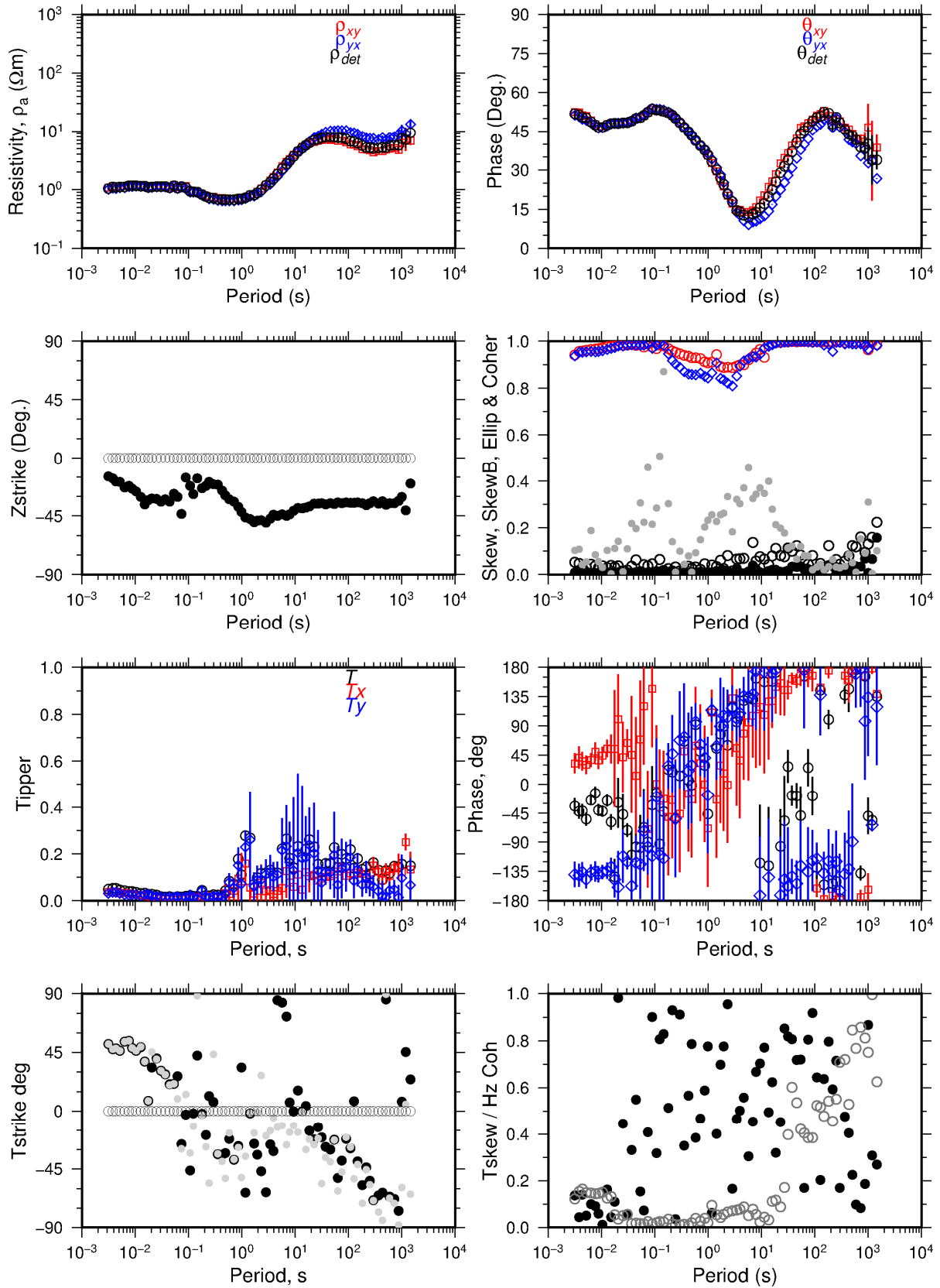
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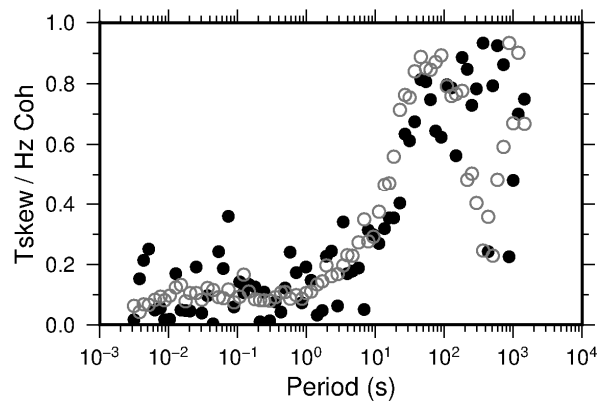
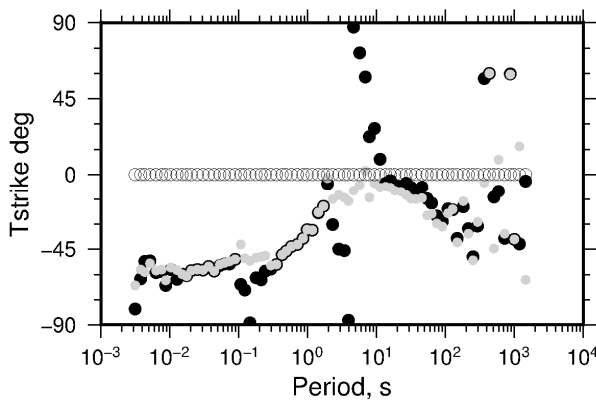
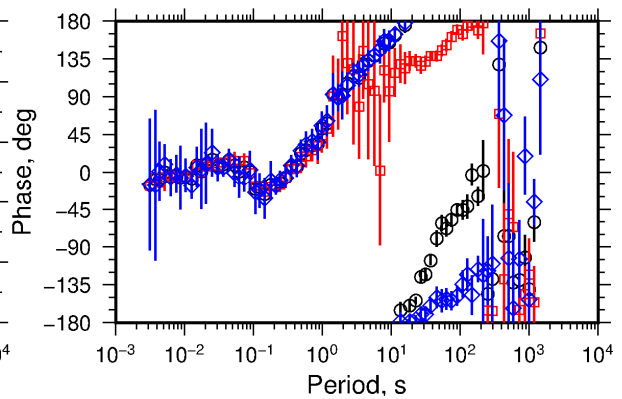
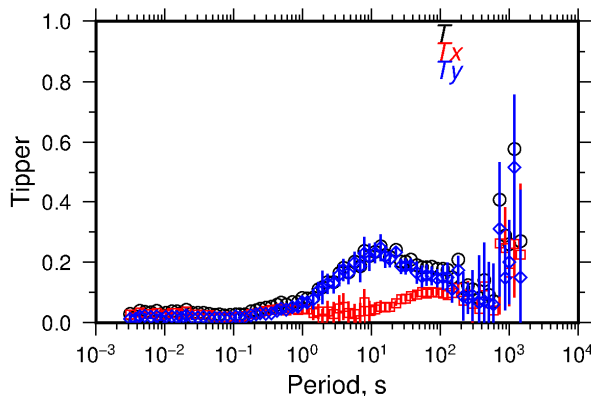
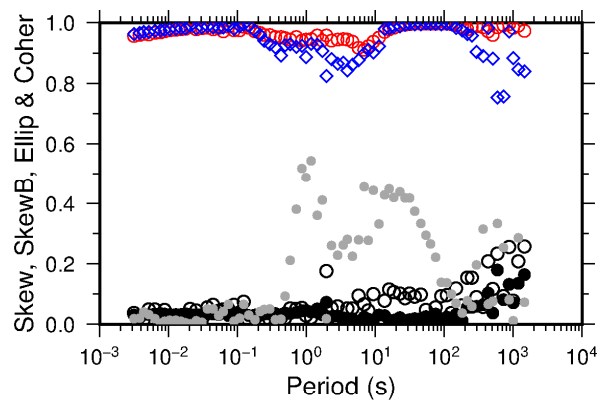
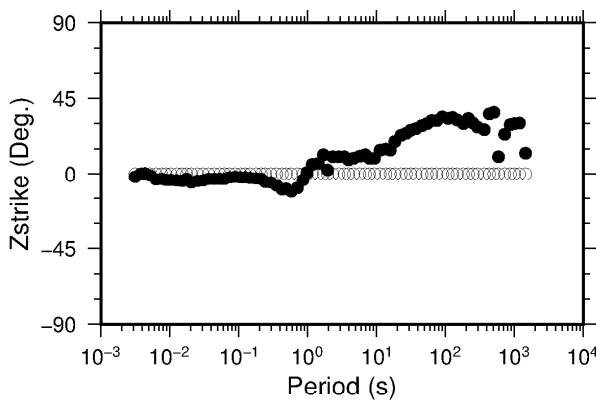
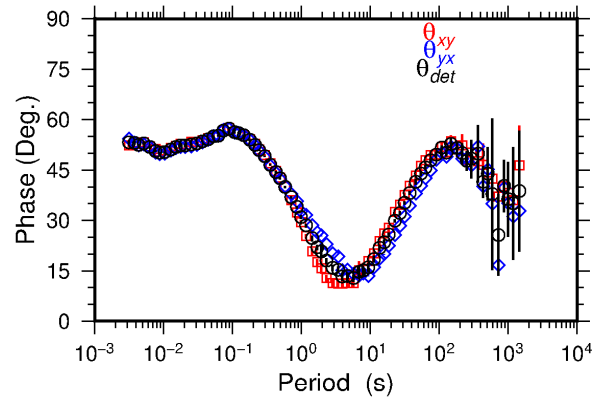
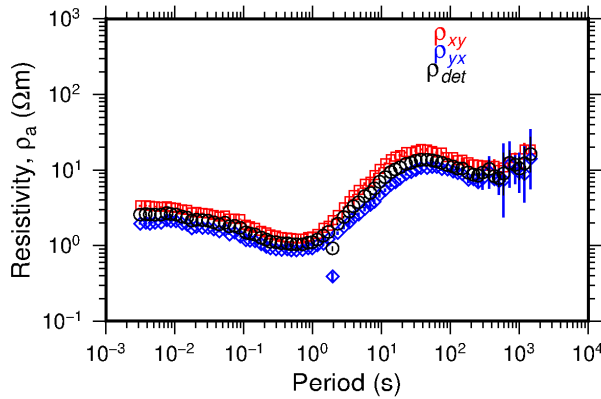
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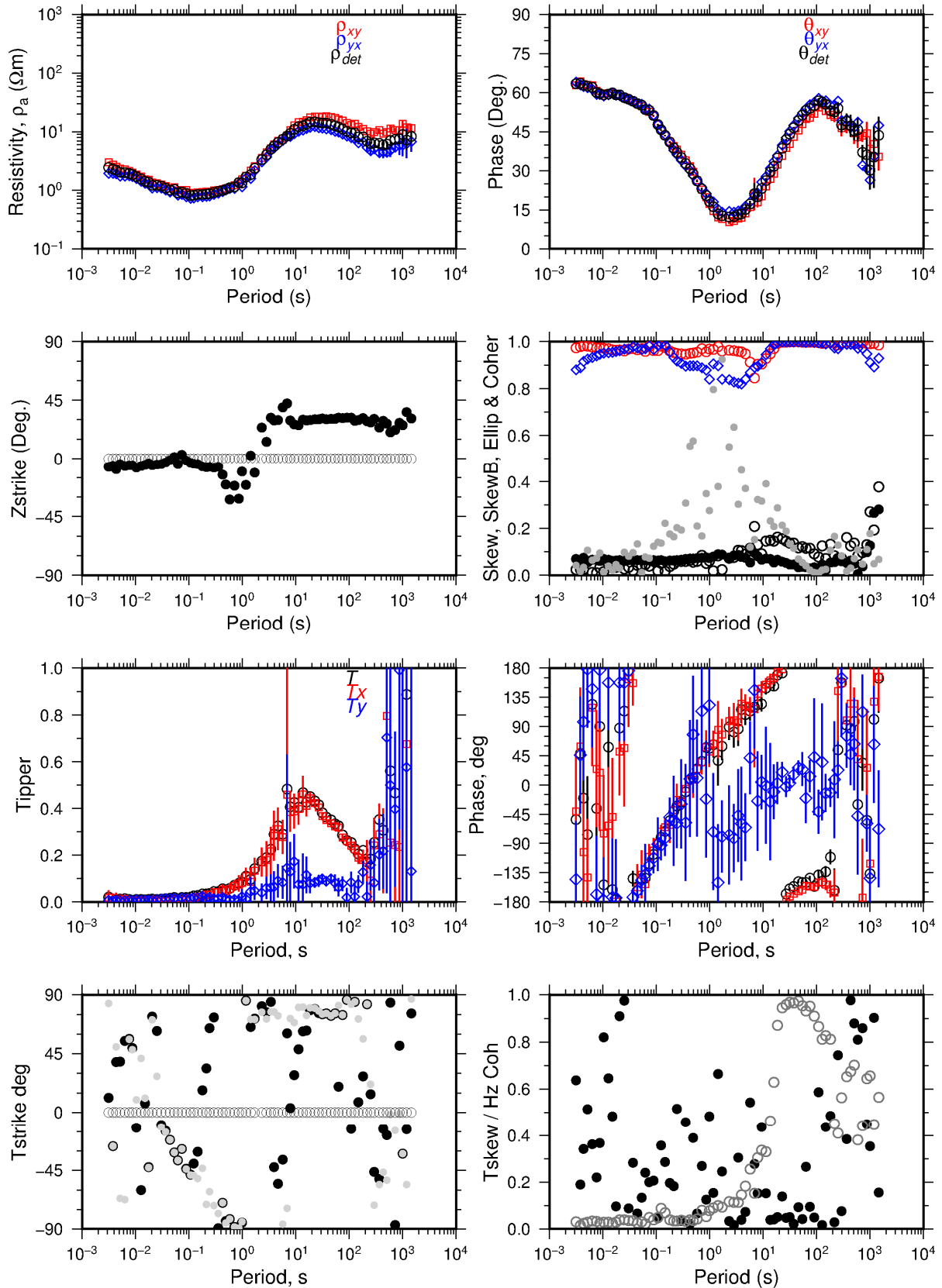
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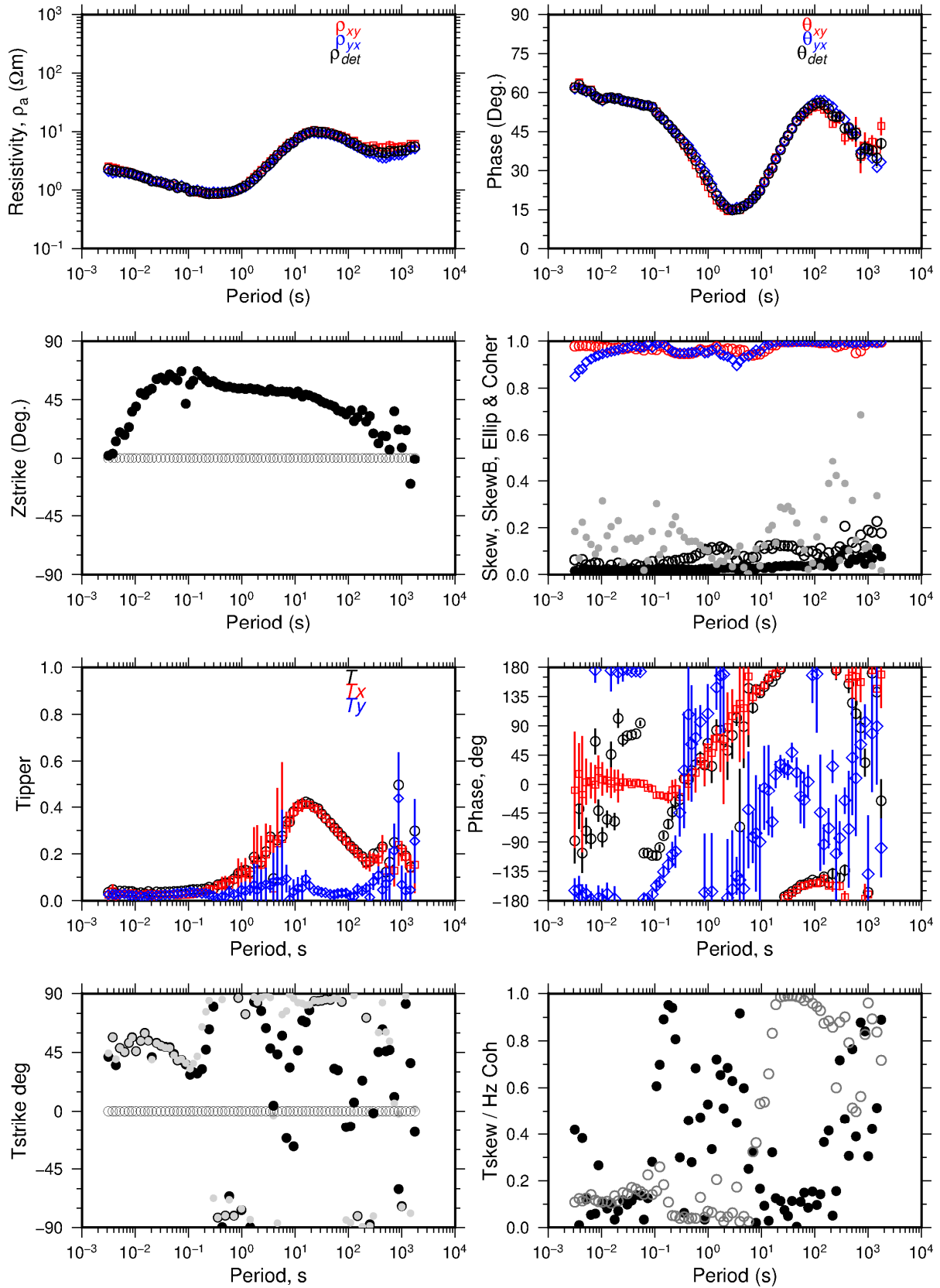
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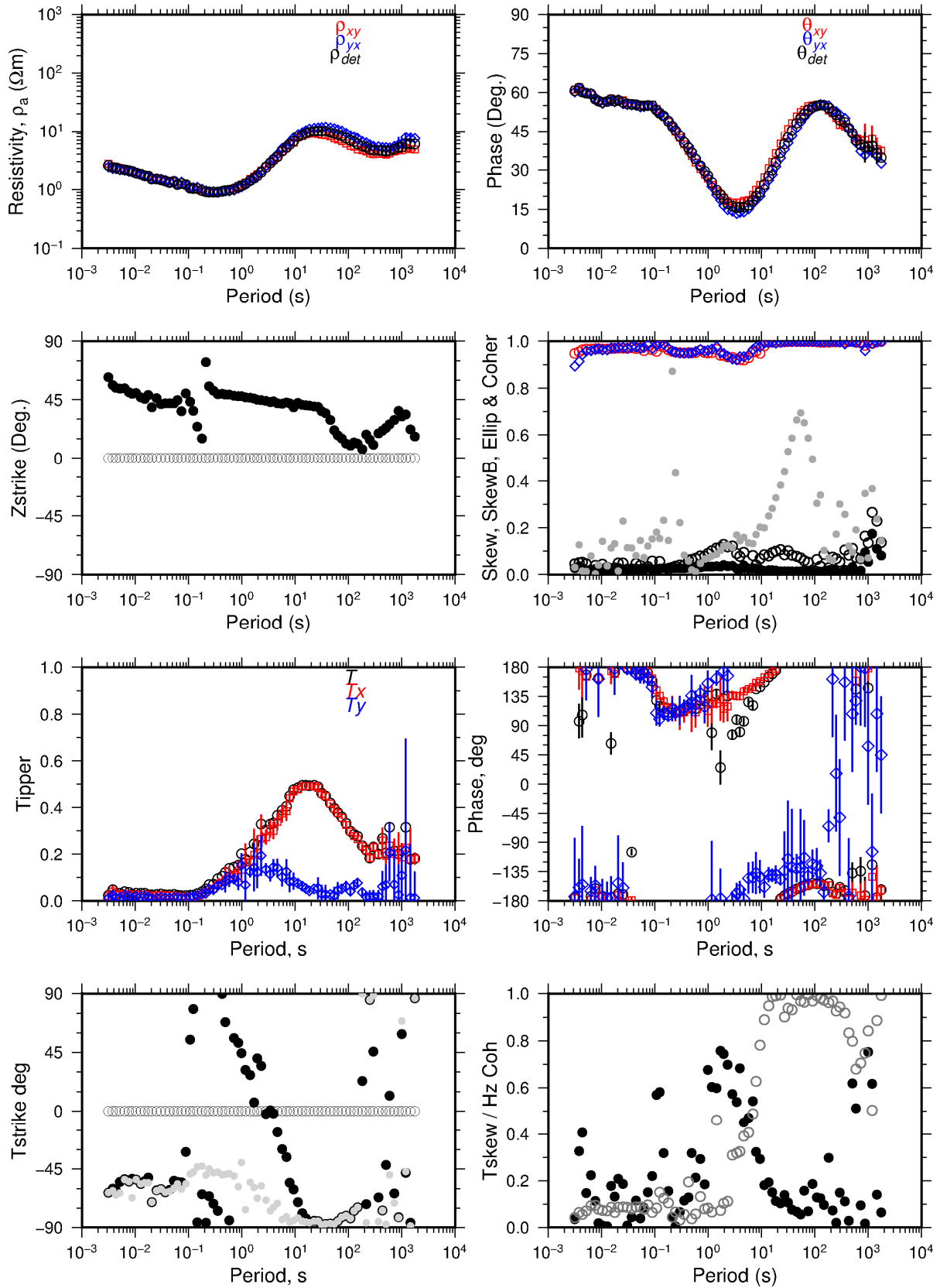
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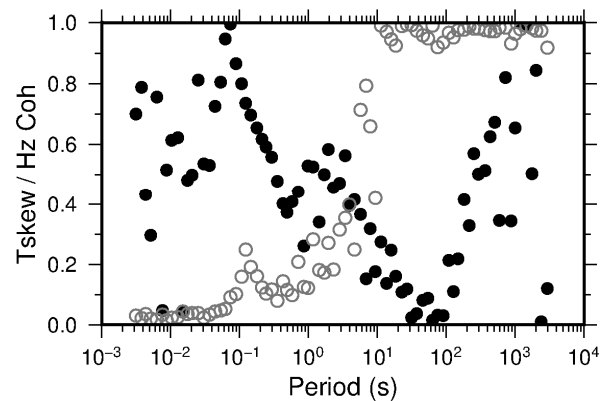
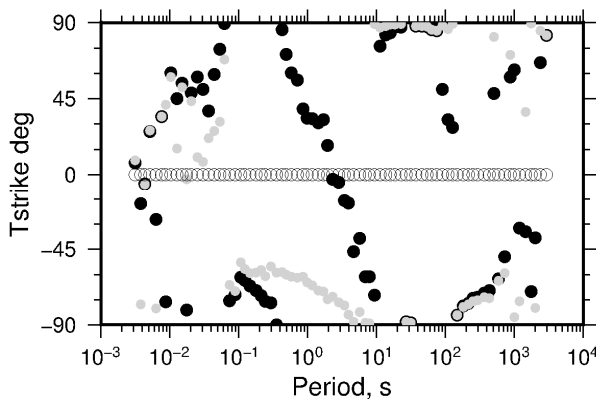
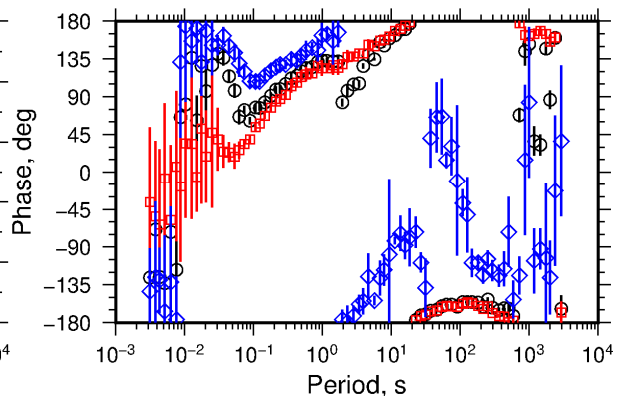
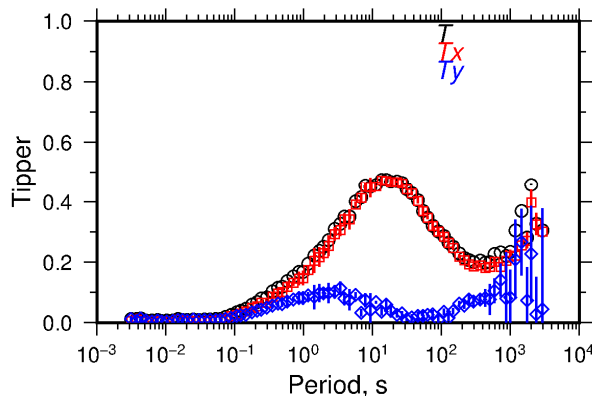
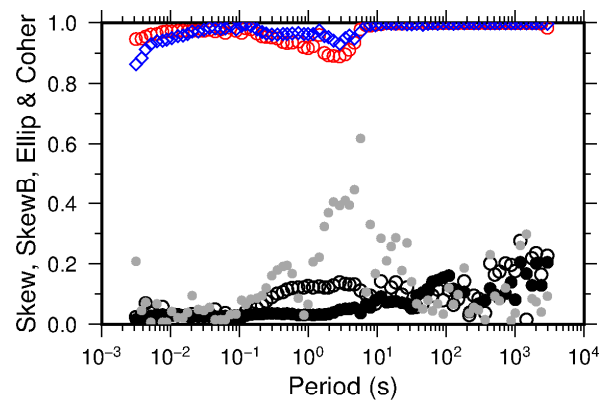
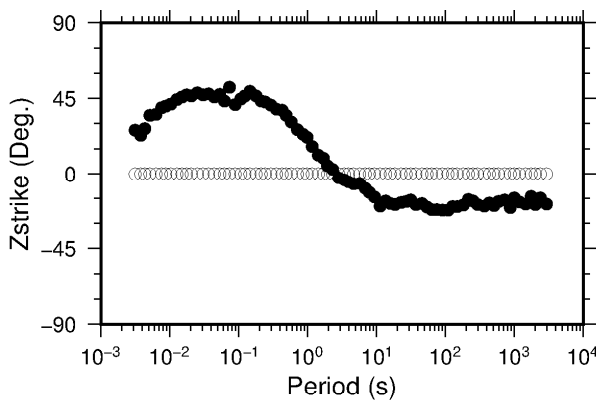
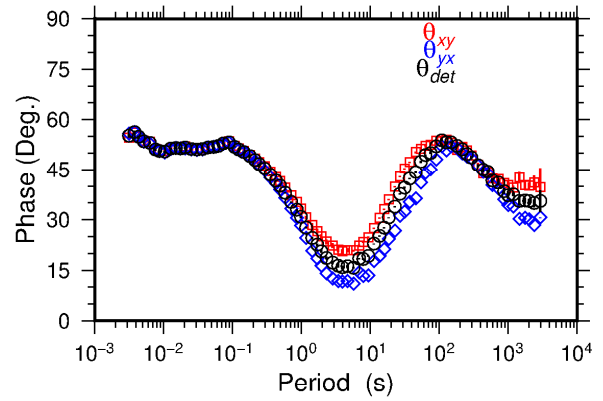
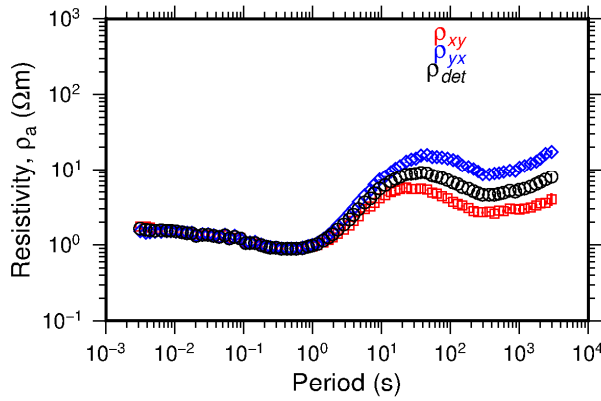
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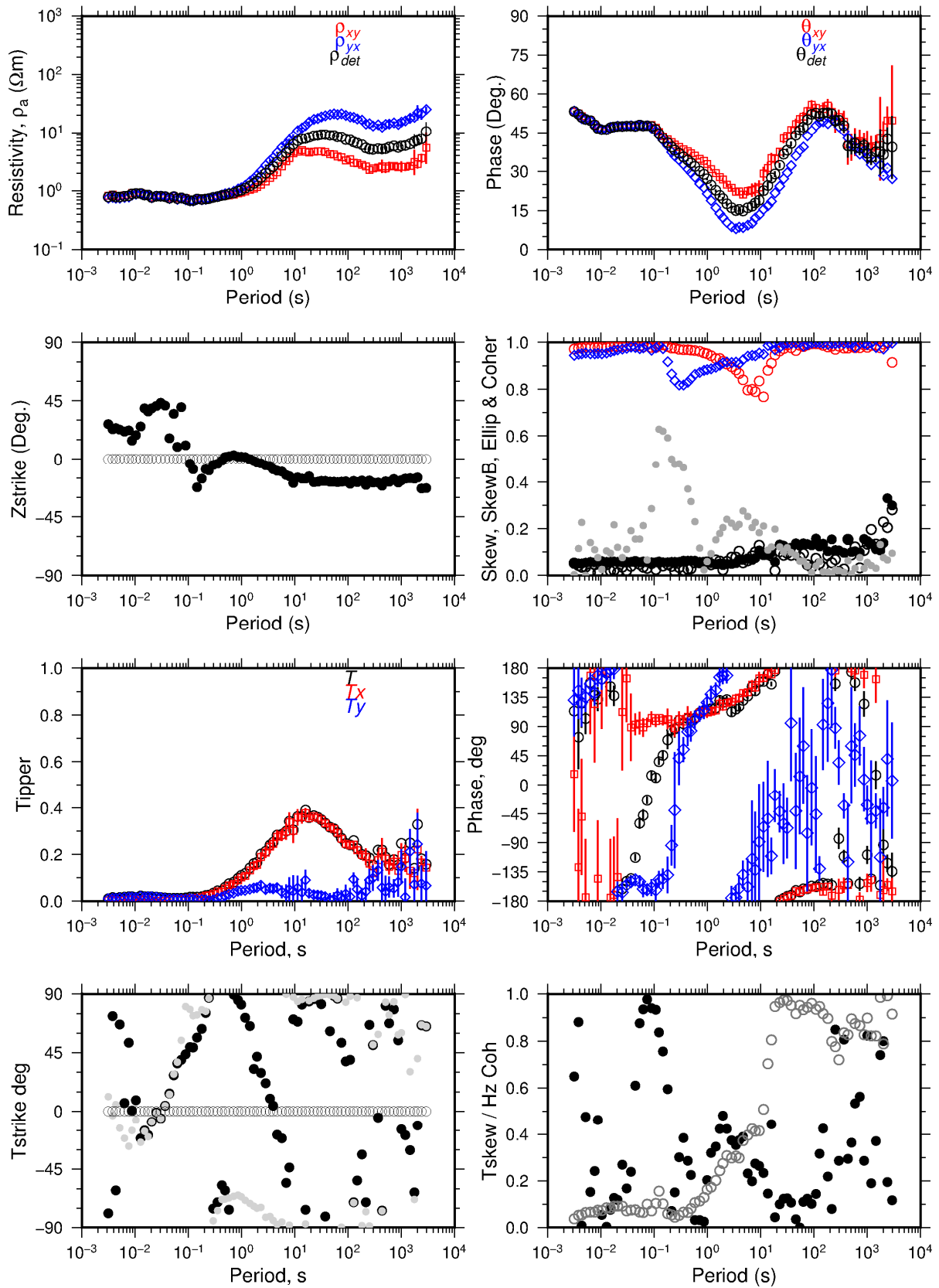
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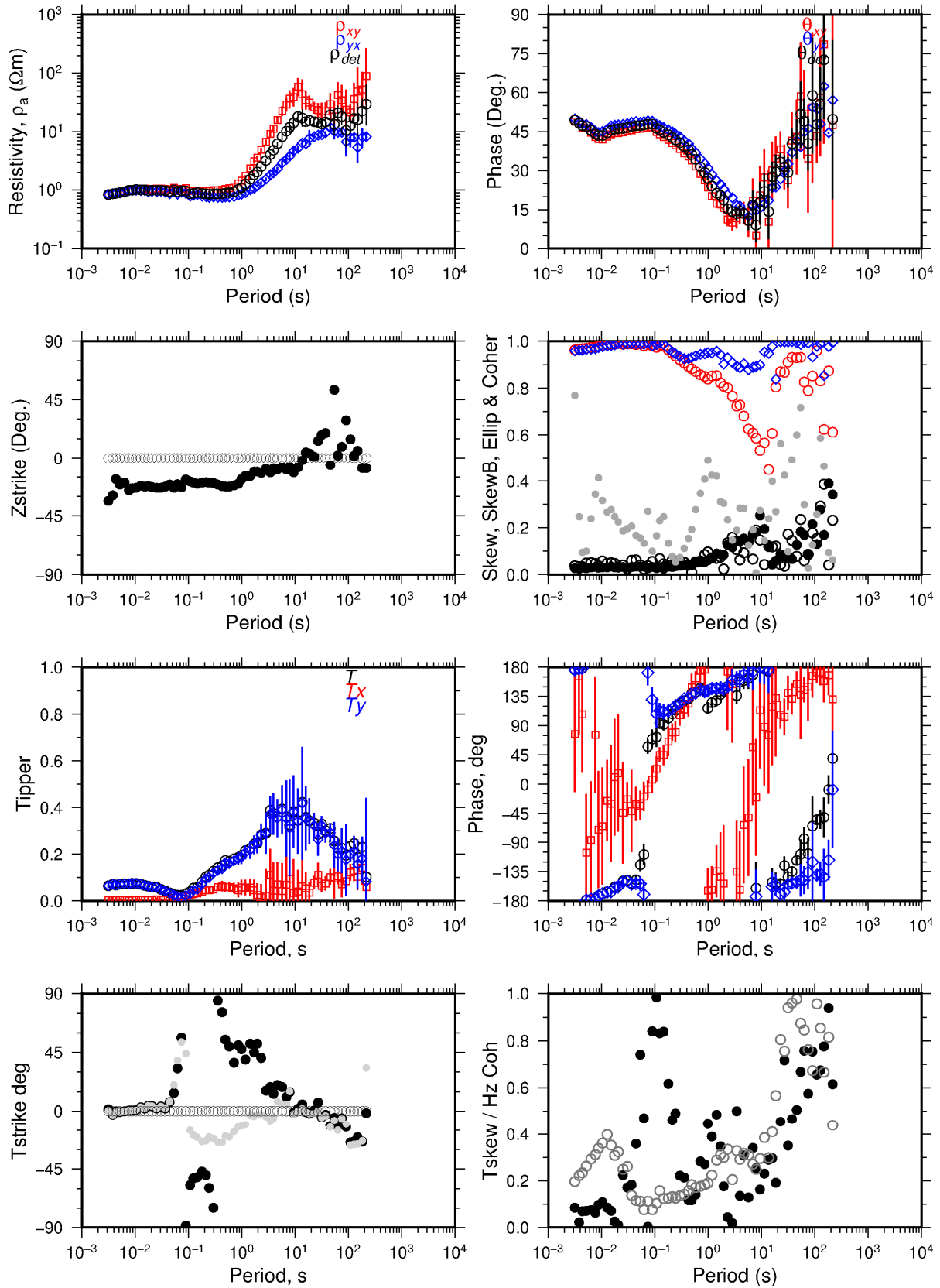
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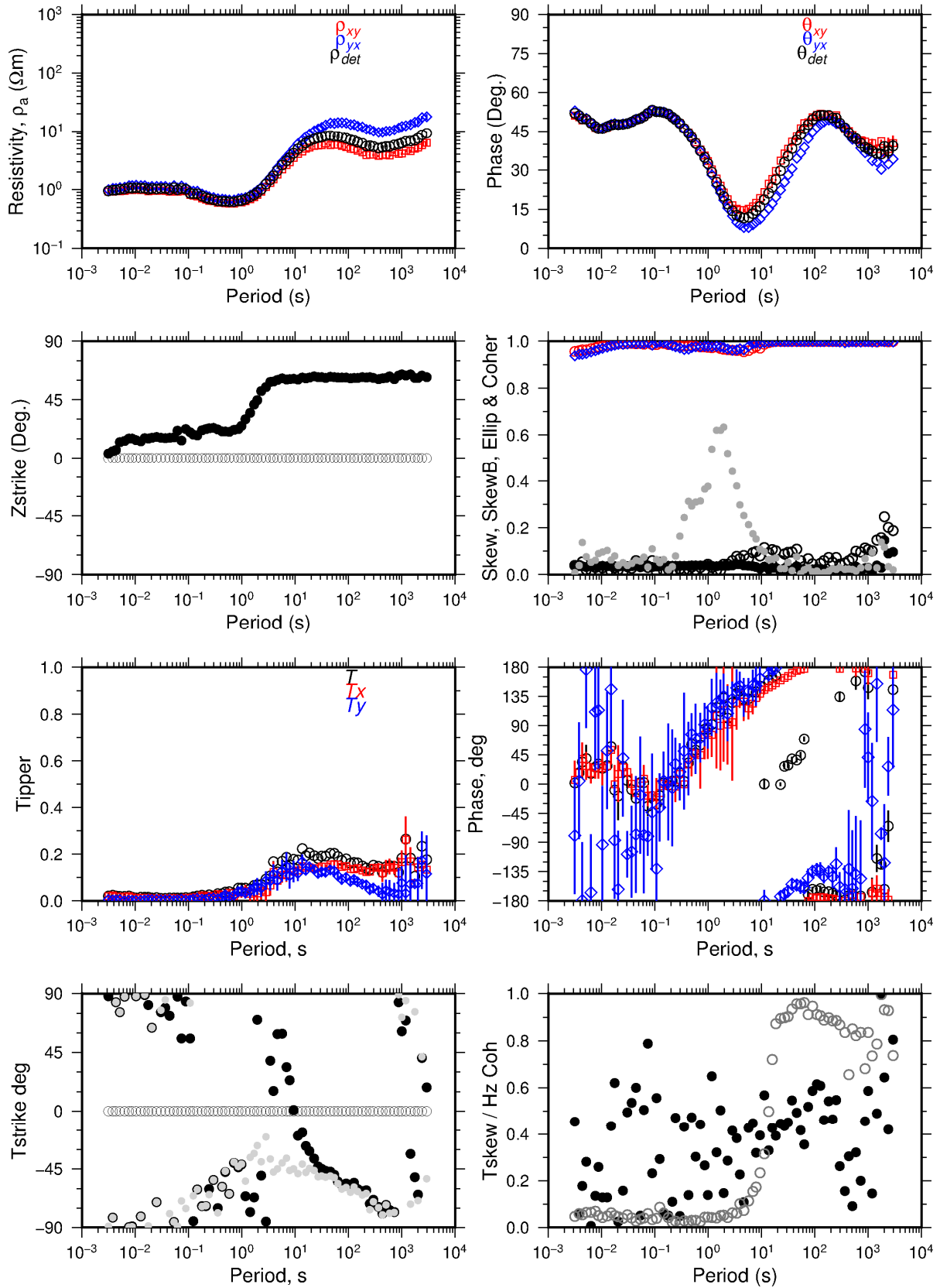
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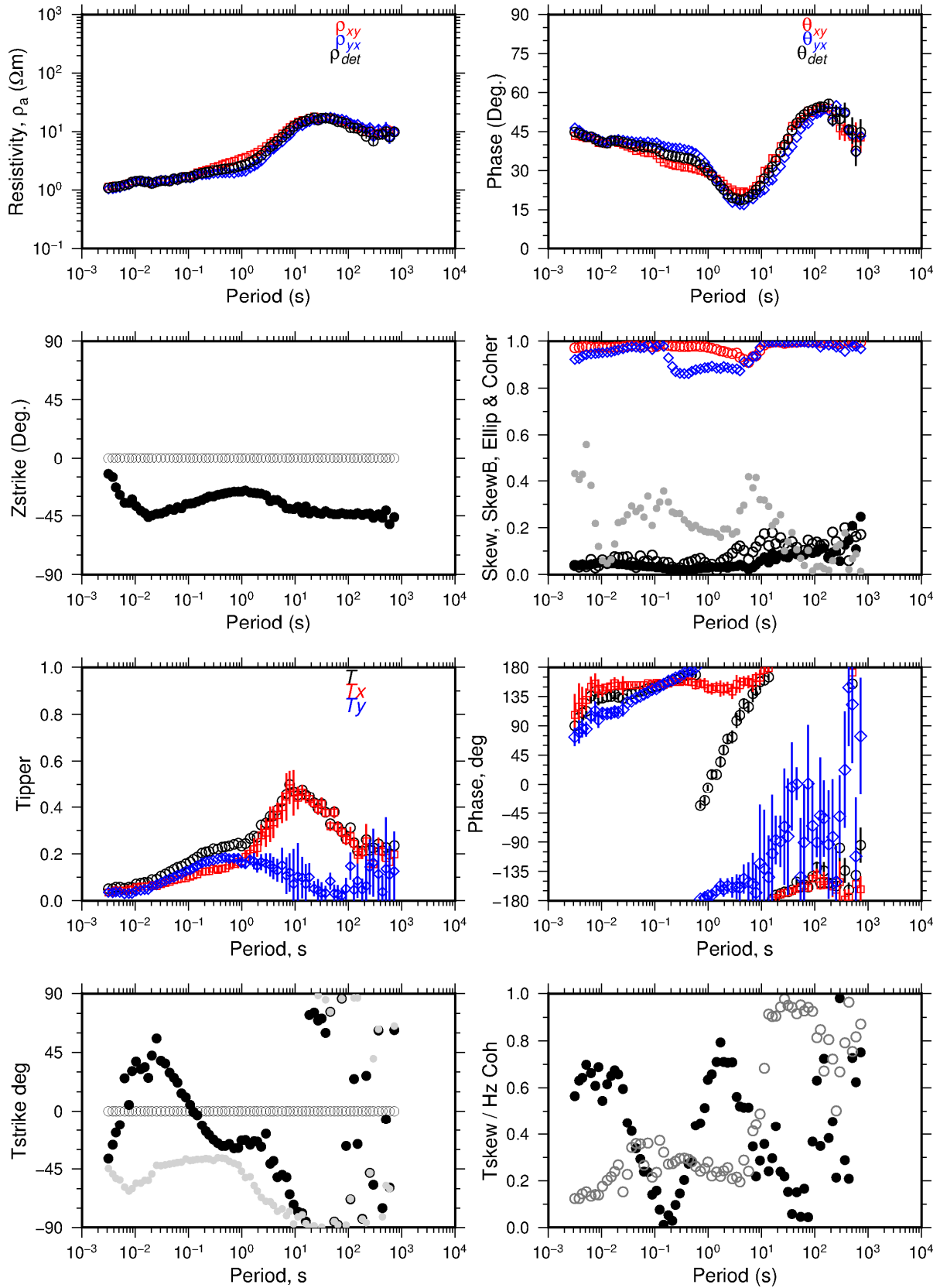
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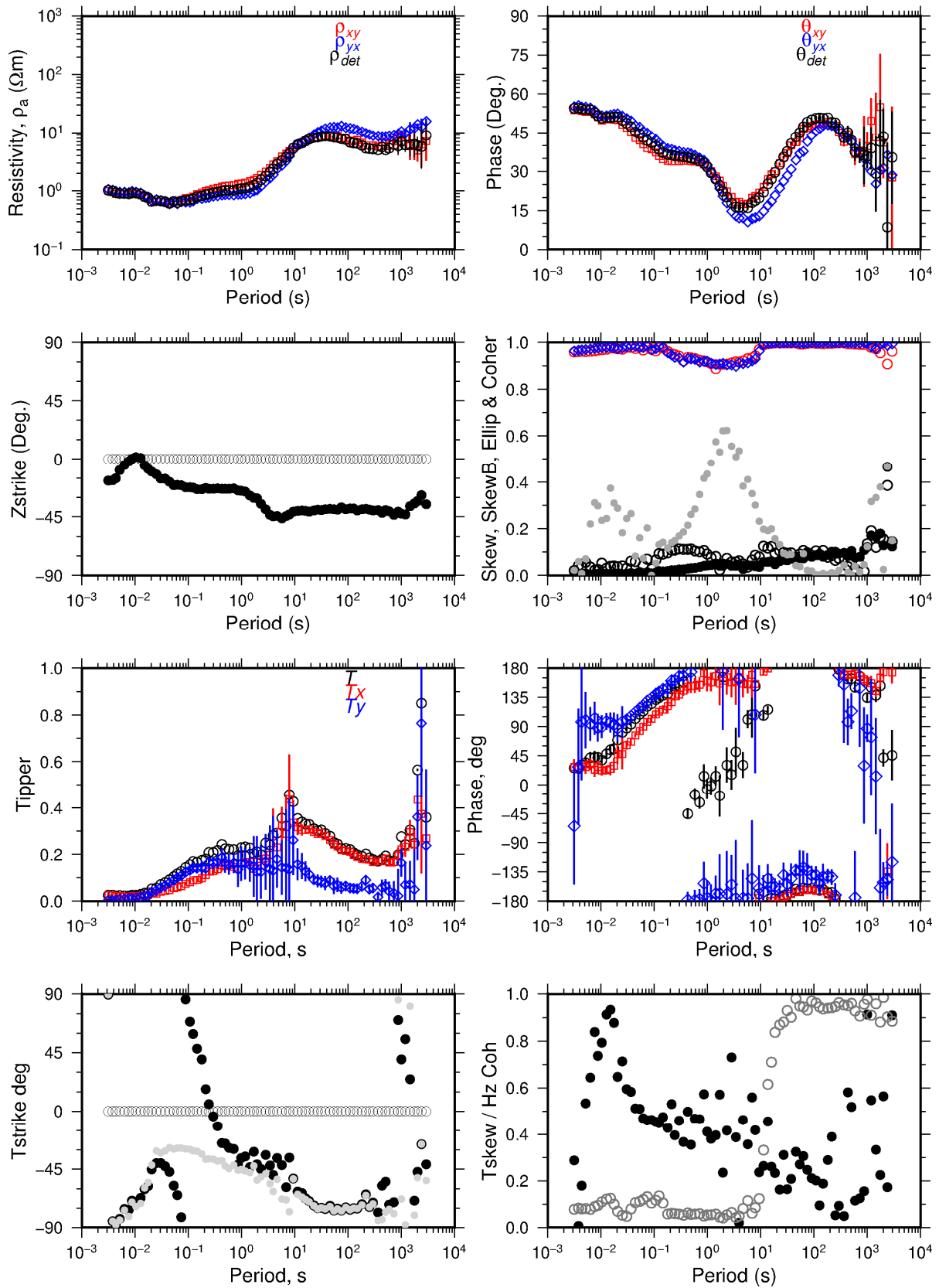
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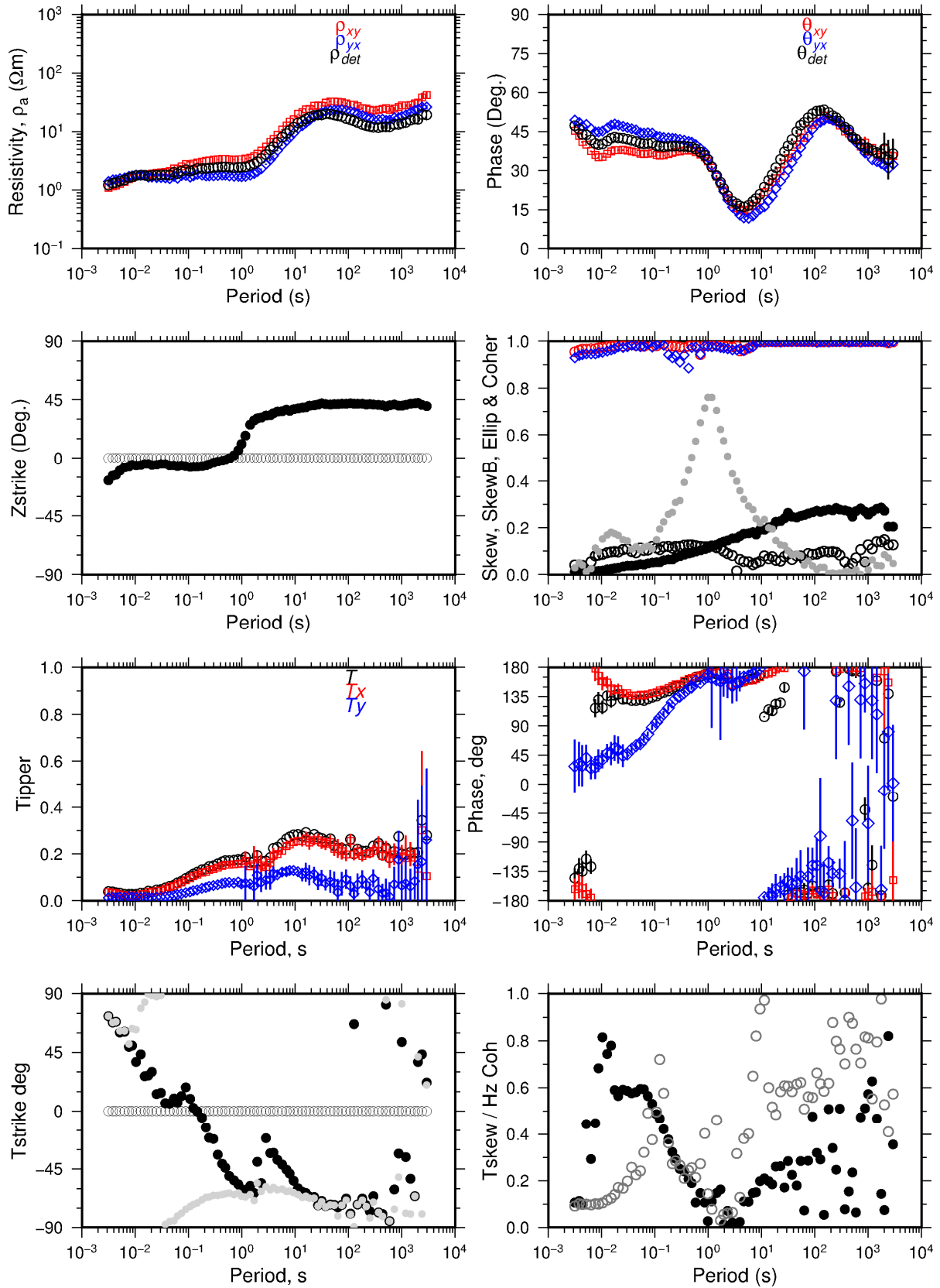
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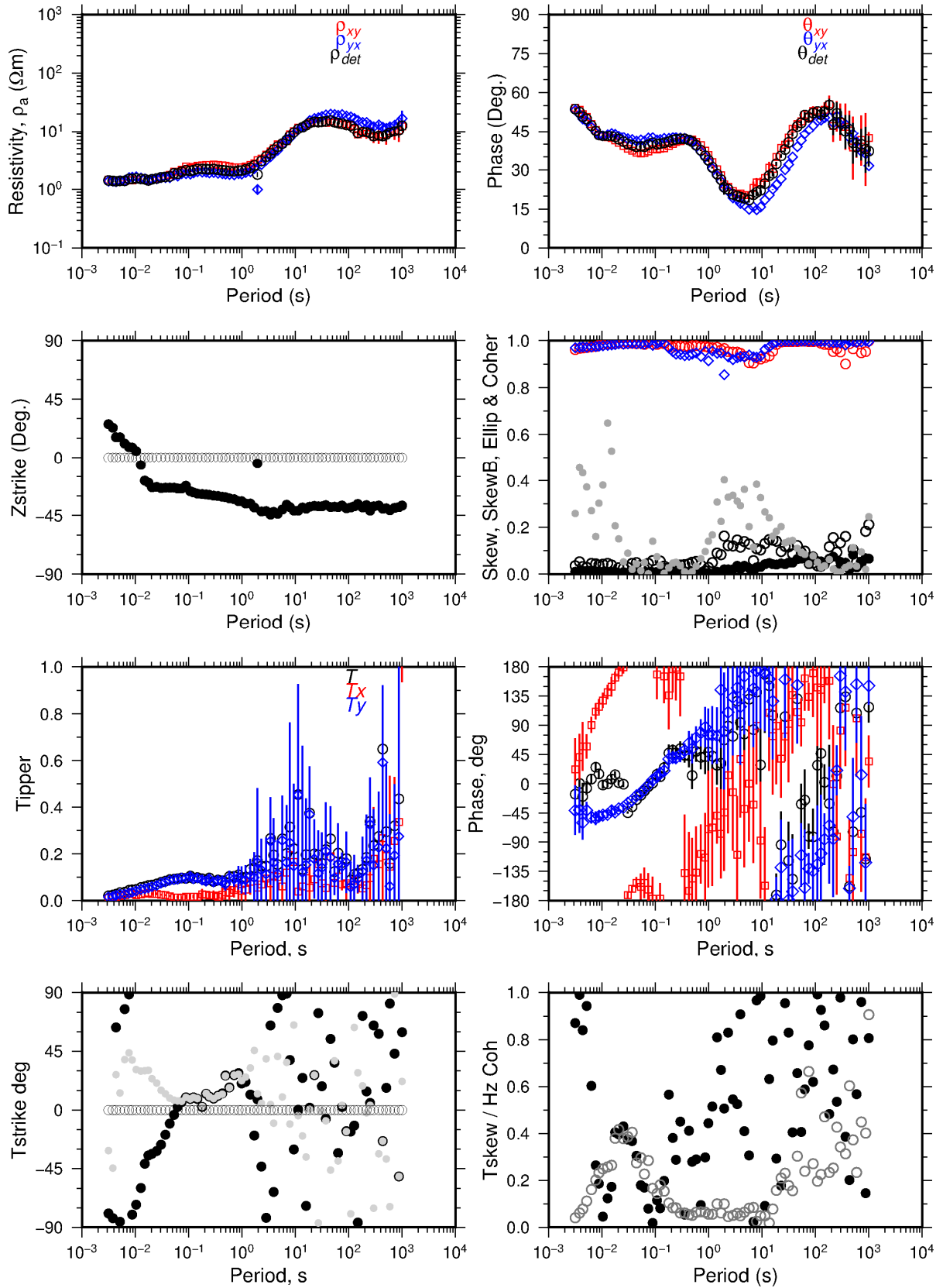
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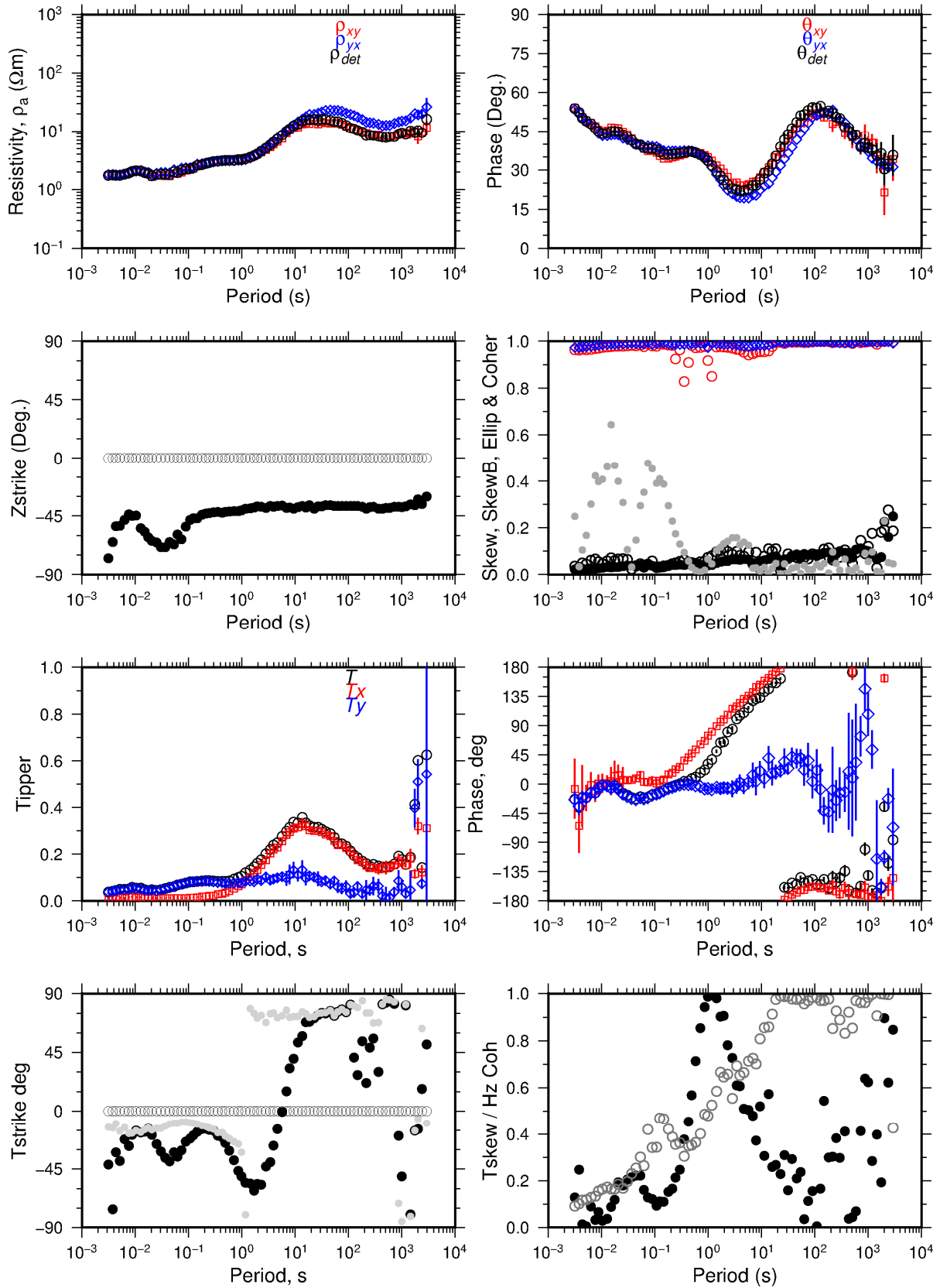
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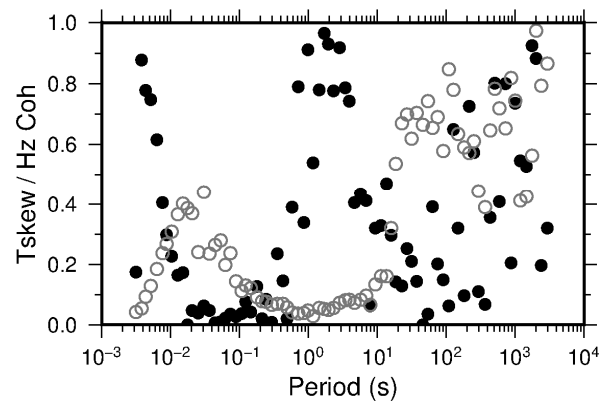
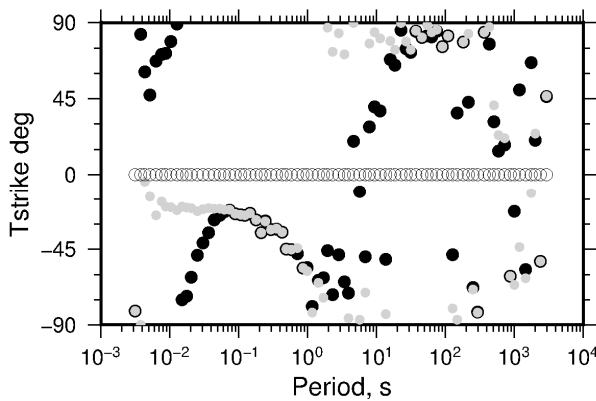
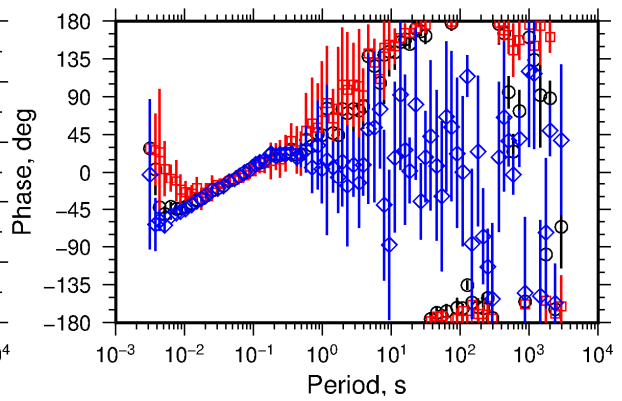
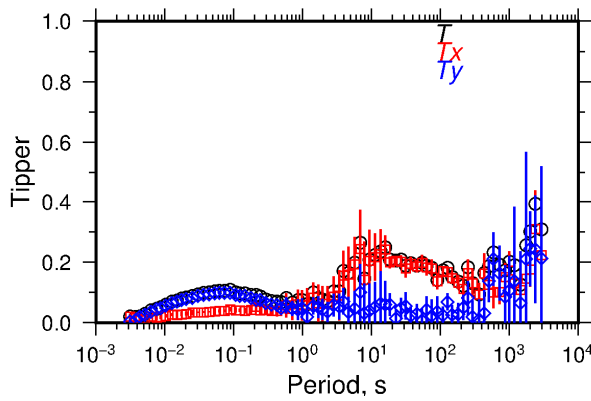
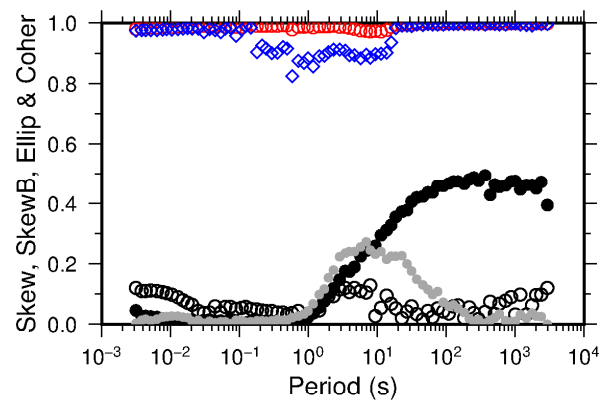
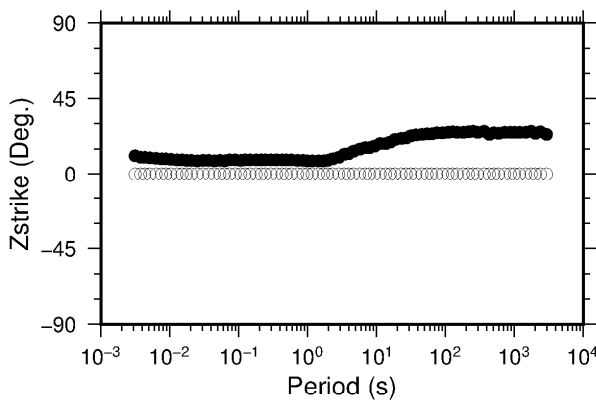
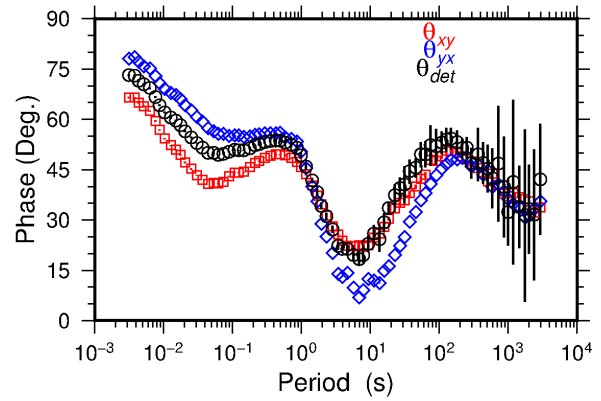
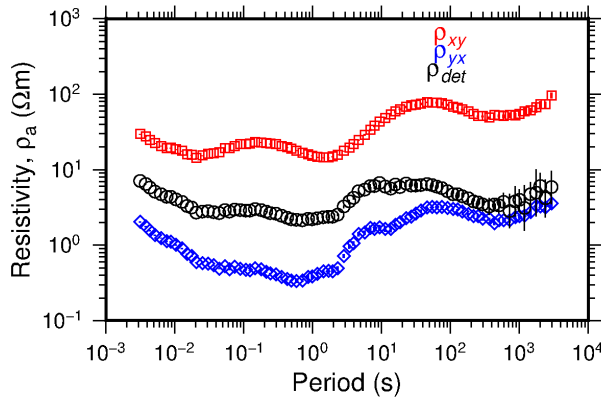
A061

Skrá: A061.EDI



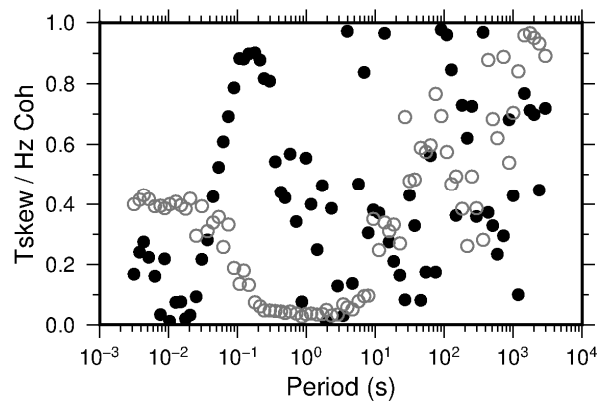
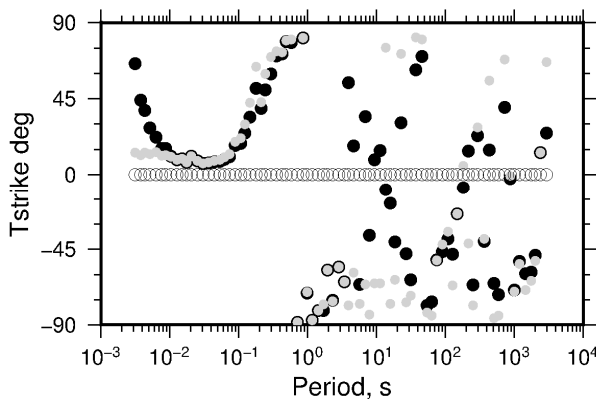
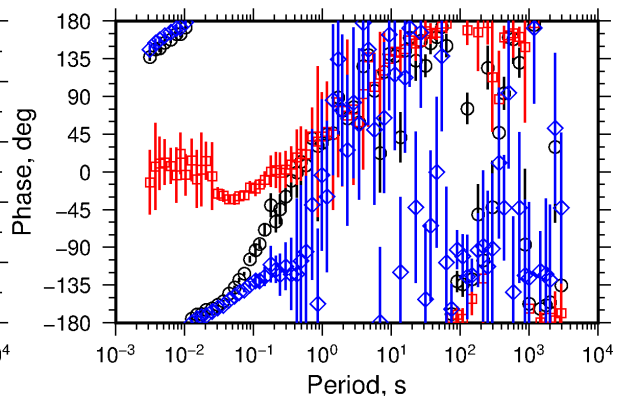
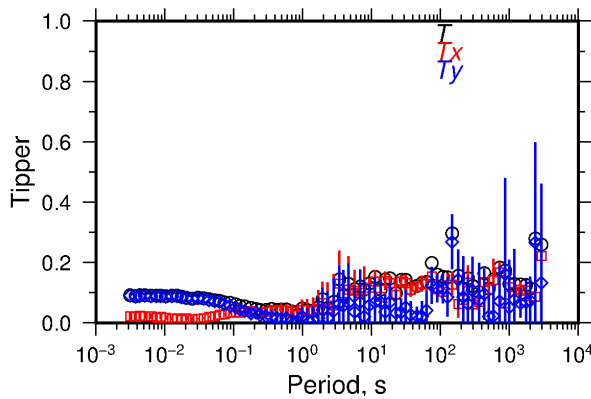
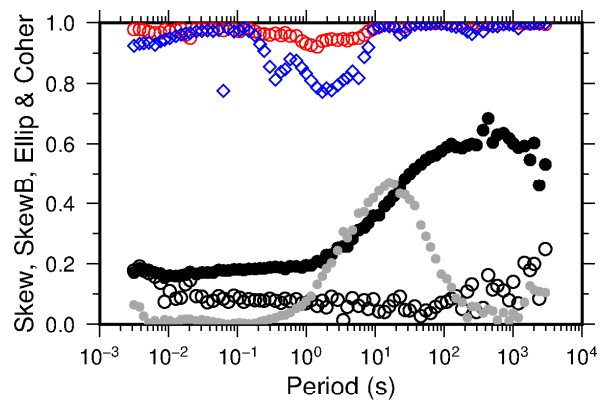
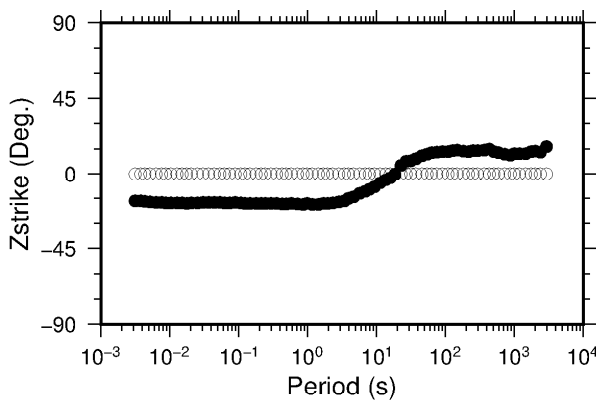
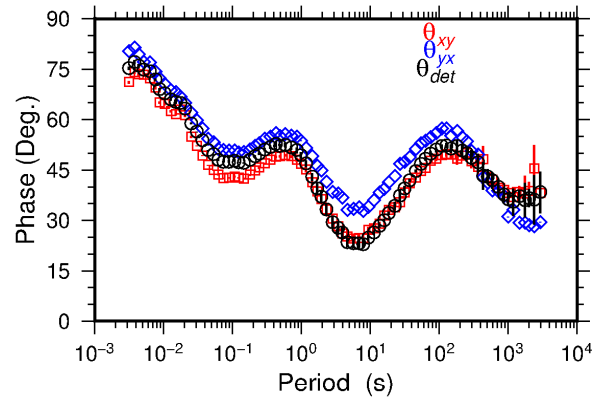
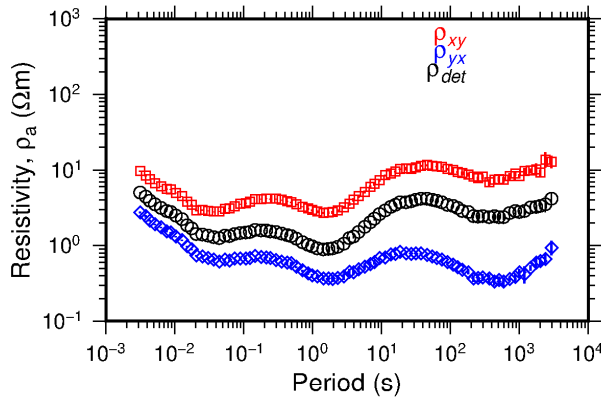
A063

Skrá: A063.EDI



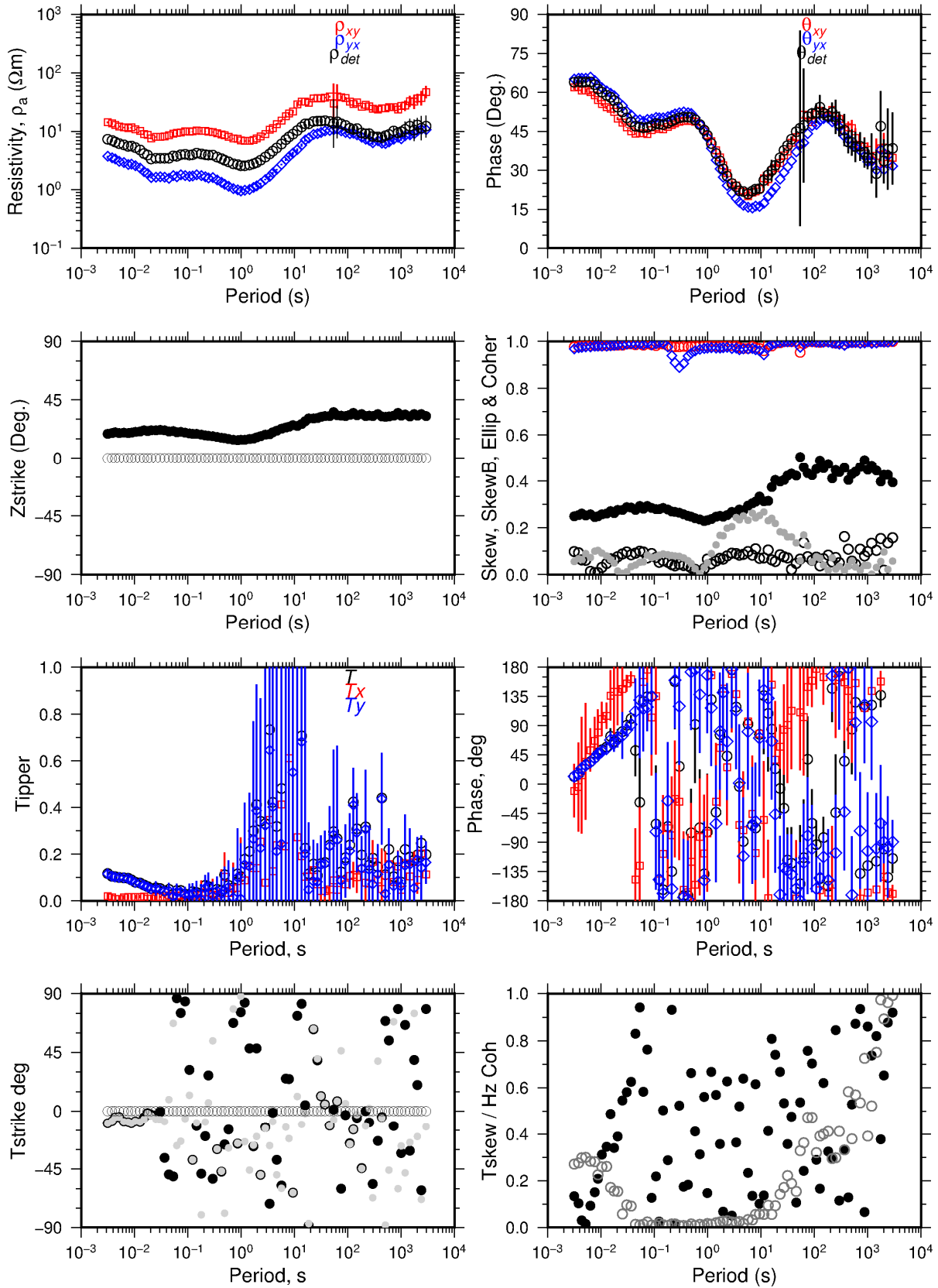
A064

Skrá: A064.EDI



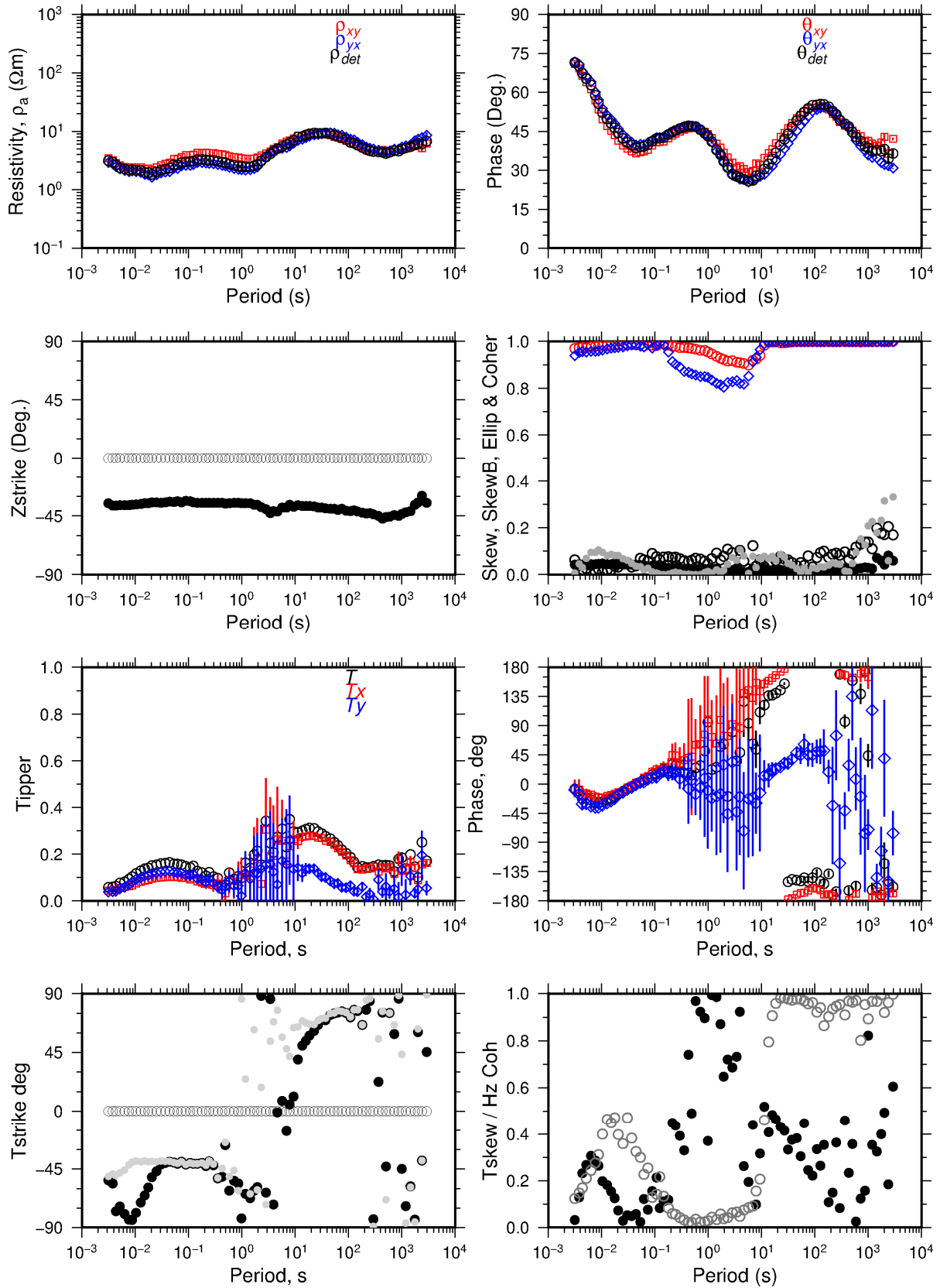
A066

Skrá: A066.EDI



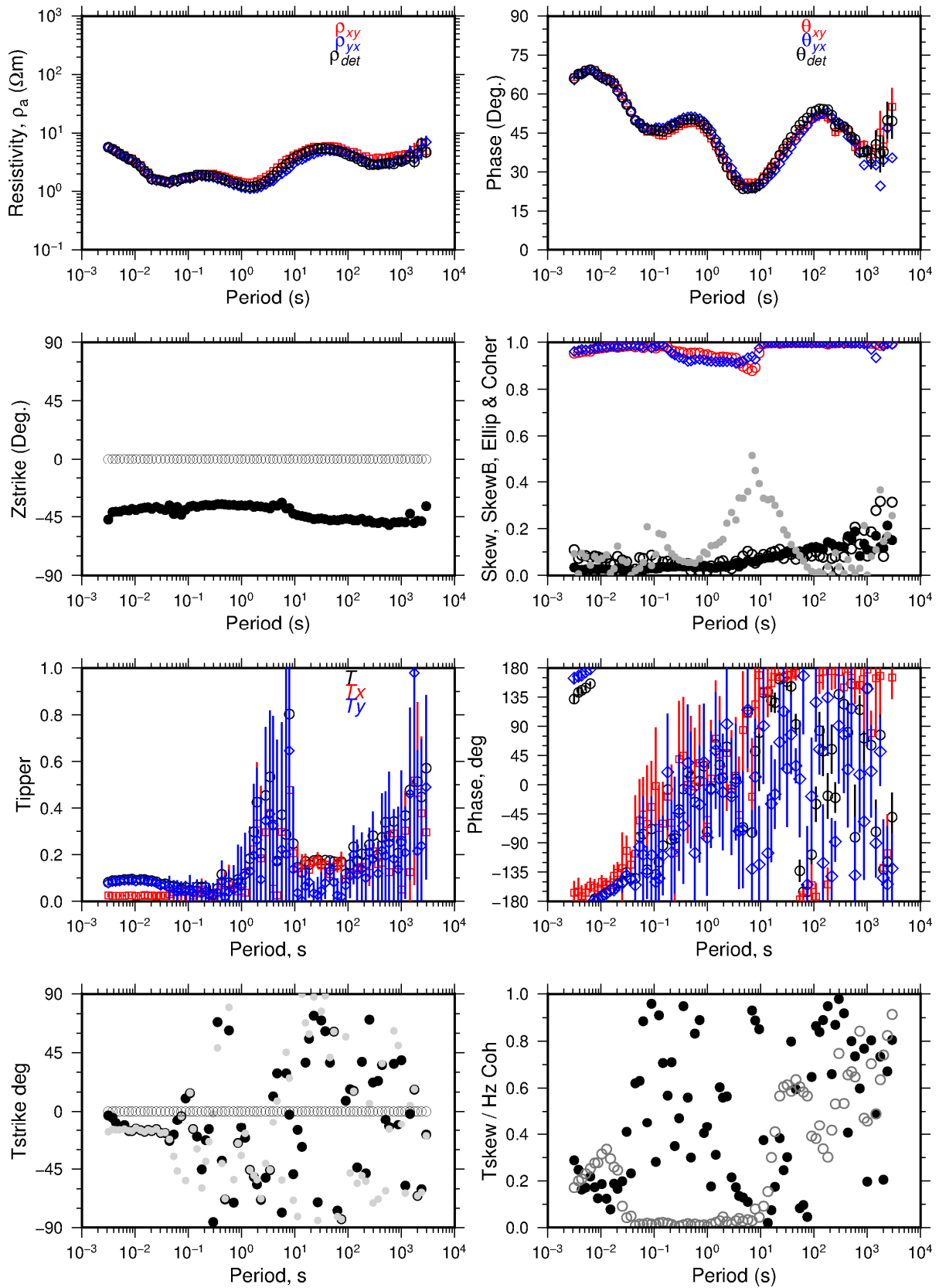
A072

Skrá: A072.EDI



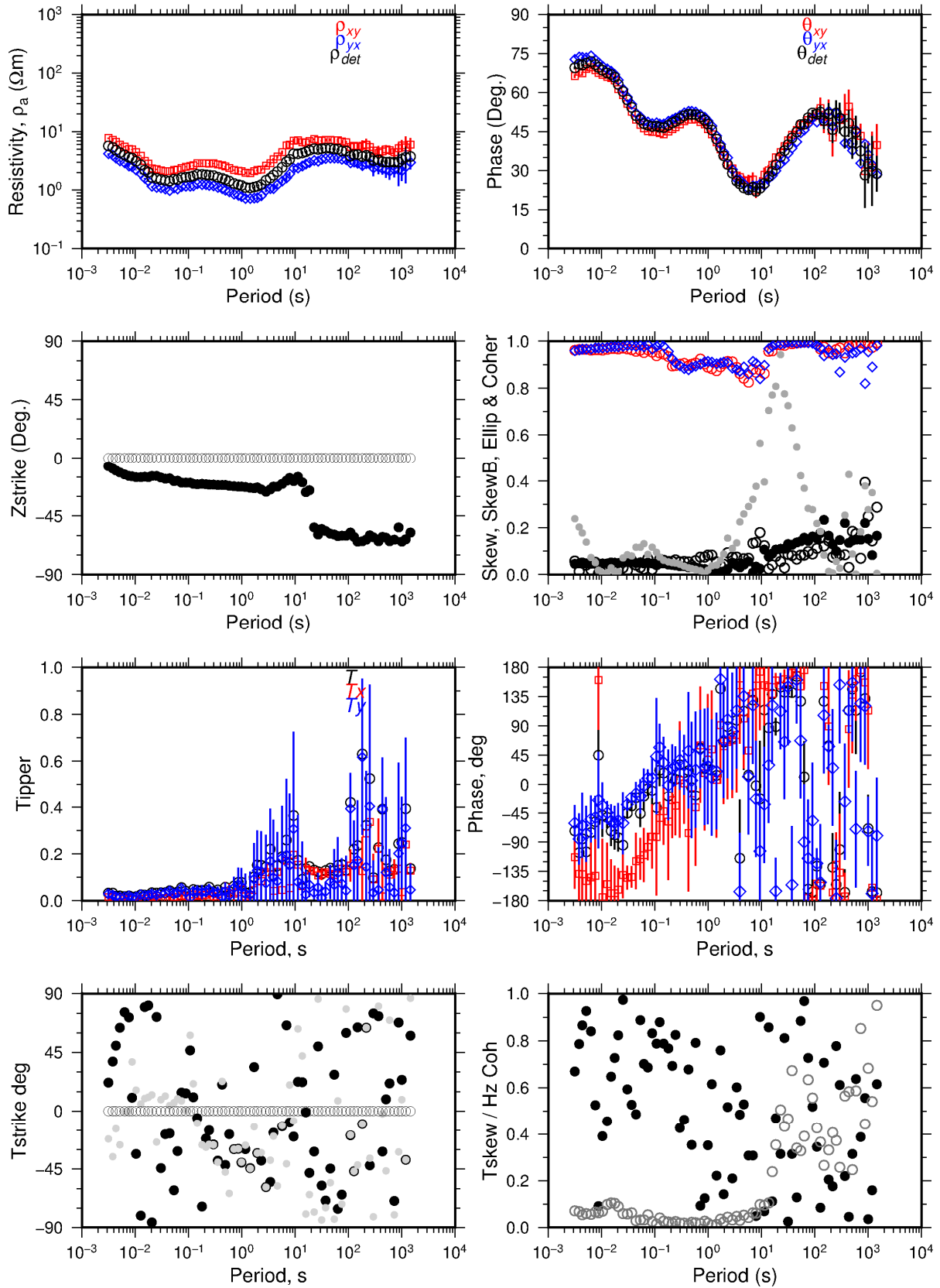
A074

Skrá: A074.EDI



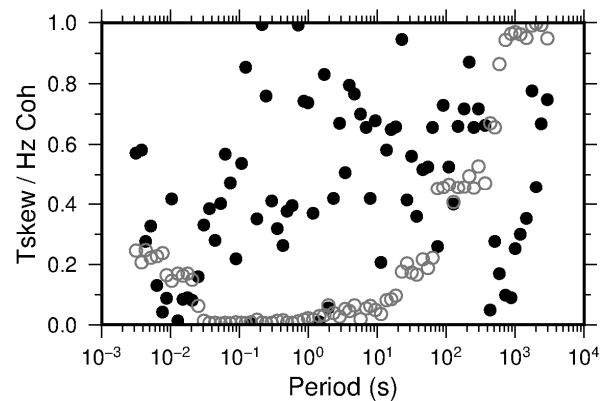
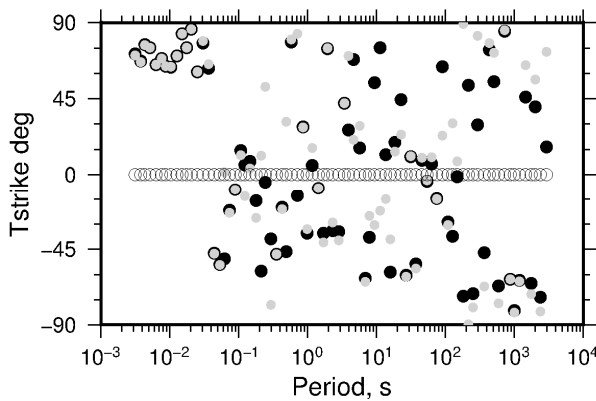
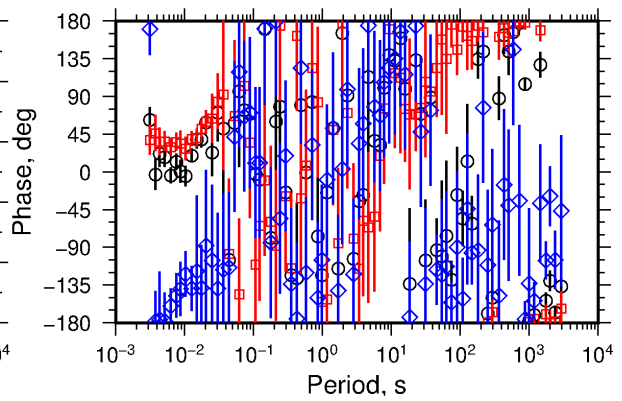
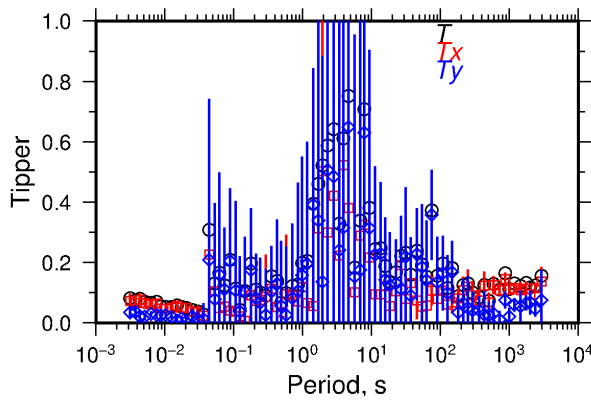
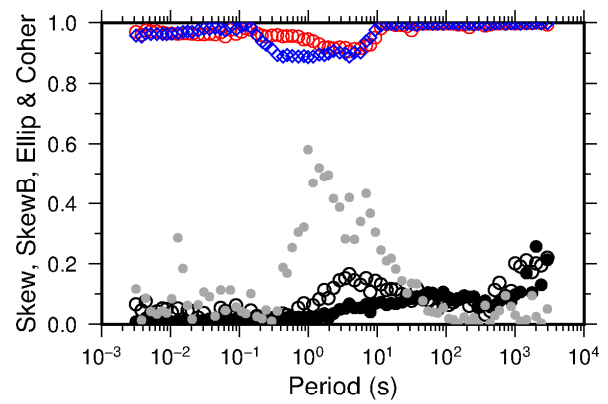
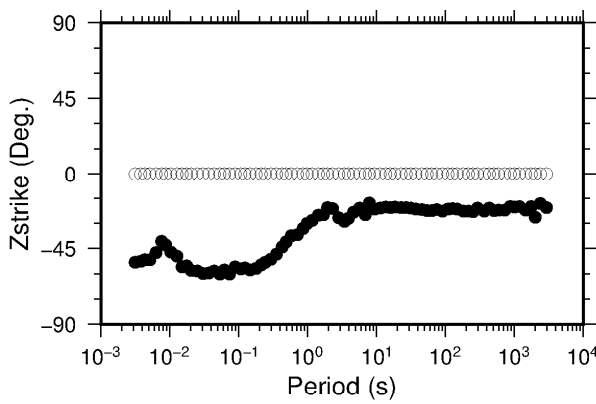
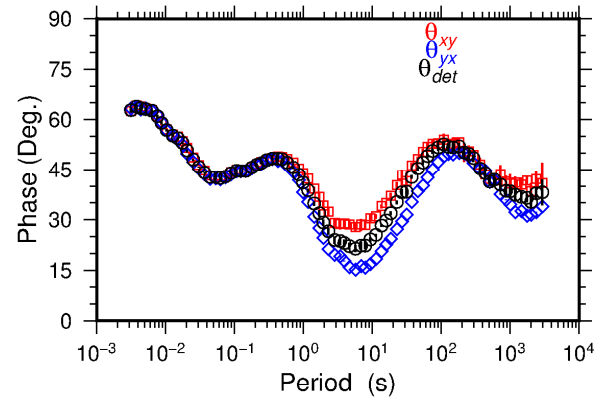
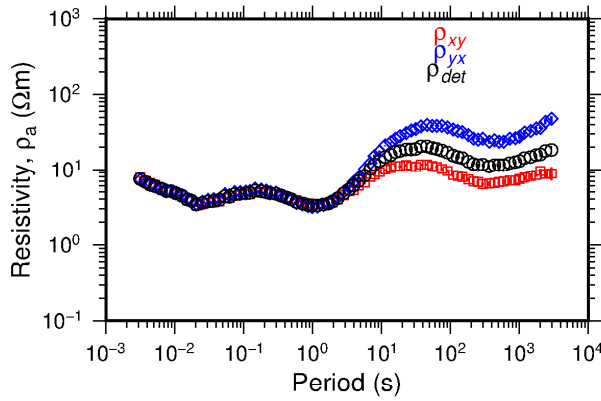
A075

Skrá: A075.EDI



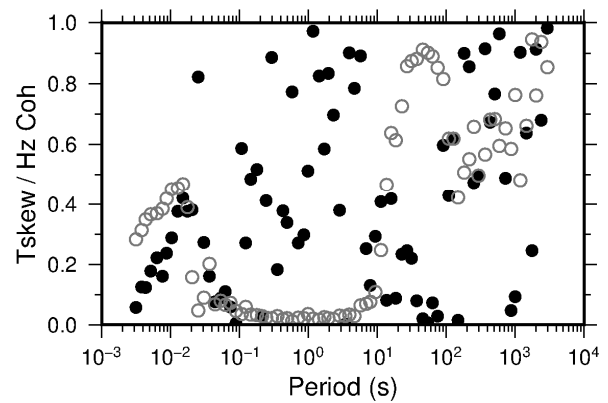
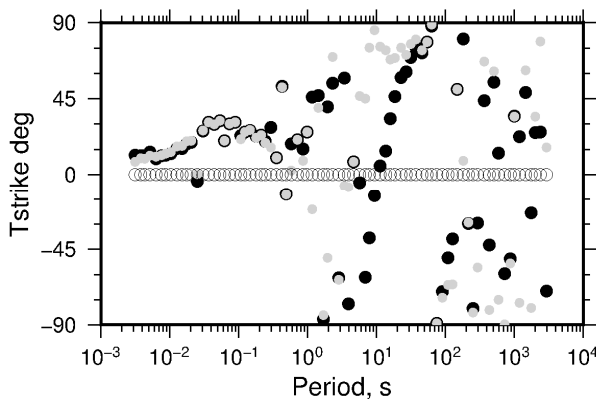
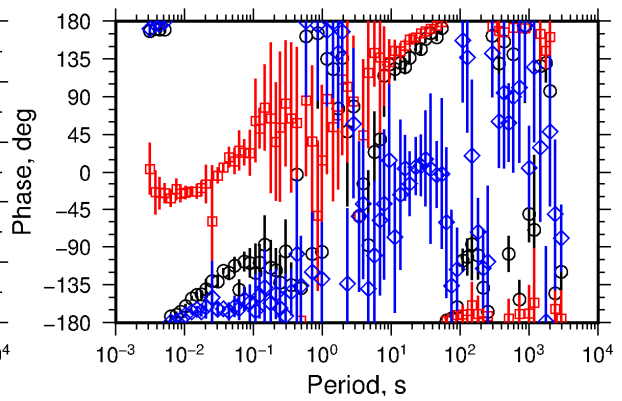
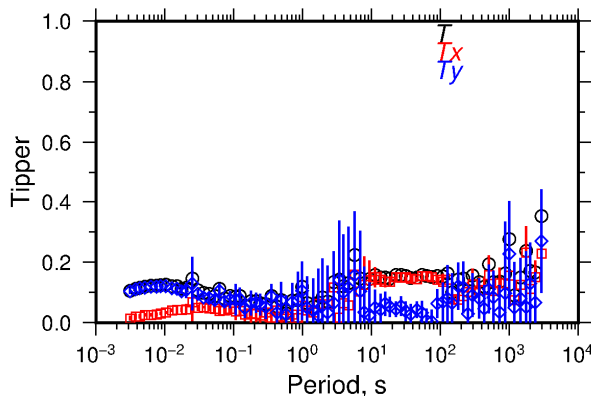
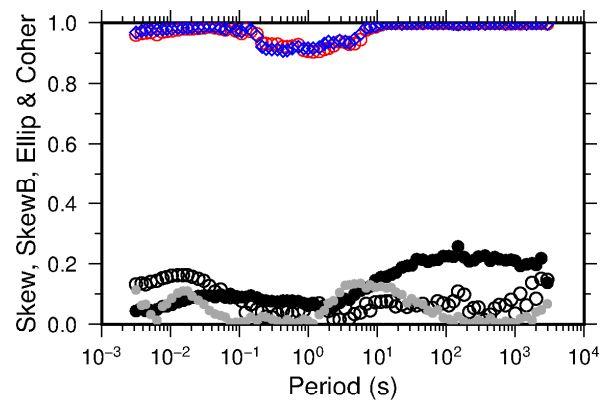
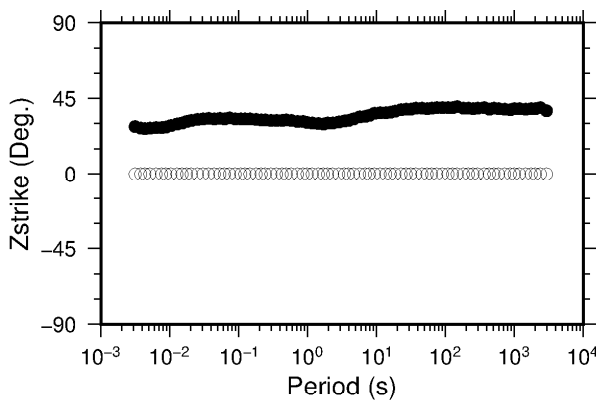
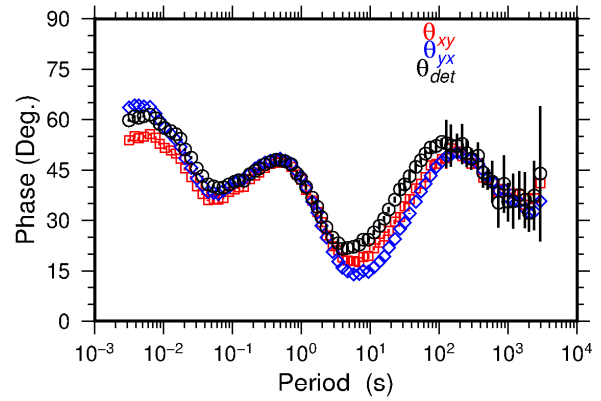
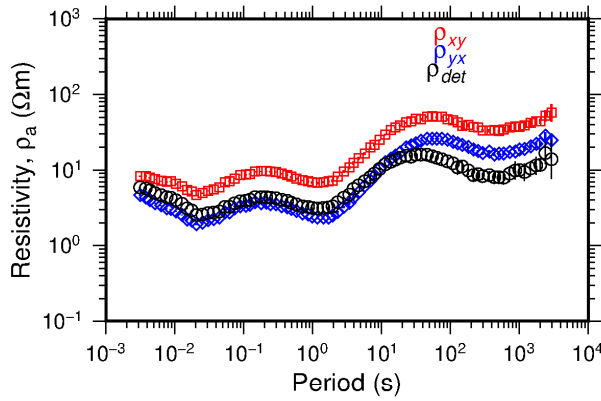
A077

Skrá: A077.EDI



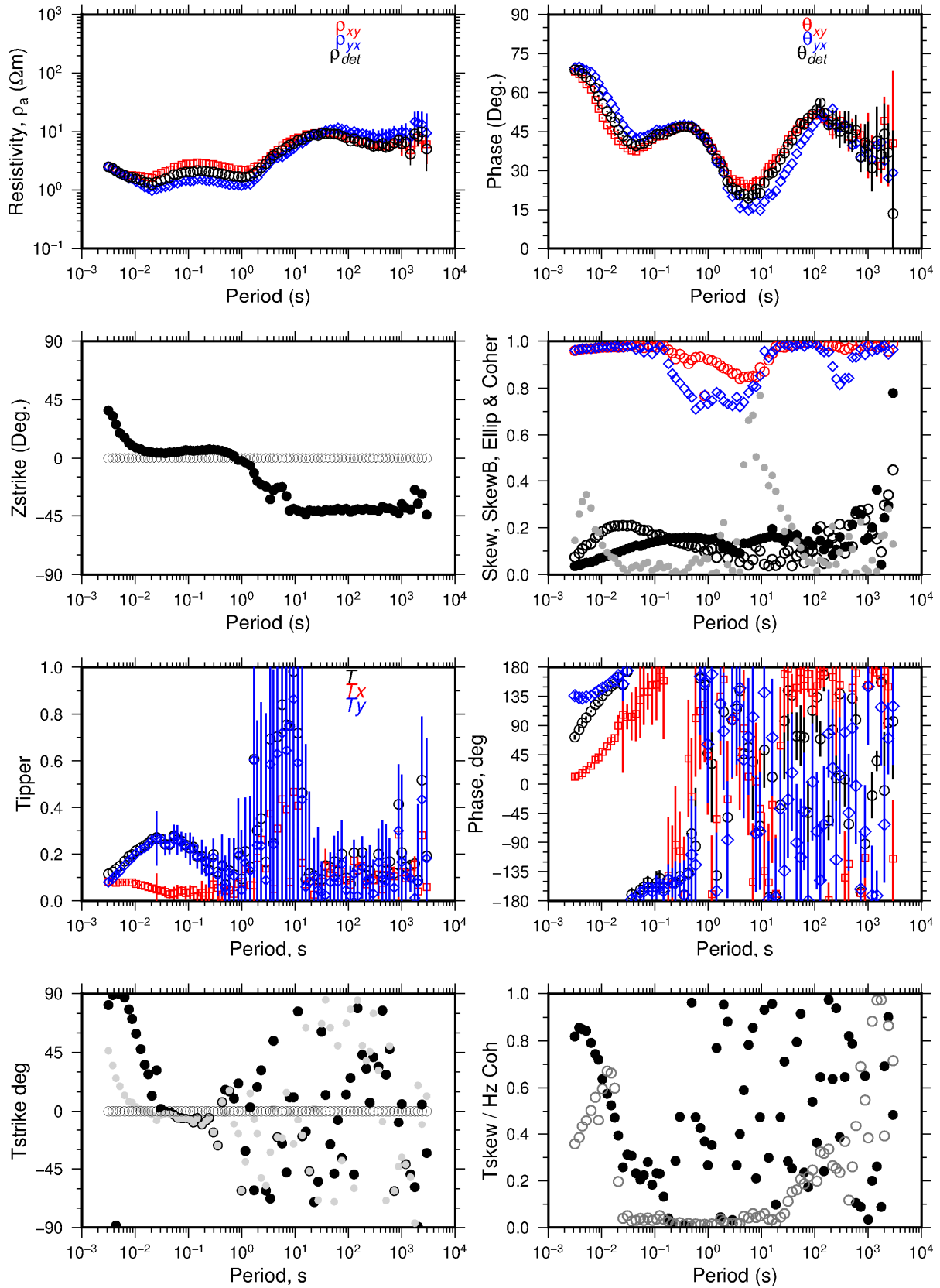
A078

Skrá: A078.EDI



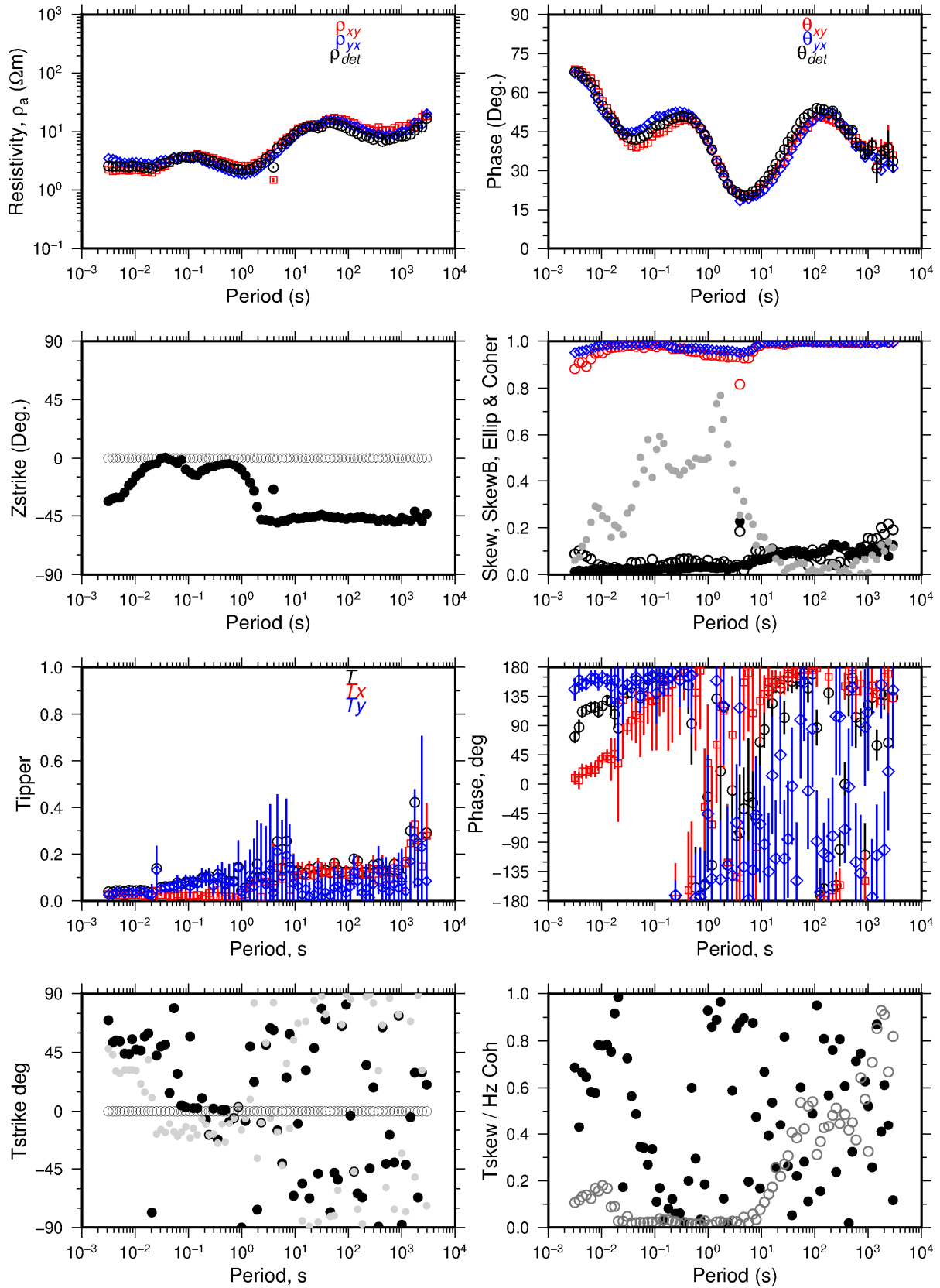
A079

Skrá: A079.EDI



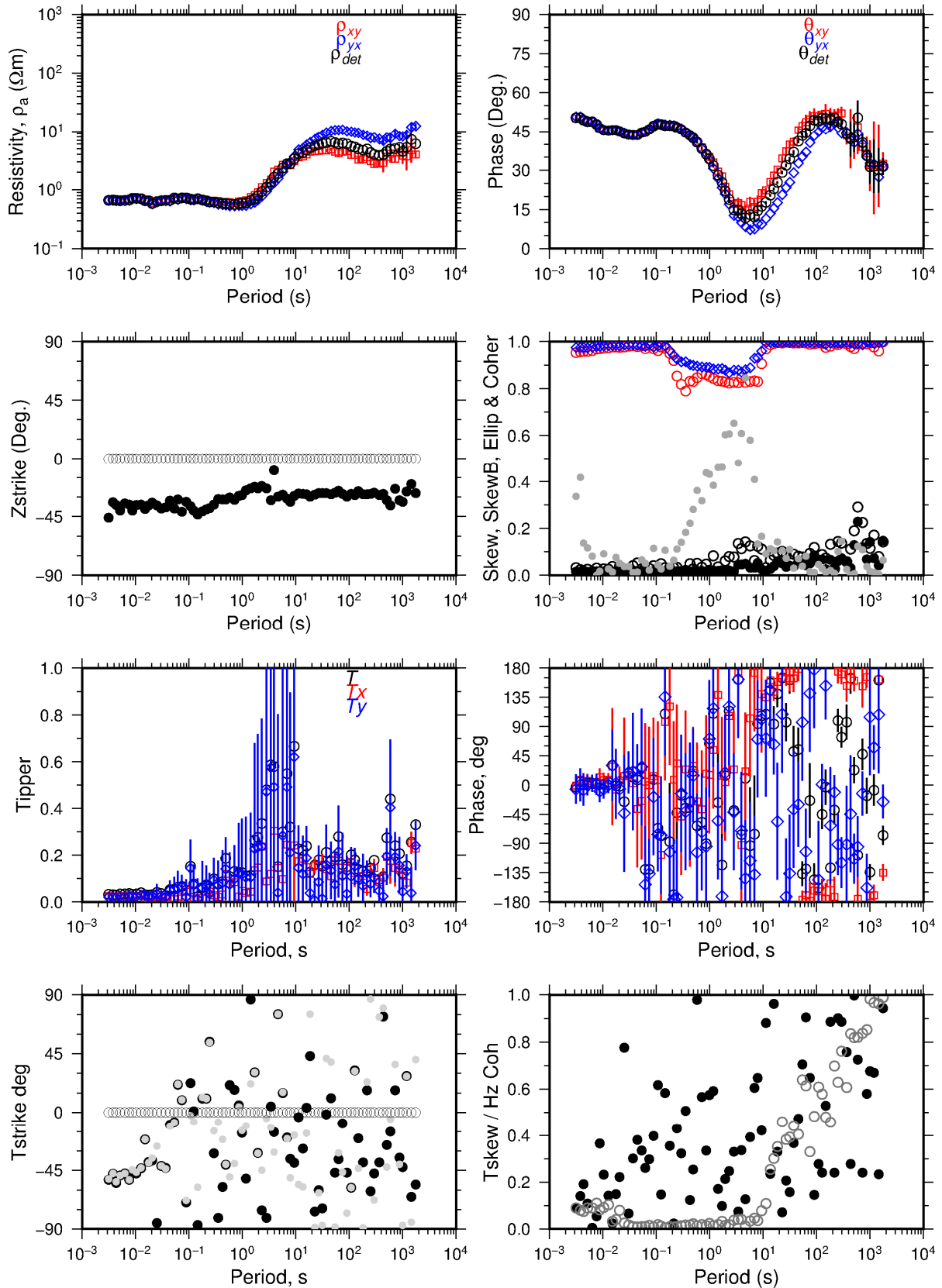
A080

Skrá: A080.EDI



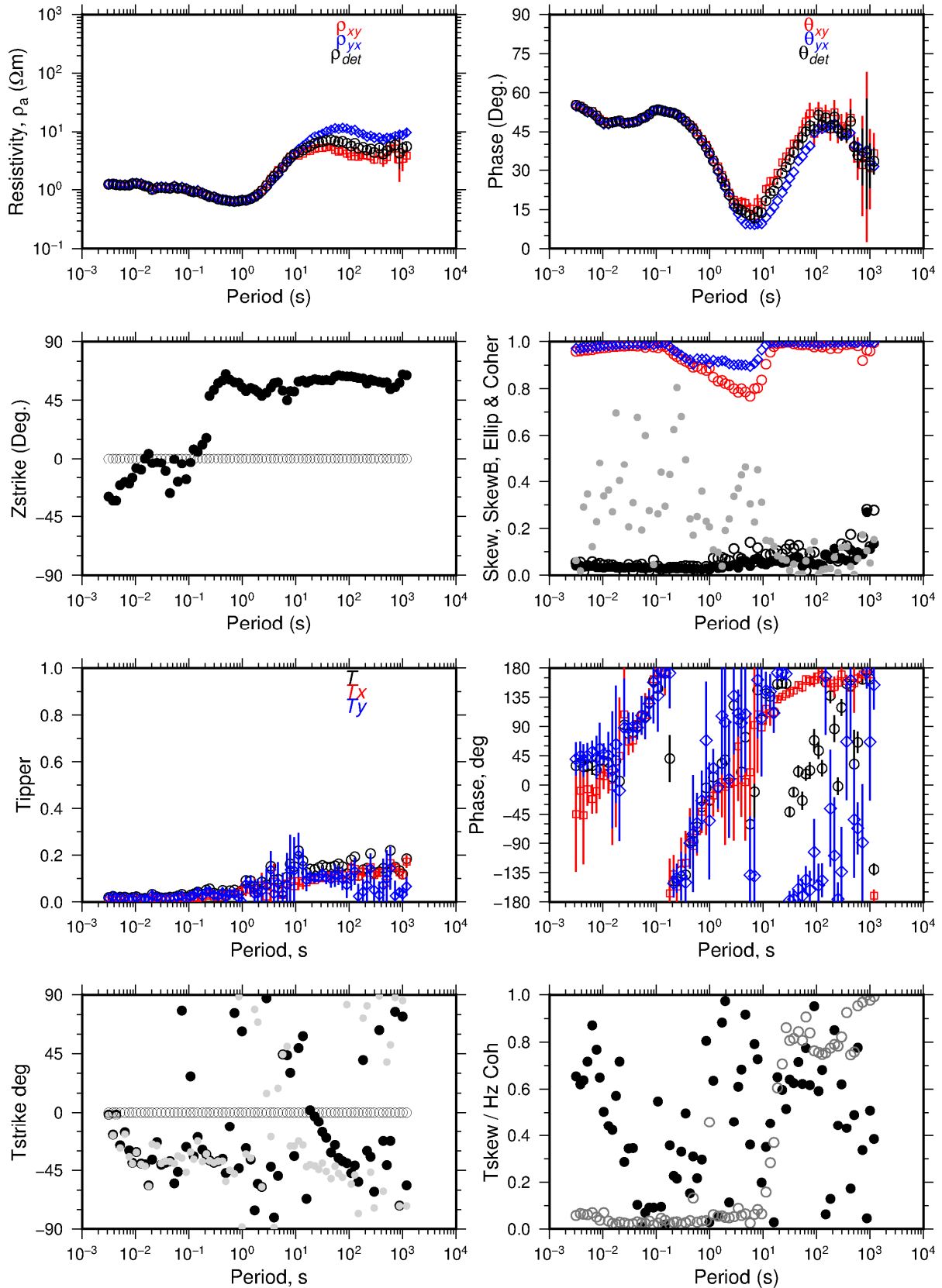
A083

Skrá: A083.EDI



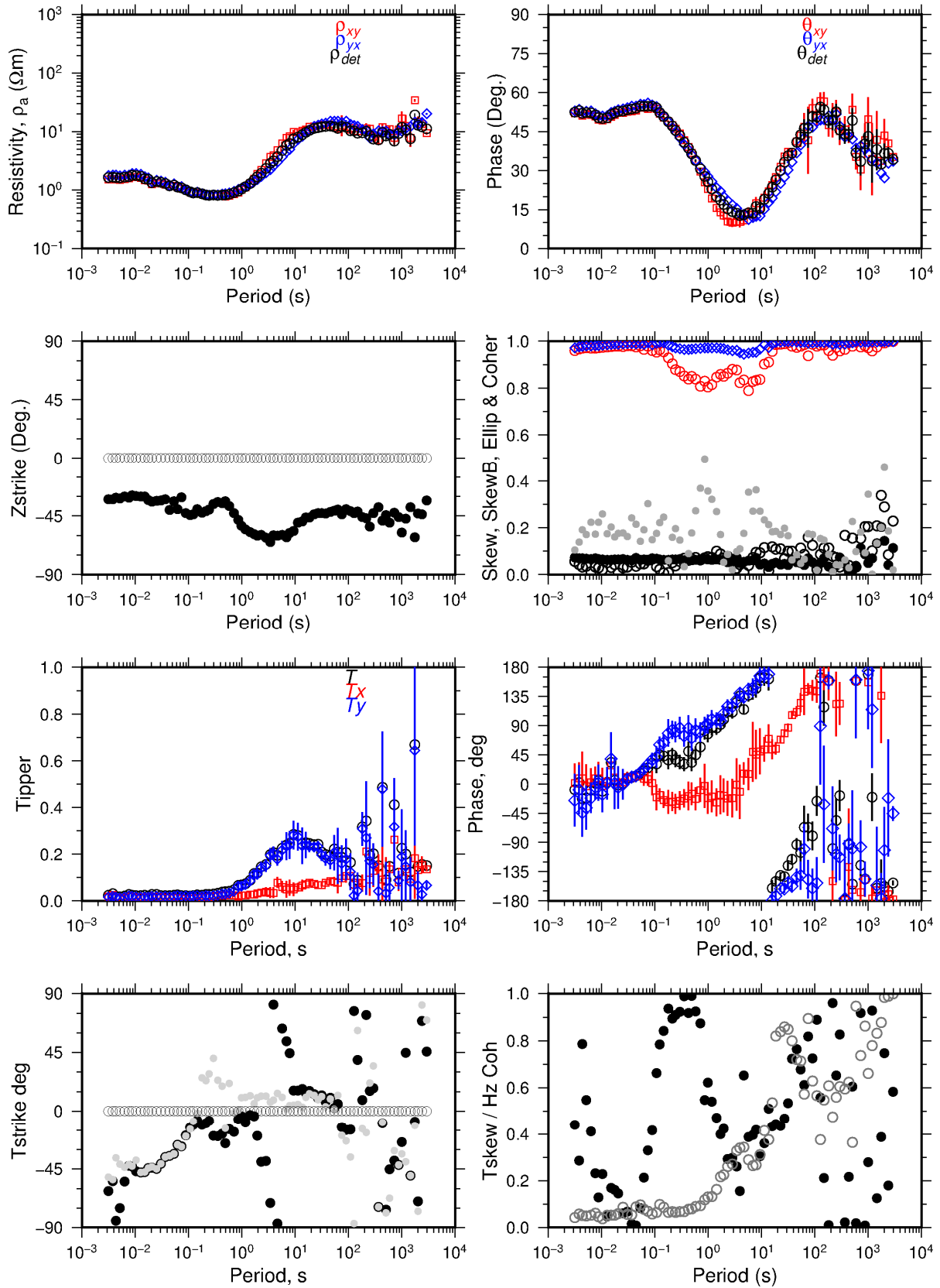
A084

Skrá: A084.EDI



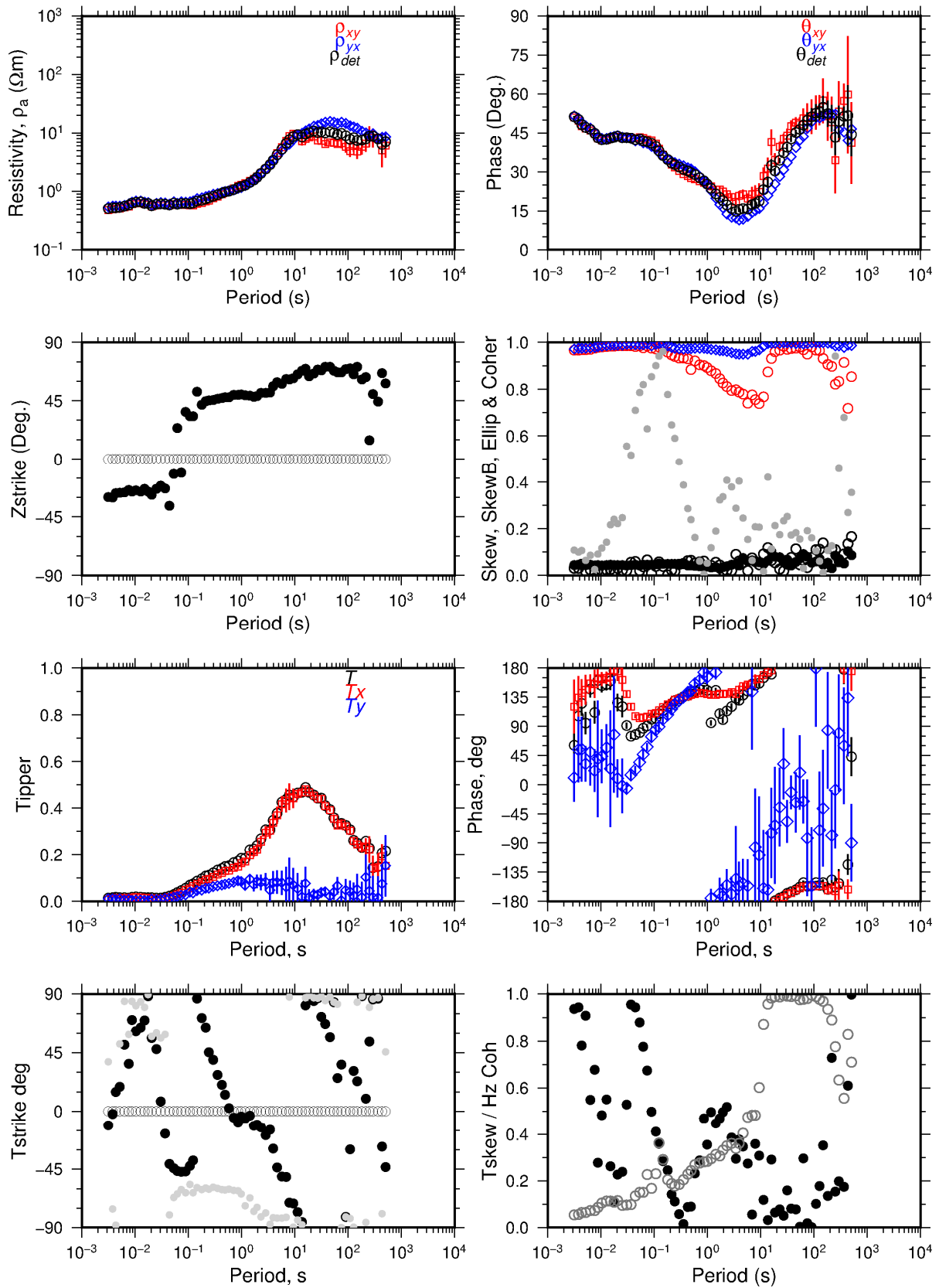
A086

Skrá: A086.EDI



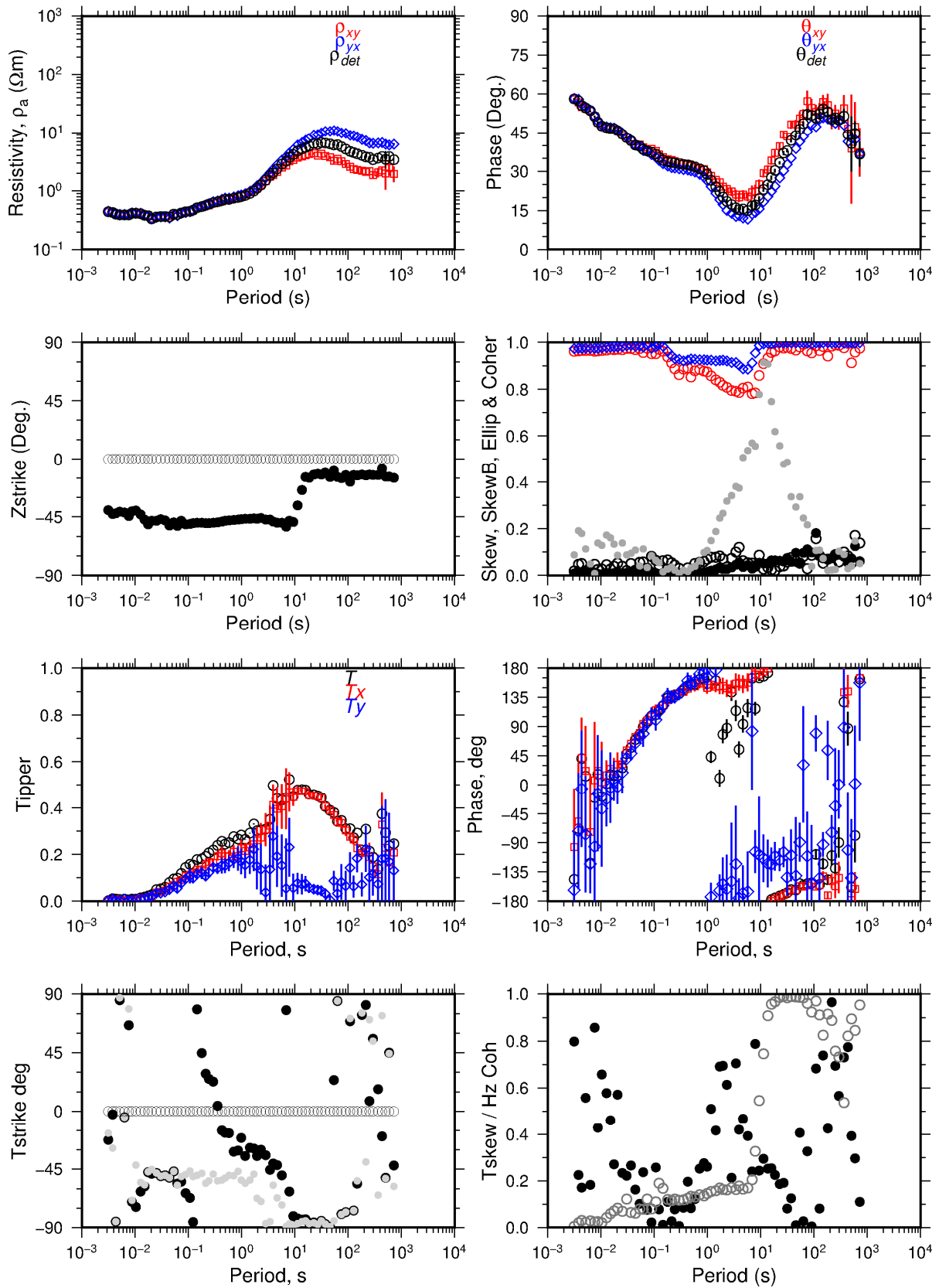
A087

Skrá: A087.EDI



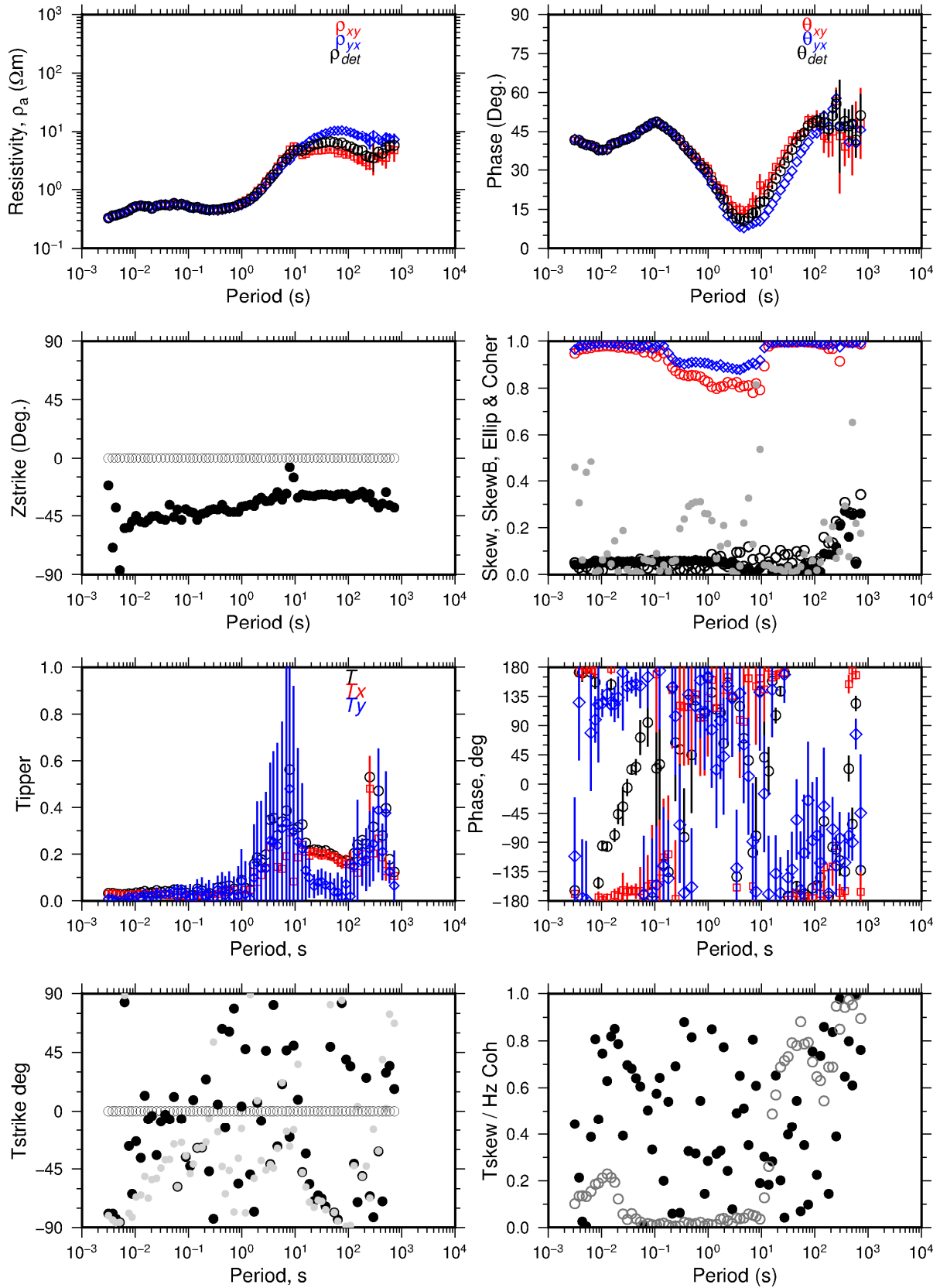
A088

Skrá: A088.EDI



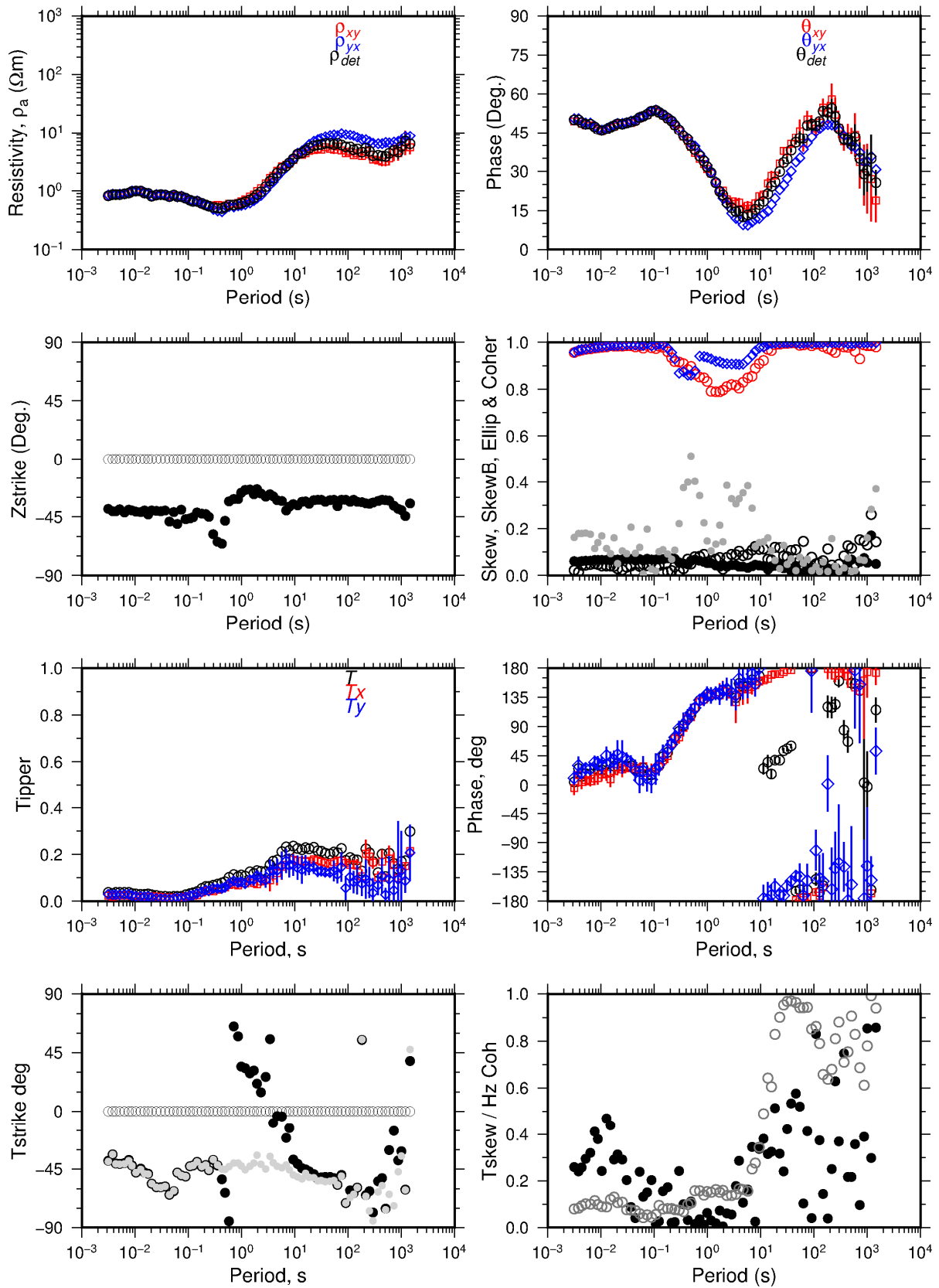
A089

Skrá: A089.EDI



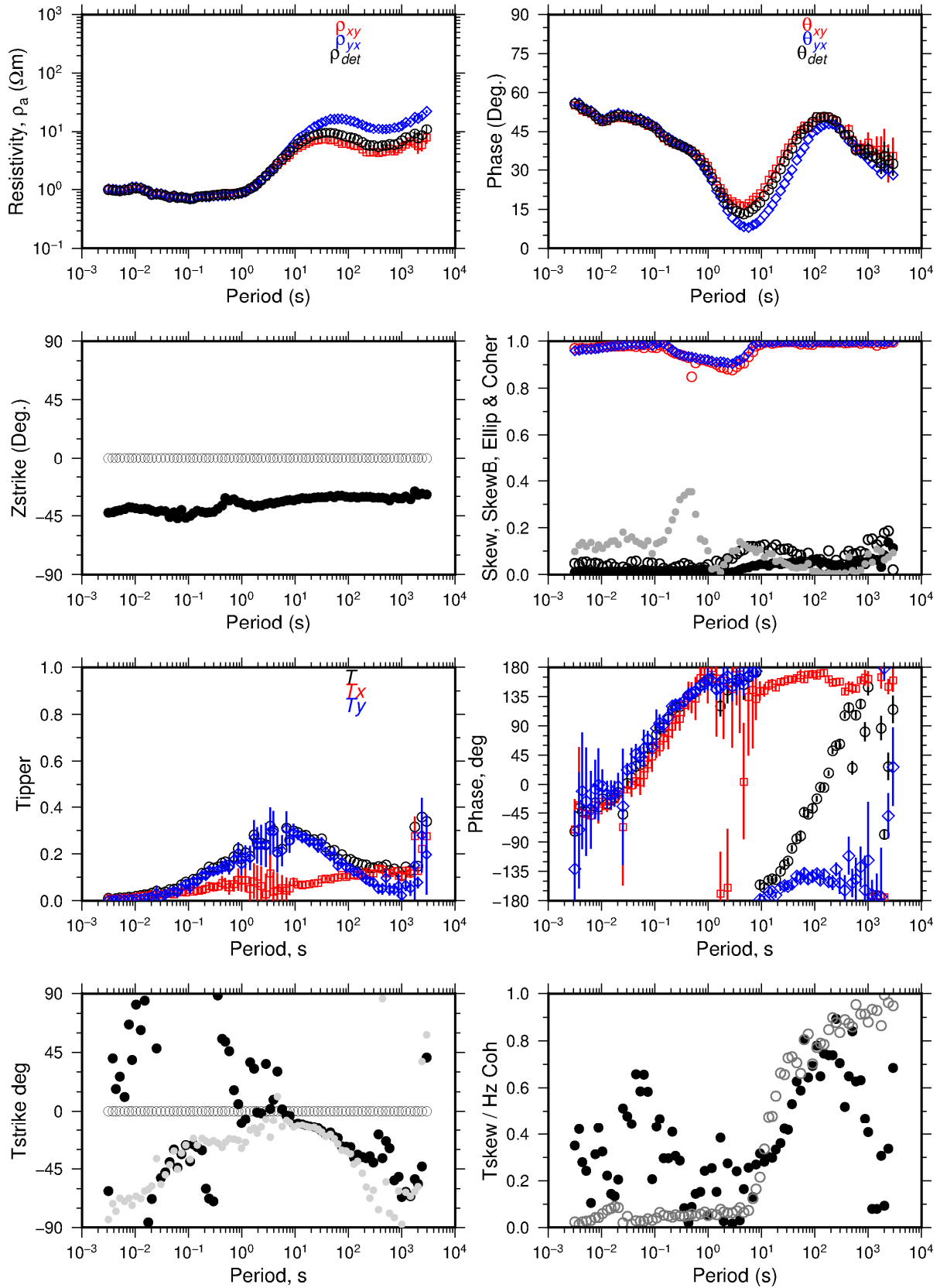
A090

Skrá: A090.EDI



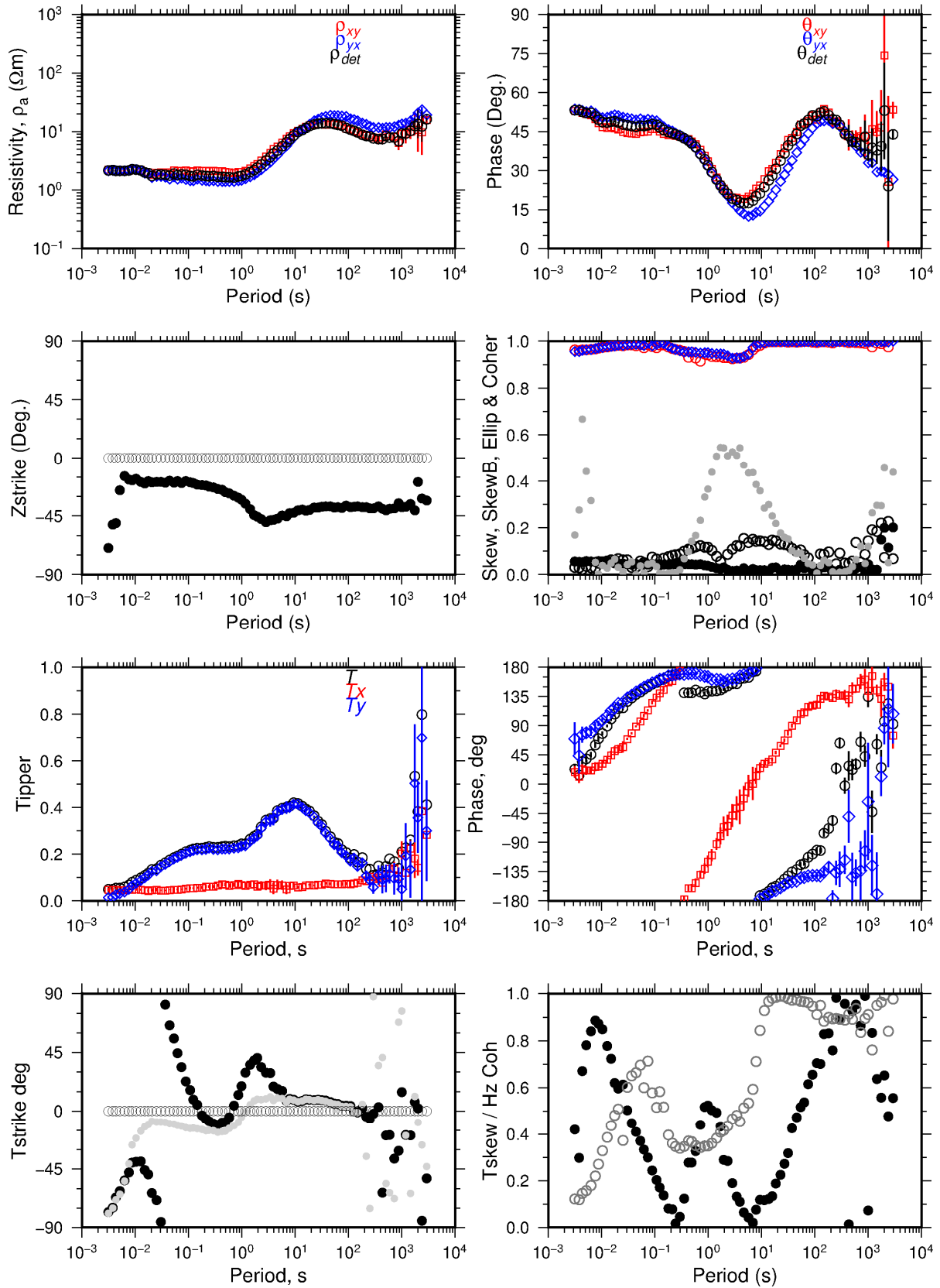
A091

Skrá: A091.EDI



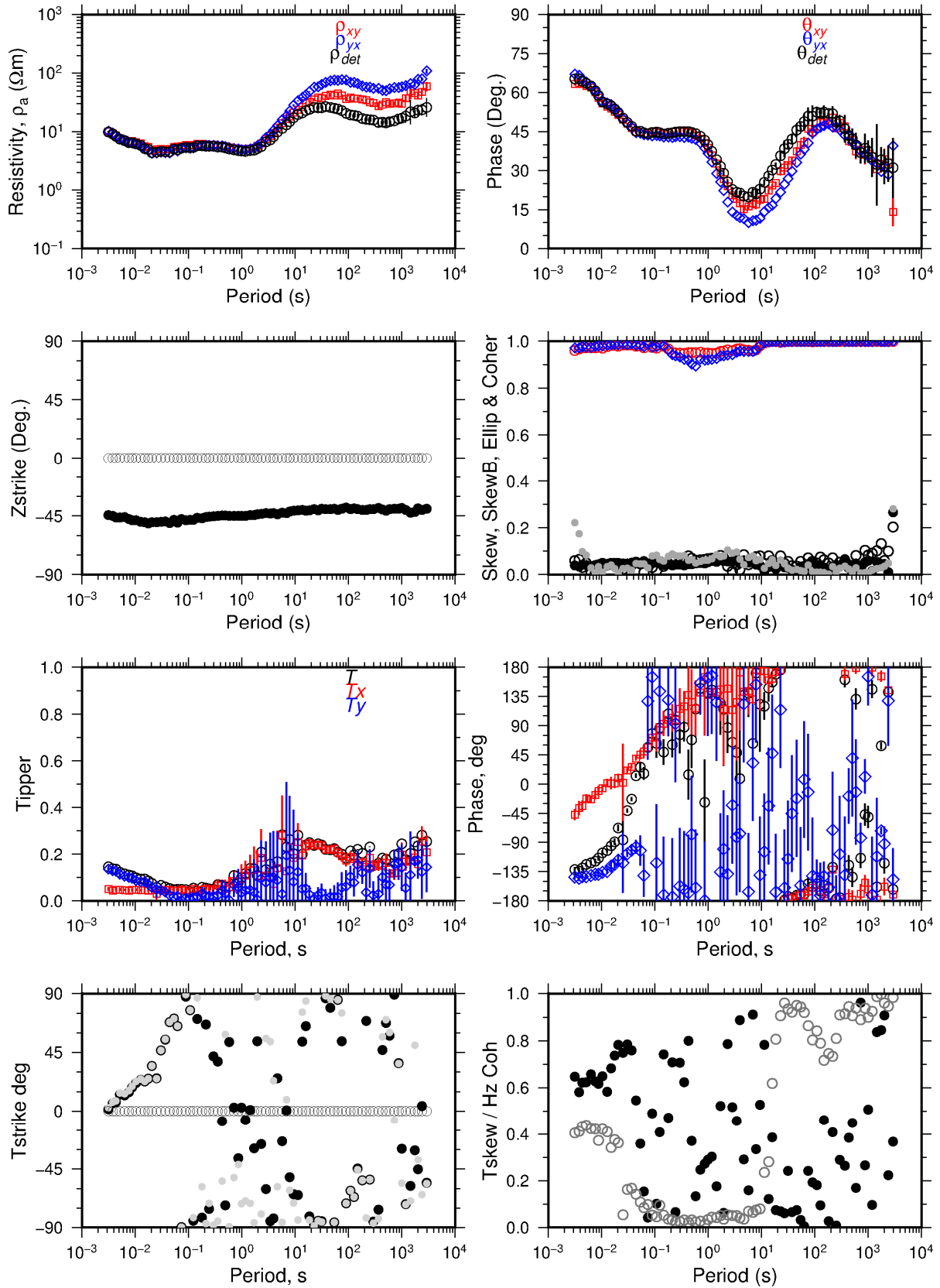
A092

Skrá: A092.EDI



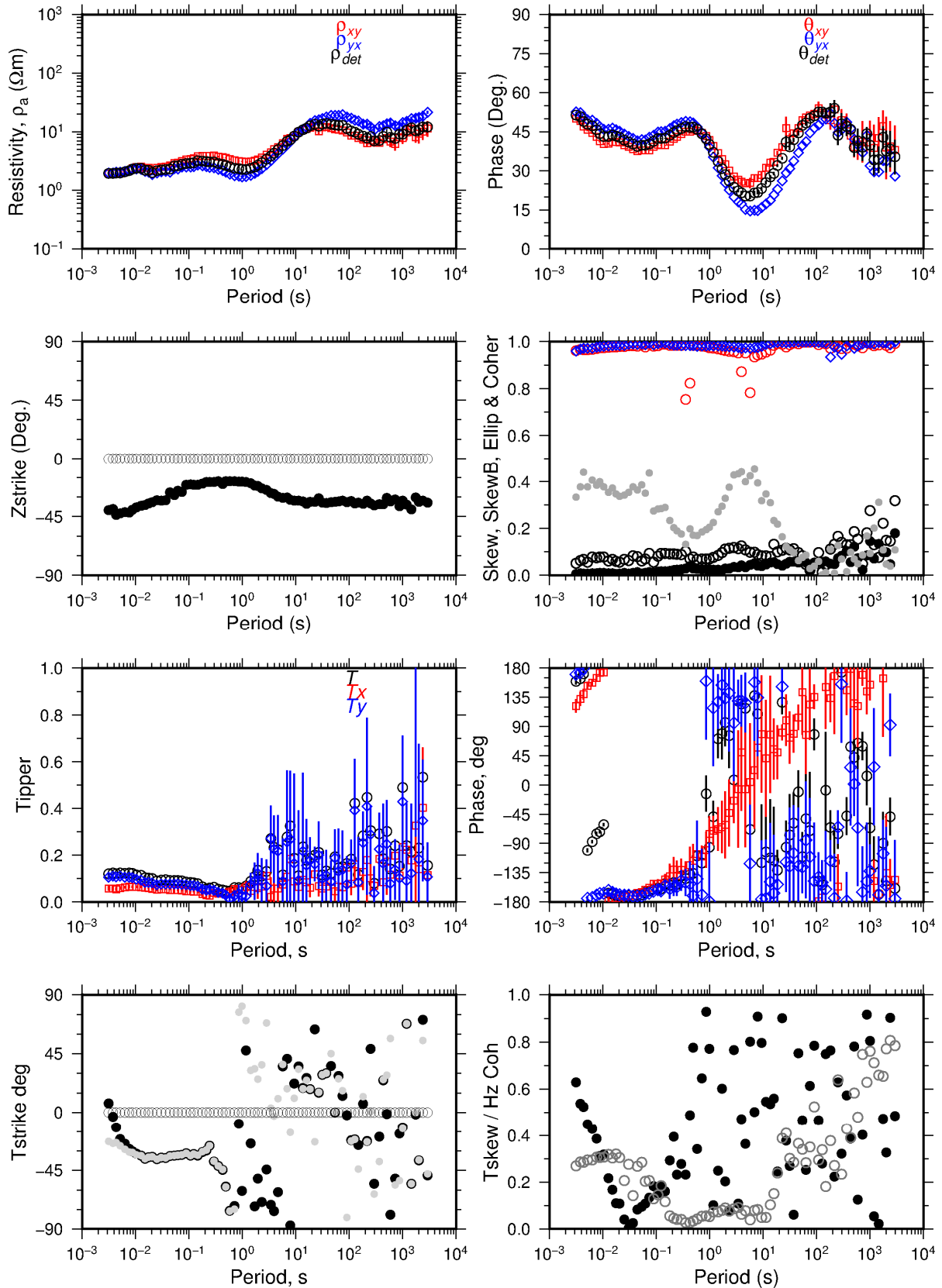
A095

Skrá: A095.EDI



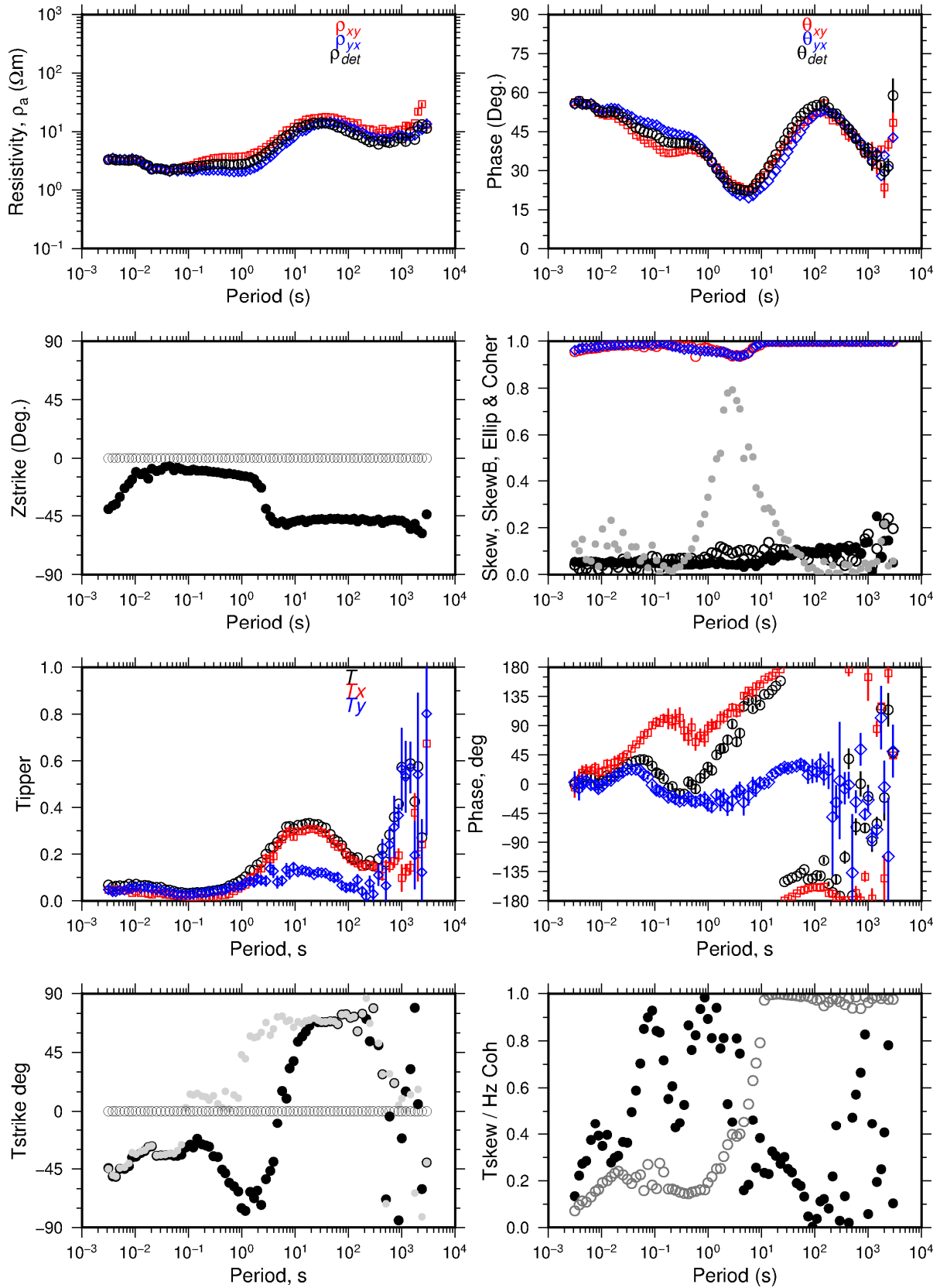
A098

Skrá: A098.EDI



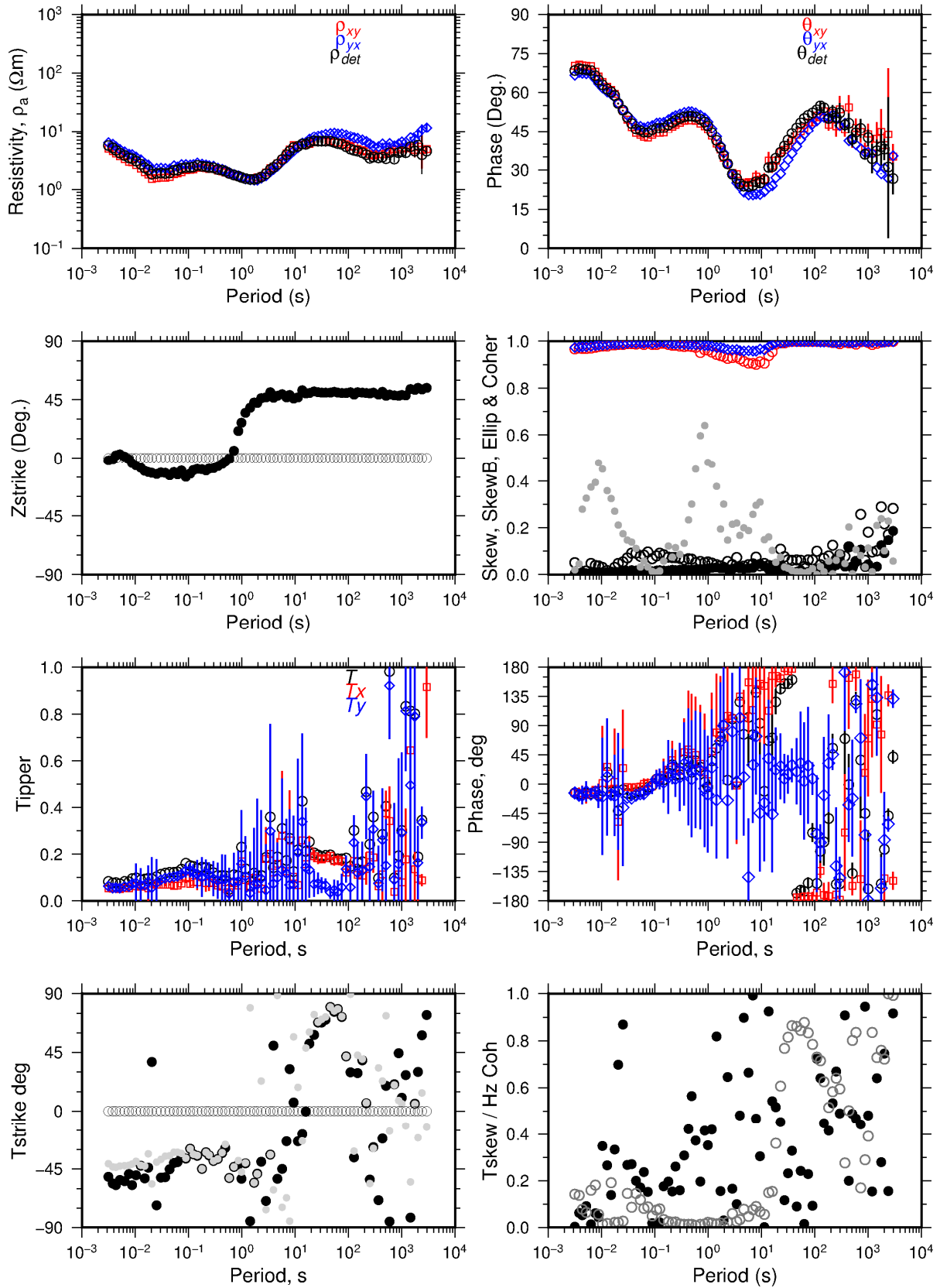
A099

Skrá: A099.EDI



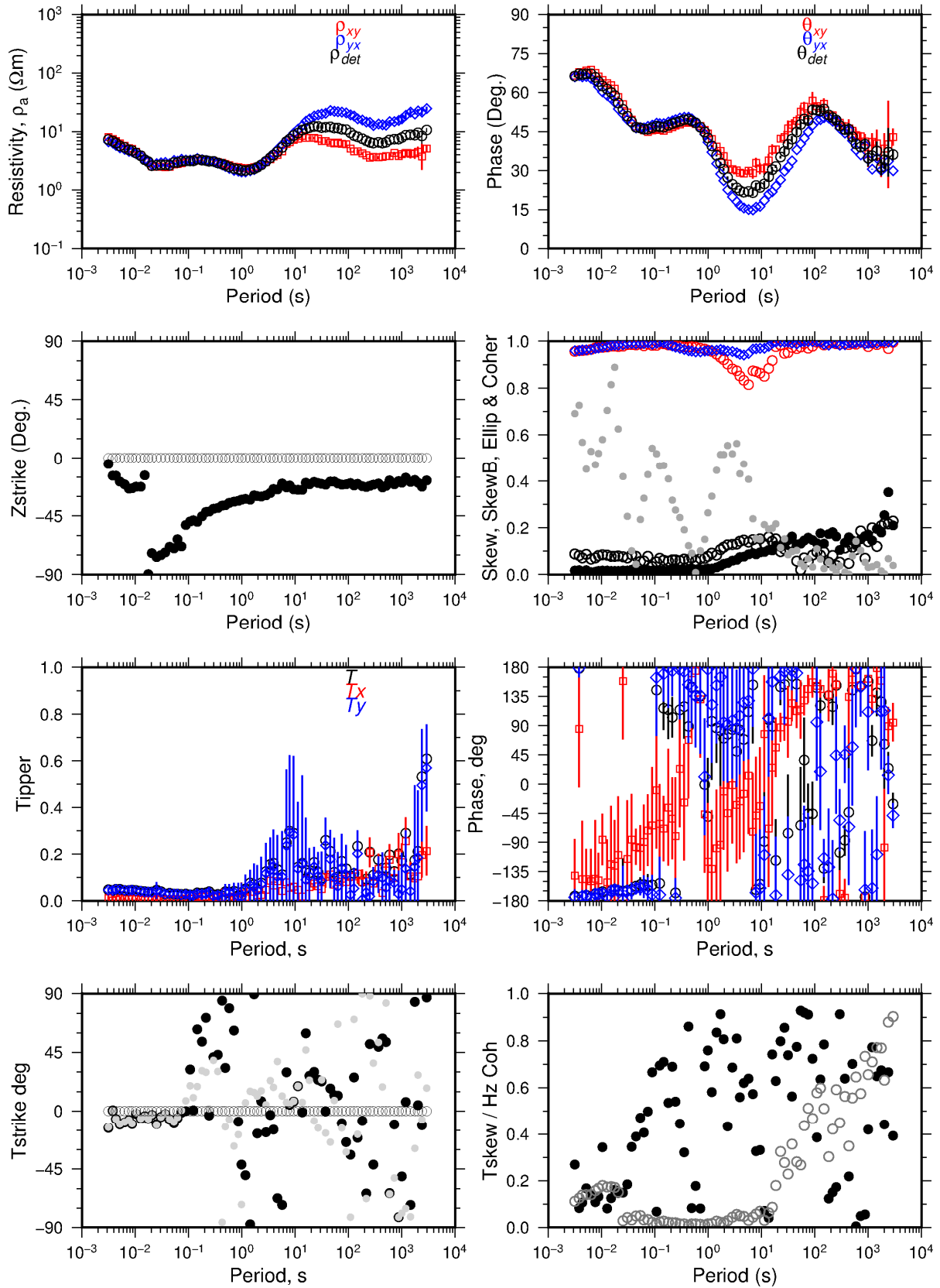
A101

Skrá: A101.EDI



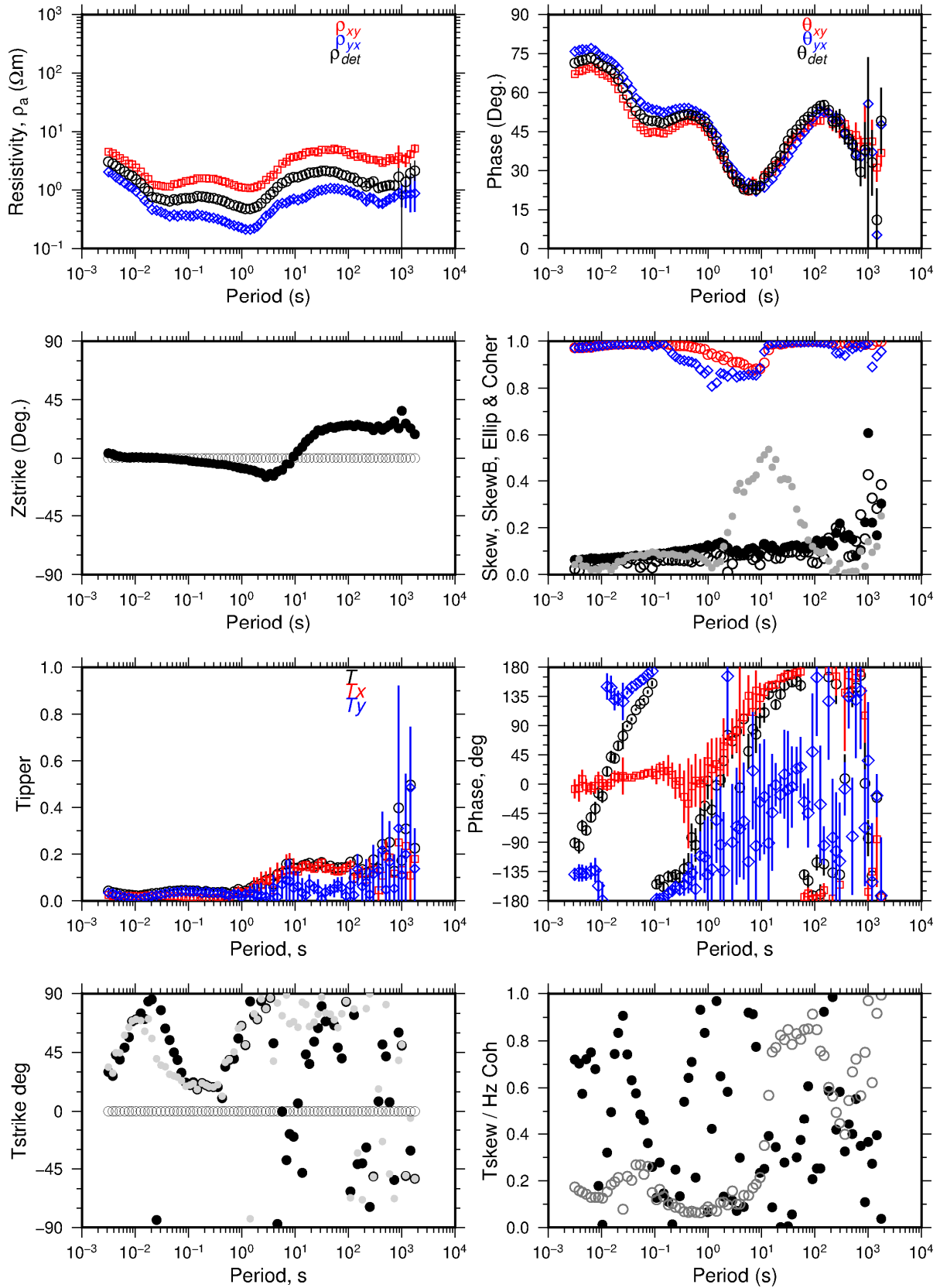
A104

Skrá: A104.EDI



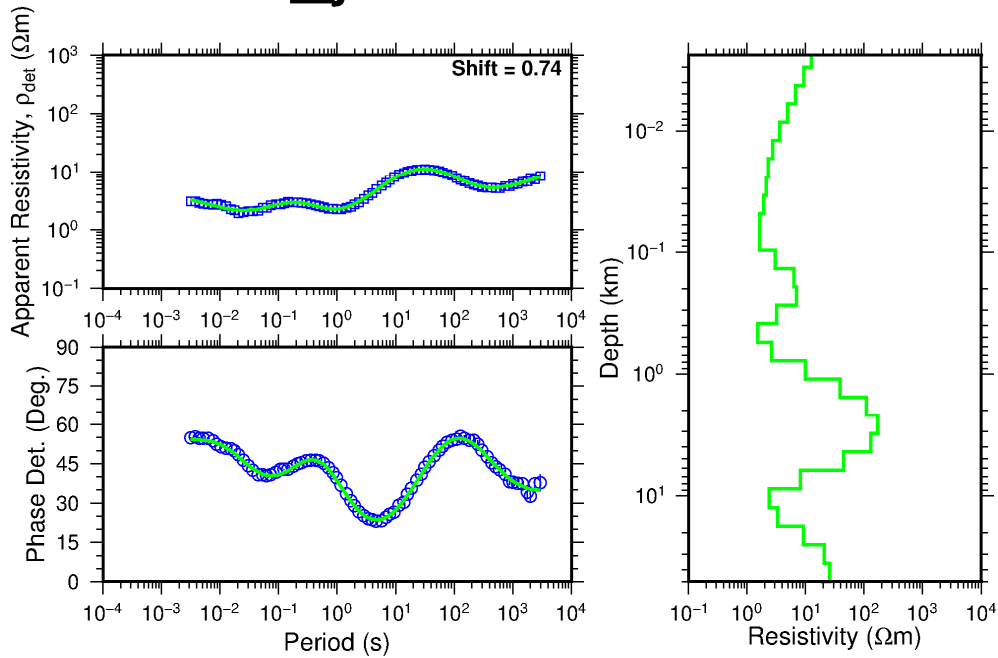
A105

Skrá: A105.EDI



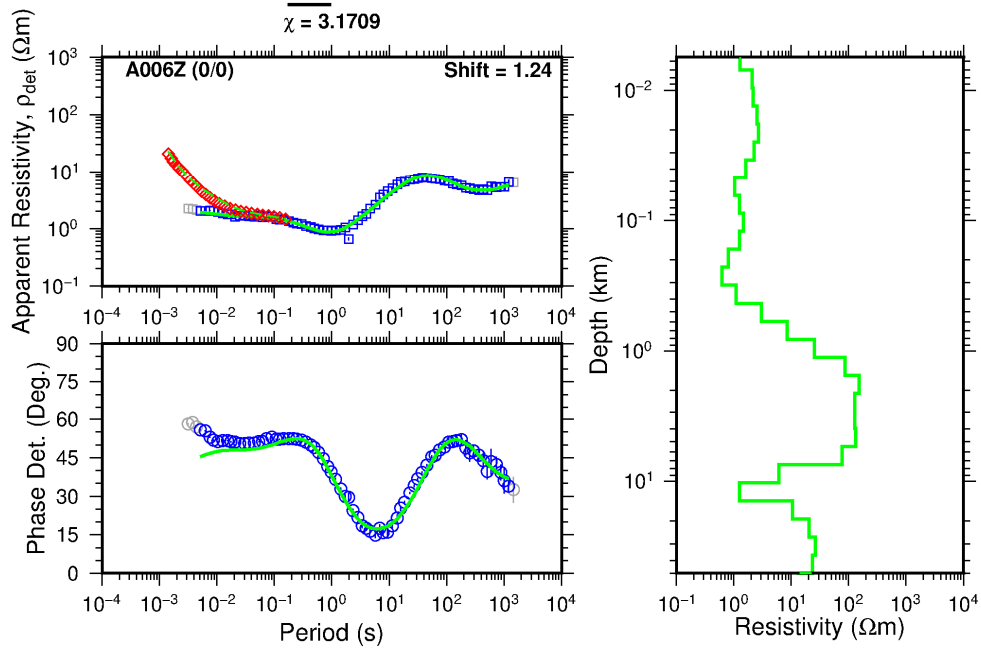
APPENDIX III: 1D models of the joint inversion of TEM and MT data

A002_justMT



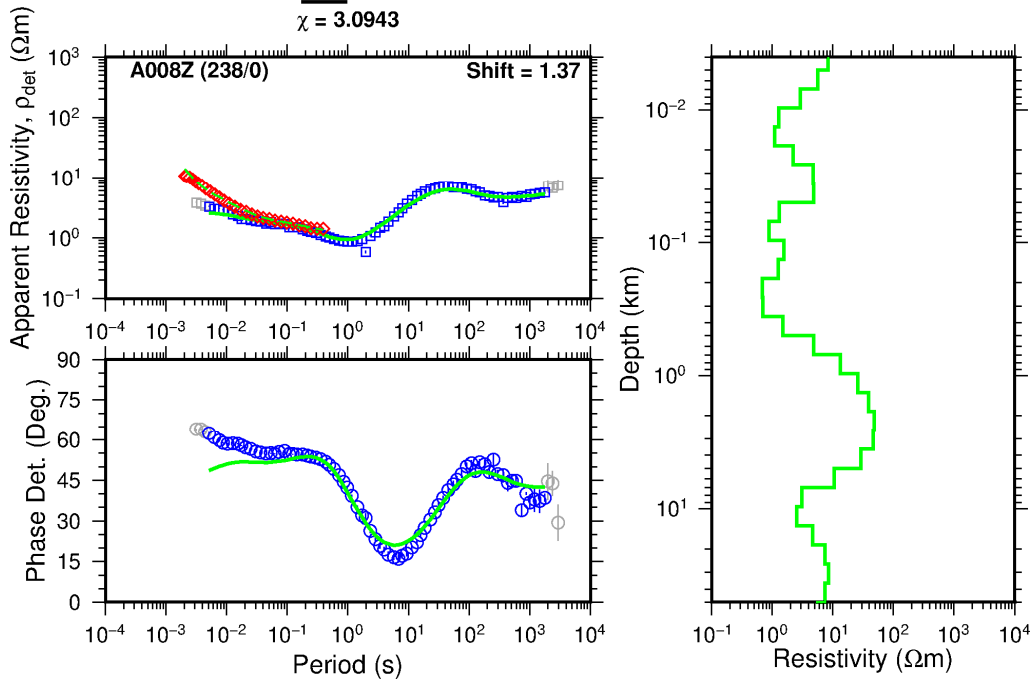
A006_A006Z

$\chi = 3.1709$



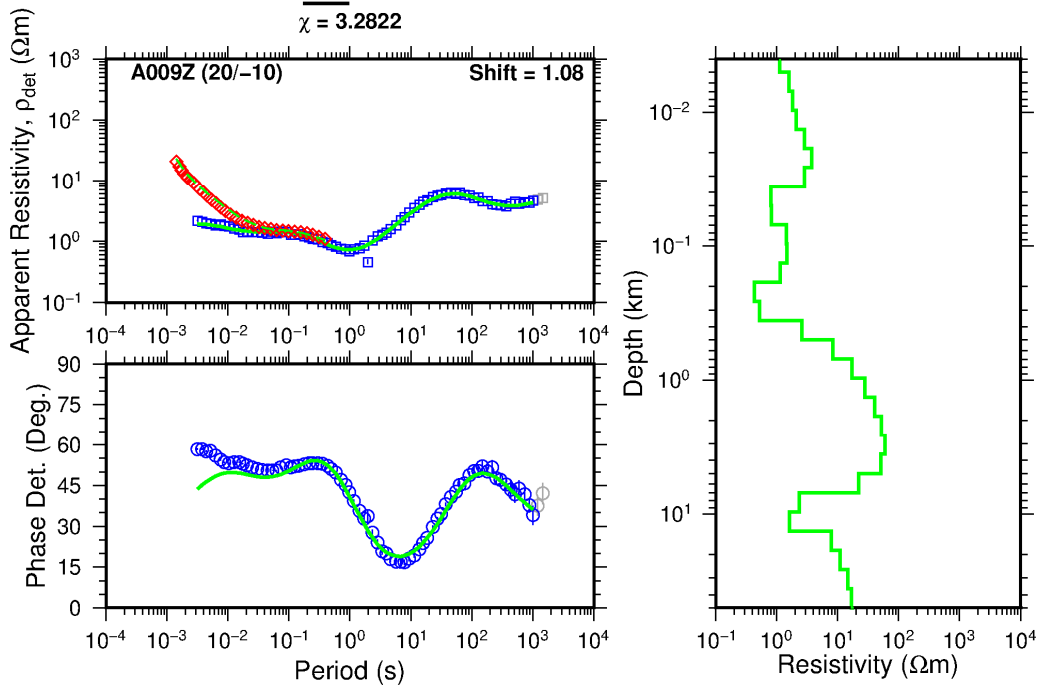
A008_A008Z

$\chi = 3.0943$



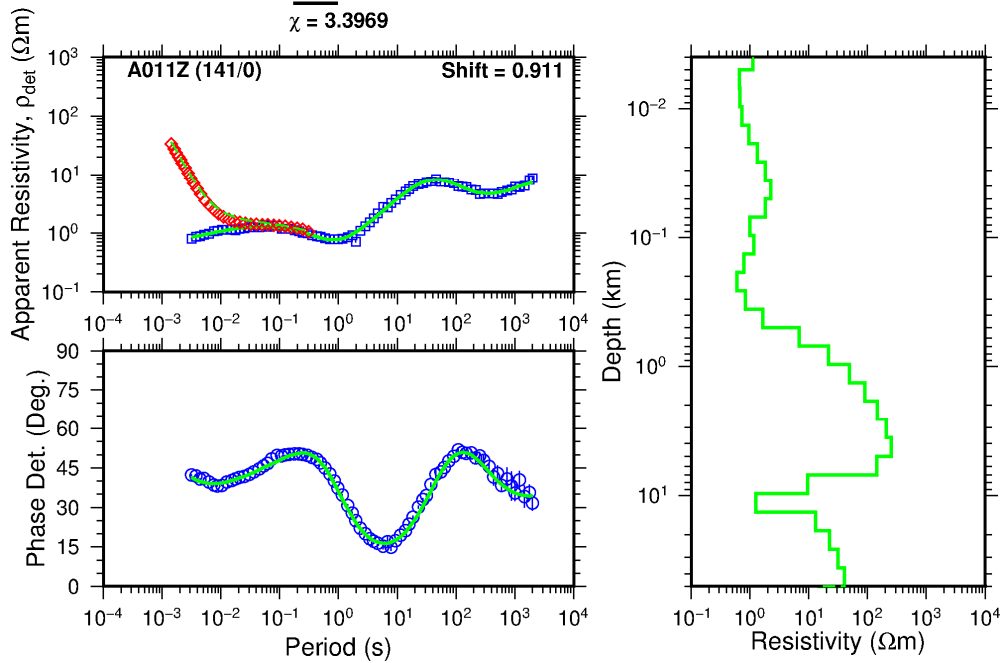
A009_A009Z

$\chi = 3.2822$



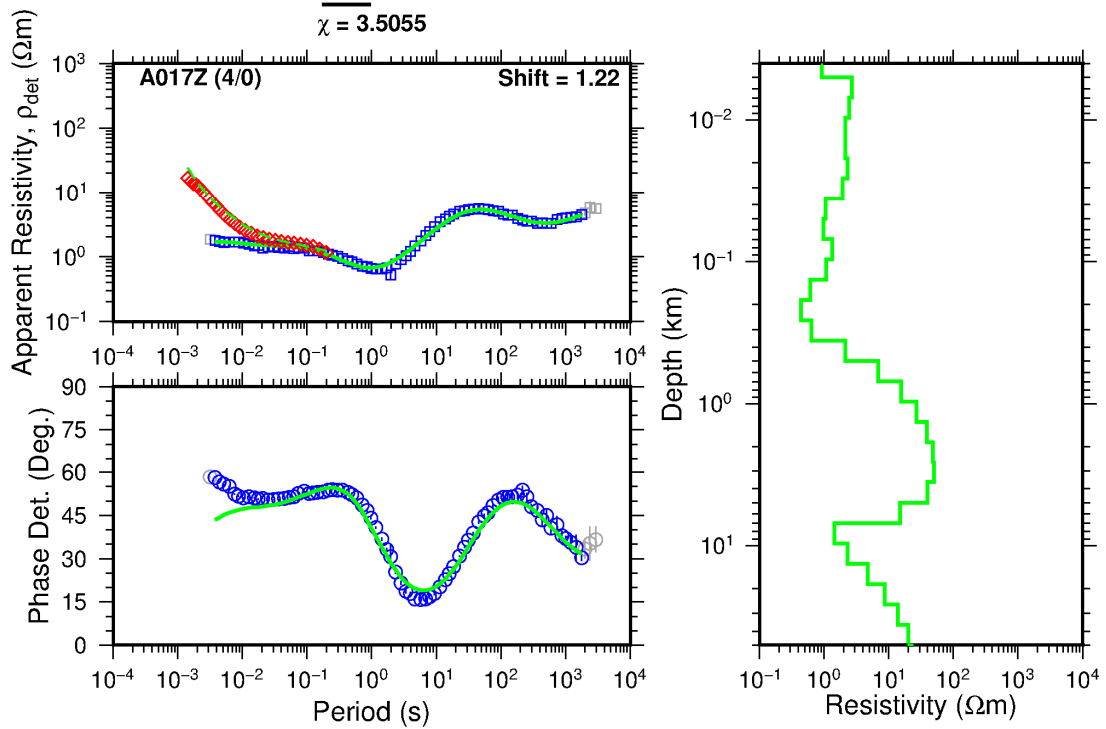
A011_A011Z

$\chi = 3.3969$



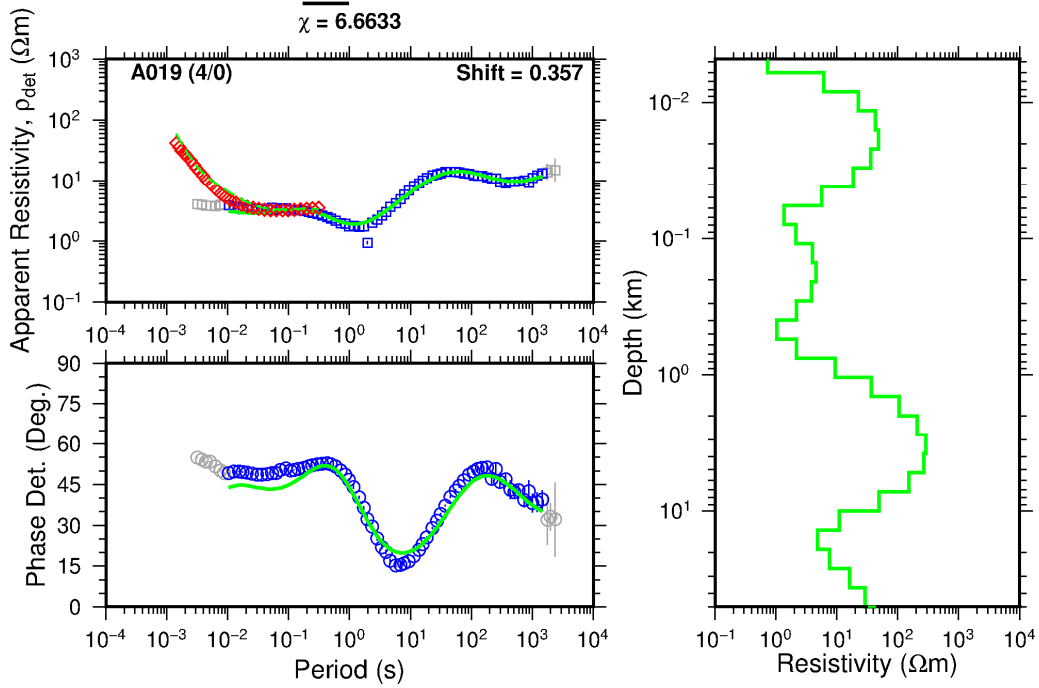
A017_A017Z

$\chi = 3.5055$



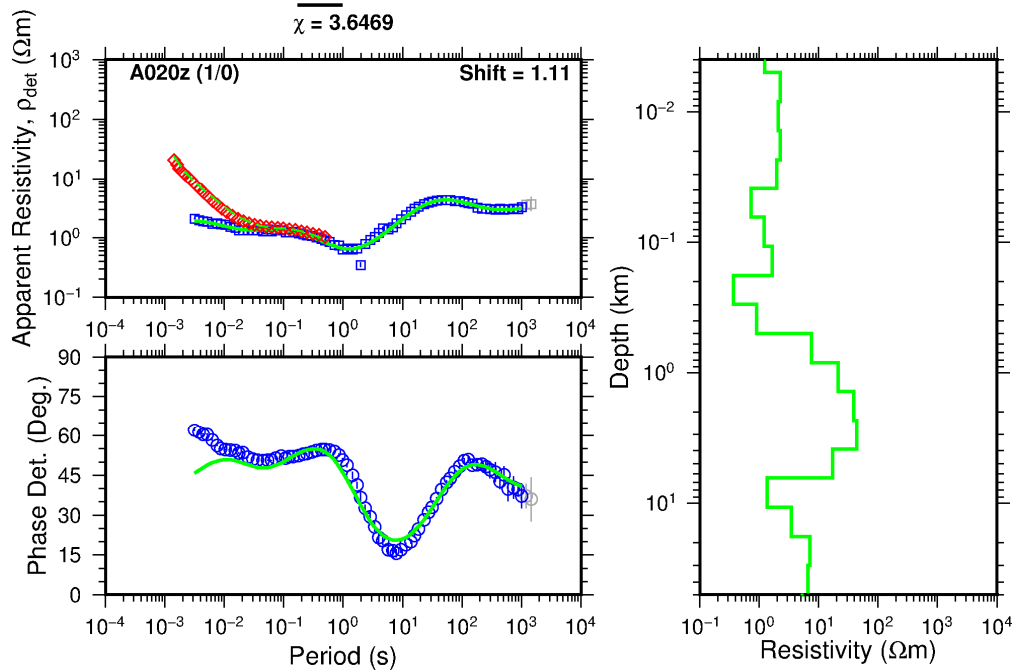
A019_A019Z

$\chi = 6.6633$



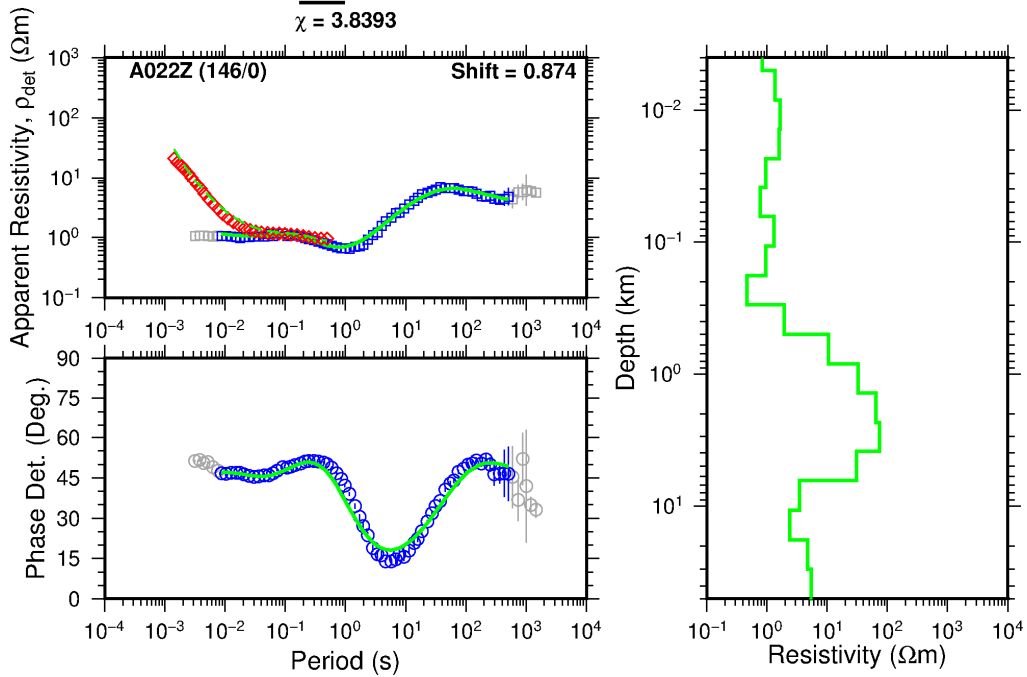
A020_A020Z

$\chi = 3.6469$



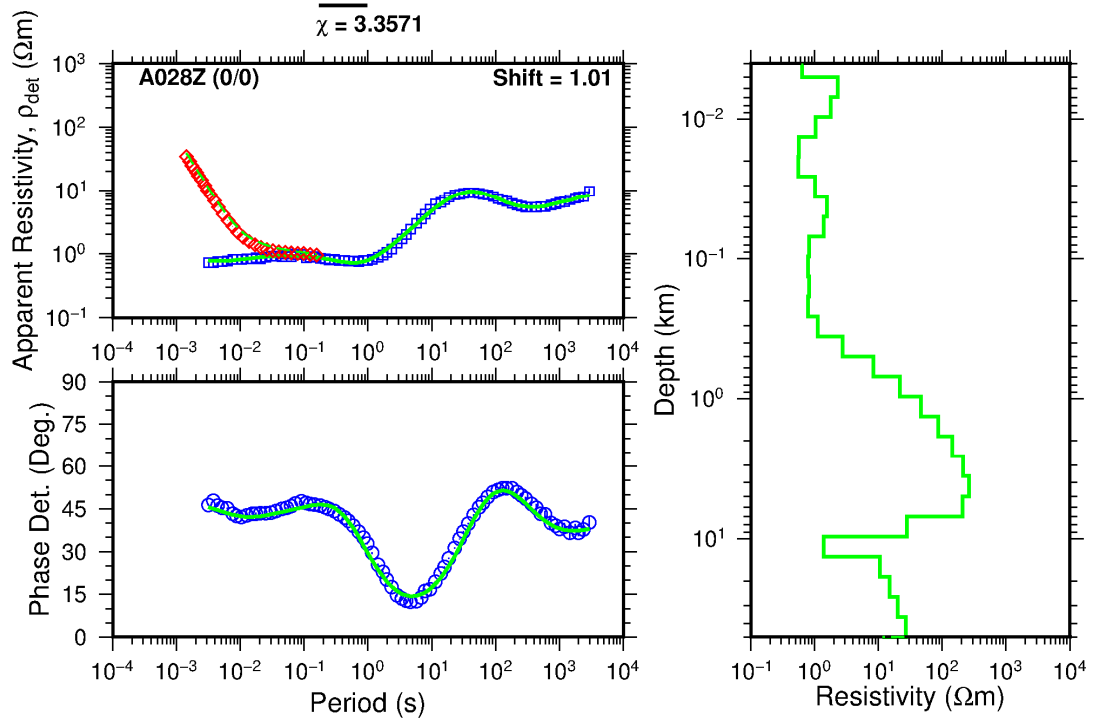
A022_A022Z

$\chi = 3.8393$



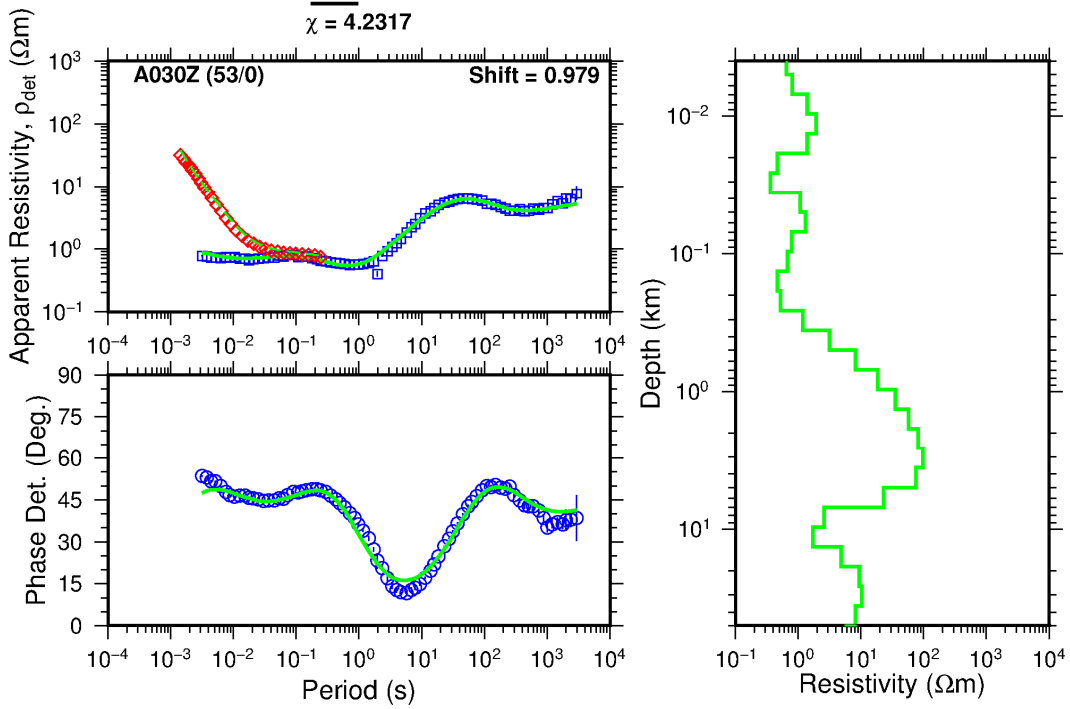
A028_A028Z

$\chi = 3.3571$



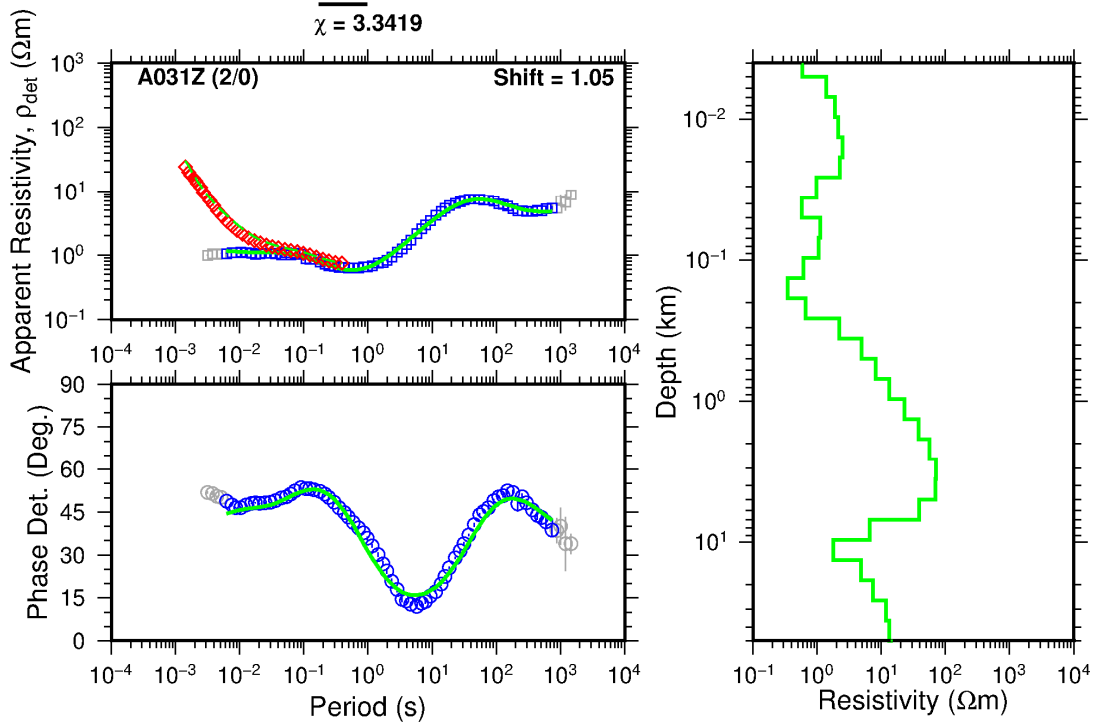
A030_A030Z

$\chi = 4.2317$



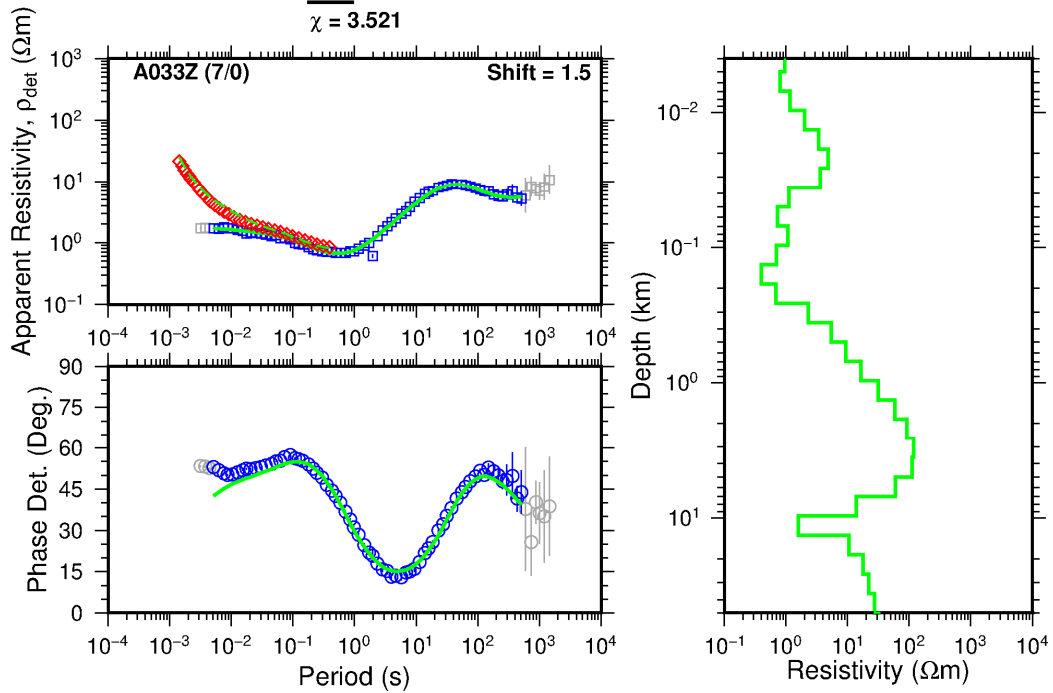
A031_A031Z

$\chi = 3.3419$



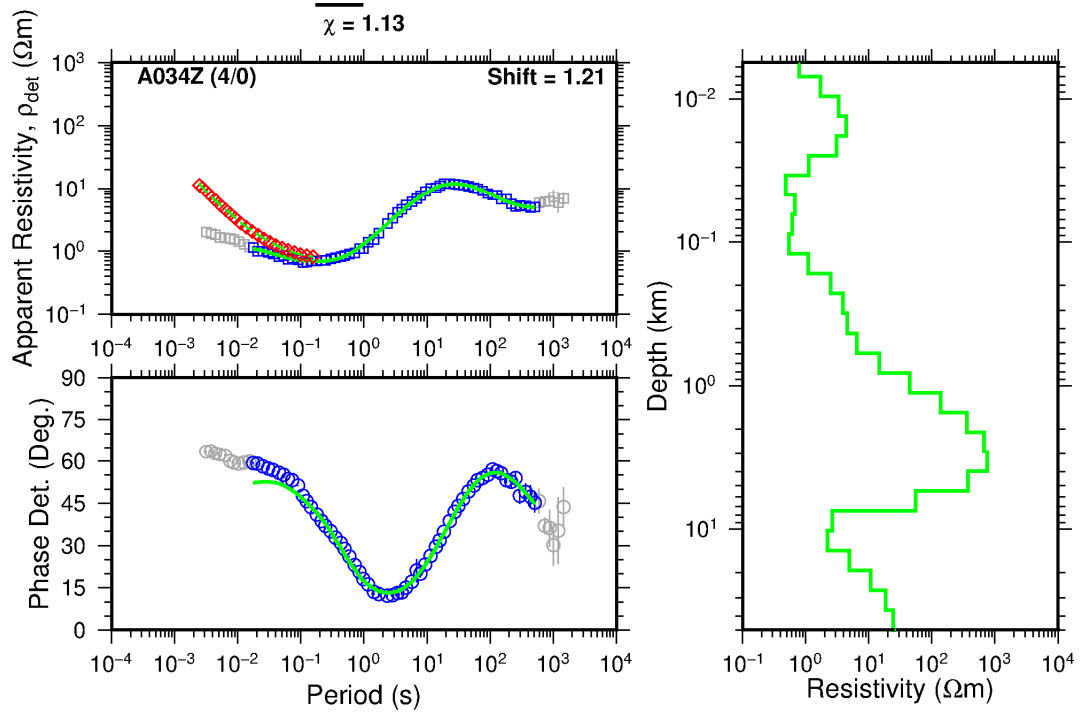
A033_A033Z

$\chi = 3.521$



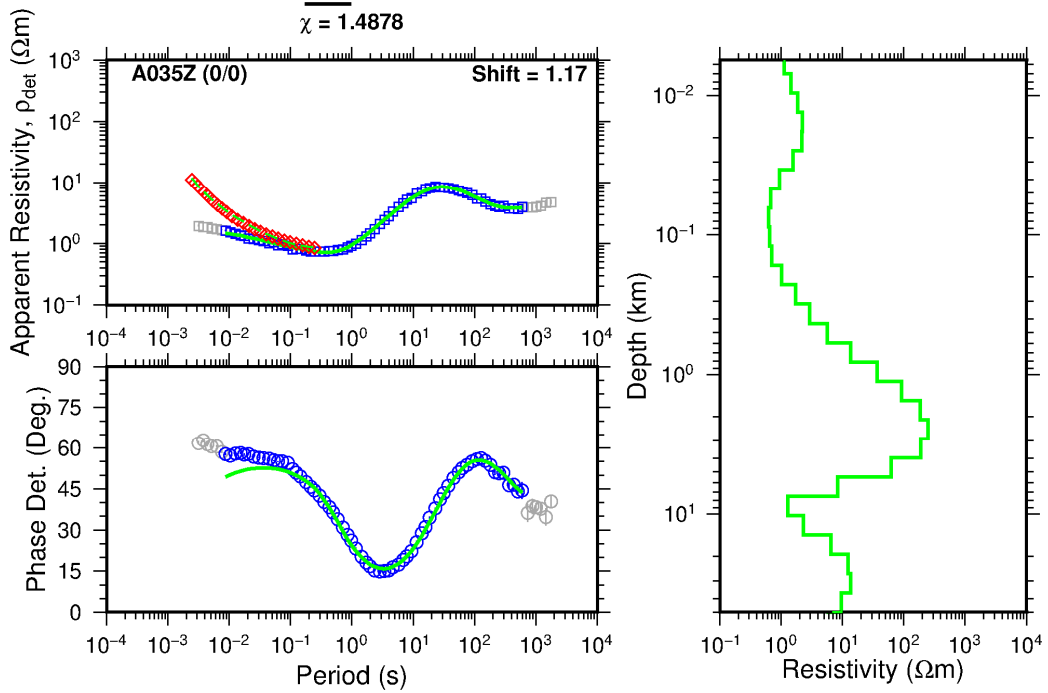
A034_A034Z

$\chi = 1.13$



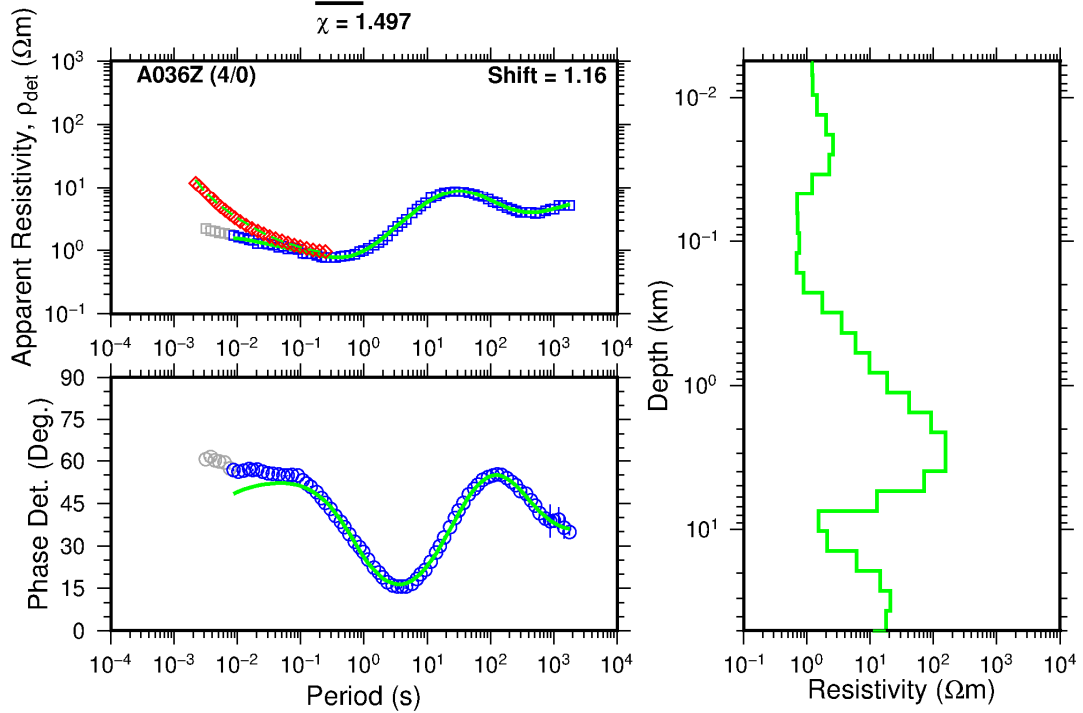
A035_A035Z

$\chi = 1.4878$



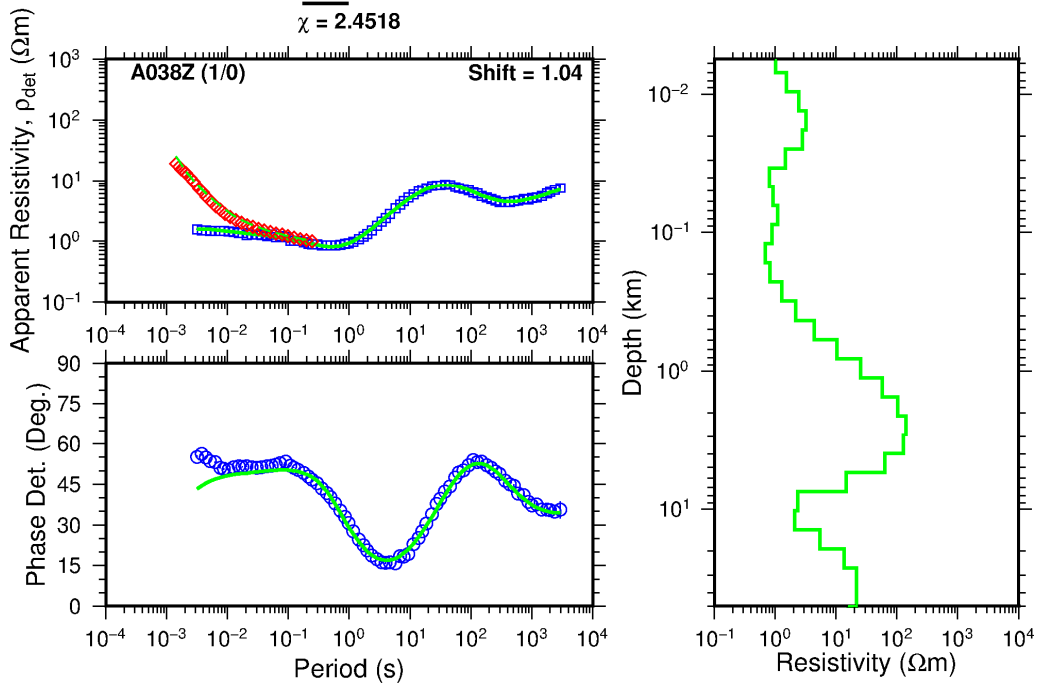
A036_A036Z

$\chi = 1.497$



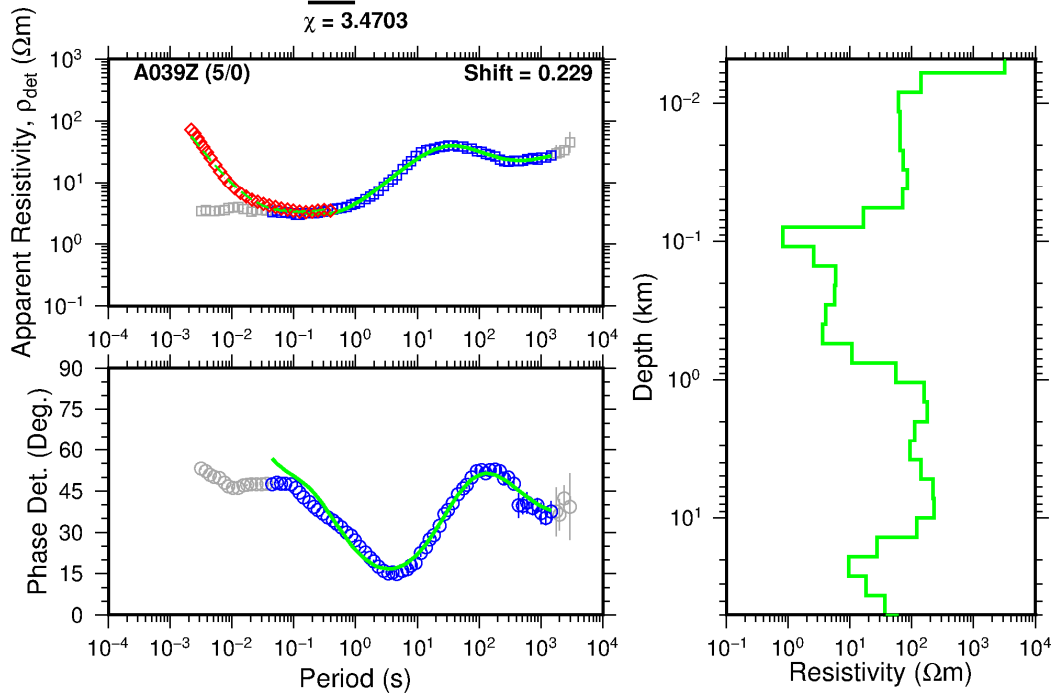
A038_A038Z

$\chi = 2.4518$

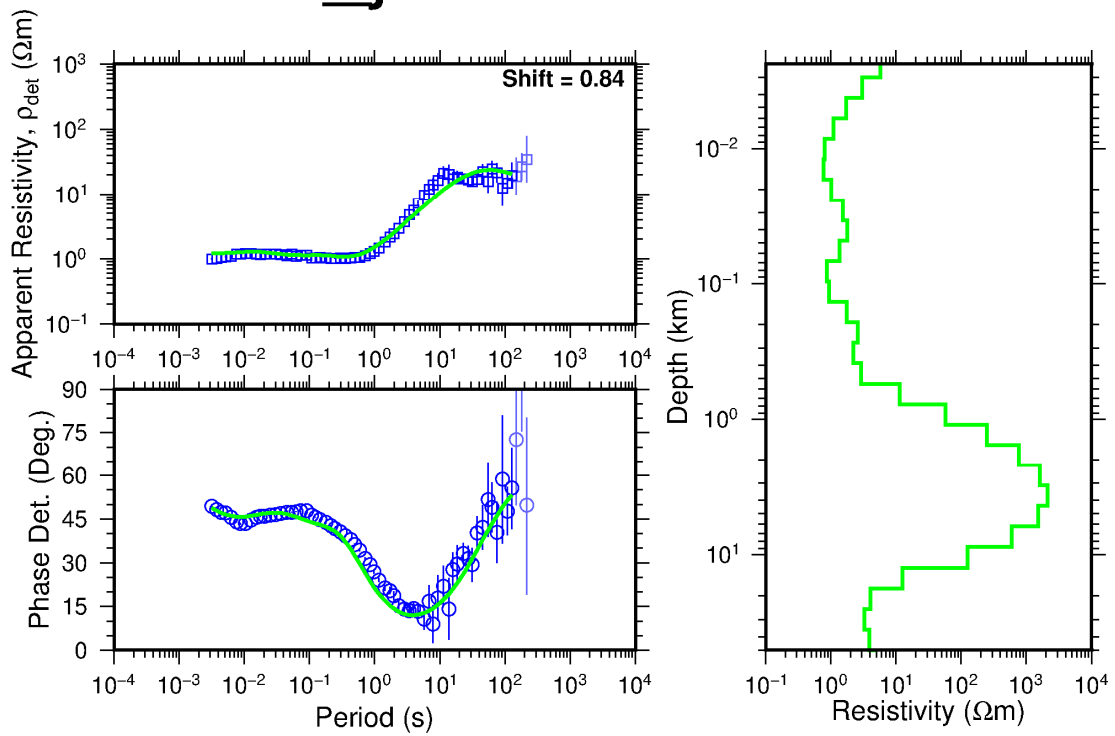


A039_A039Z

$\chi = 3.4703$

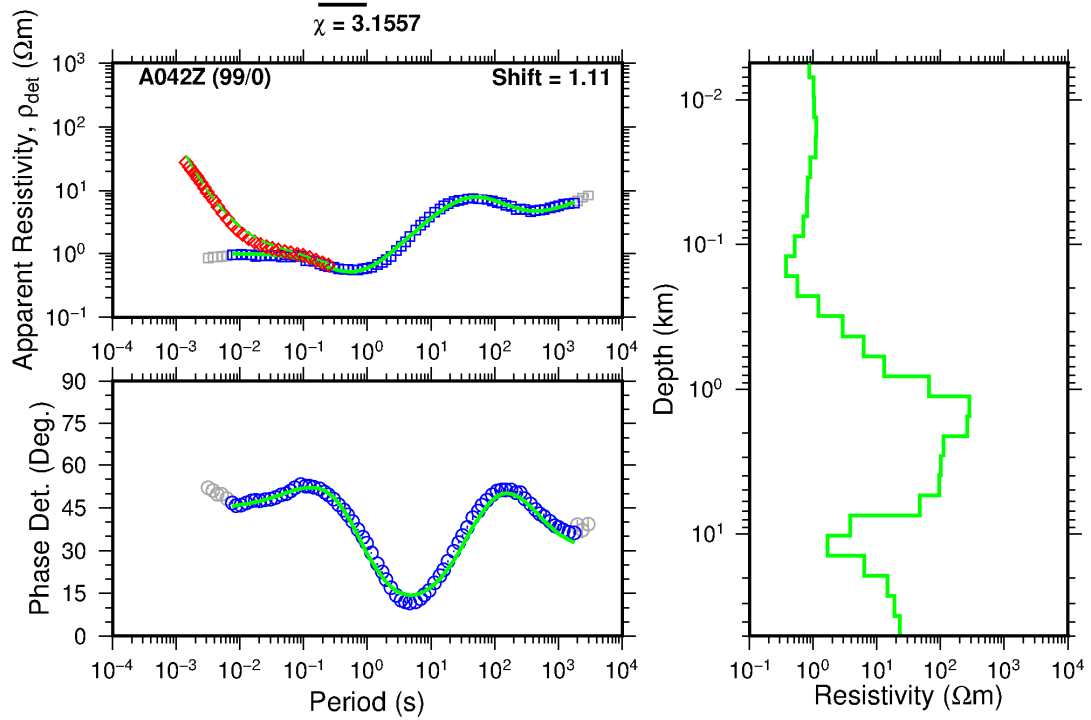


A041_justMT



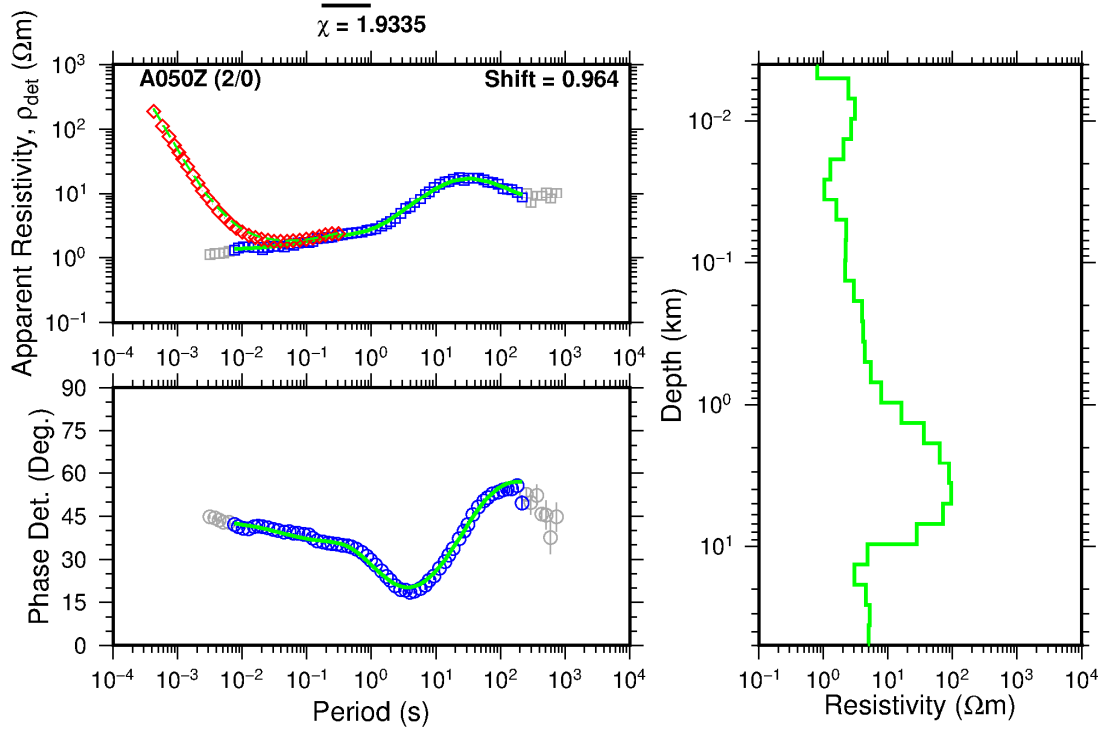
A042_A042Z

$\chi = 3.1557$

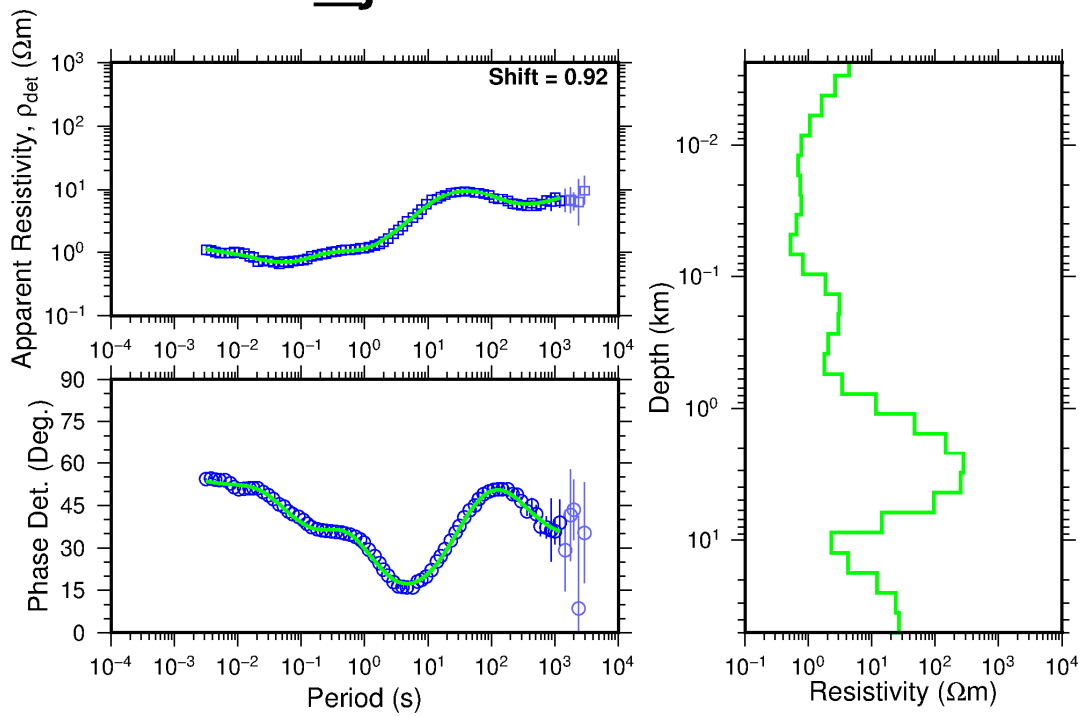


A050_A050Z

$\chi = 1.9335$

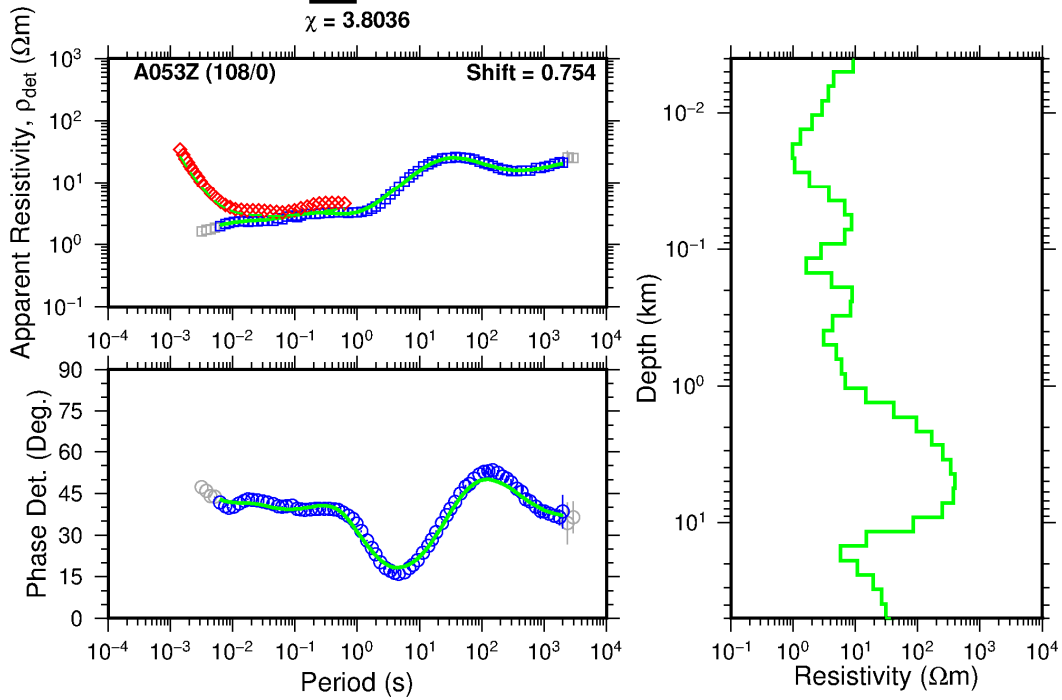


A052_justMT



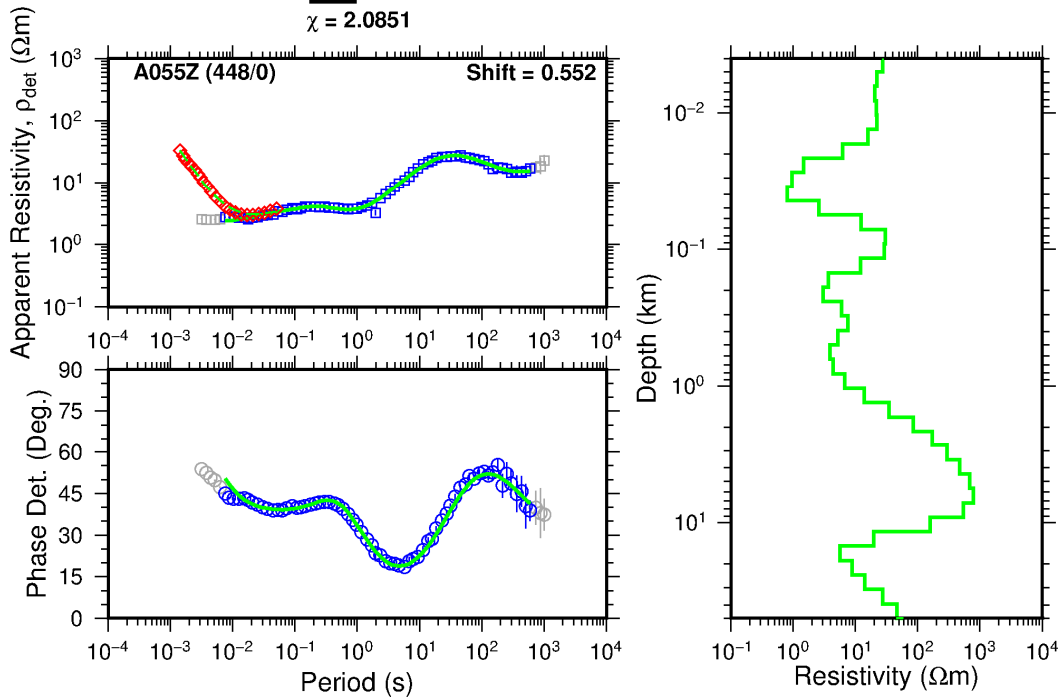
A053_A053Z

$\chi = 3.8036$



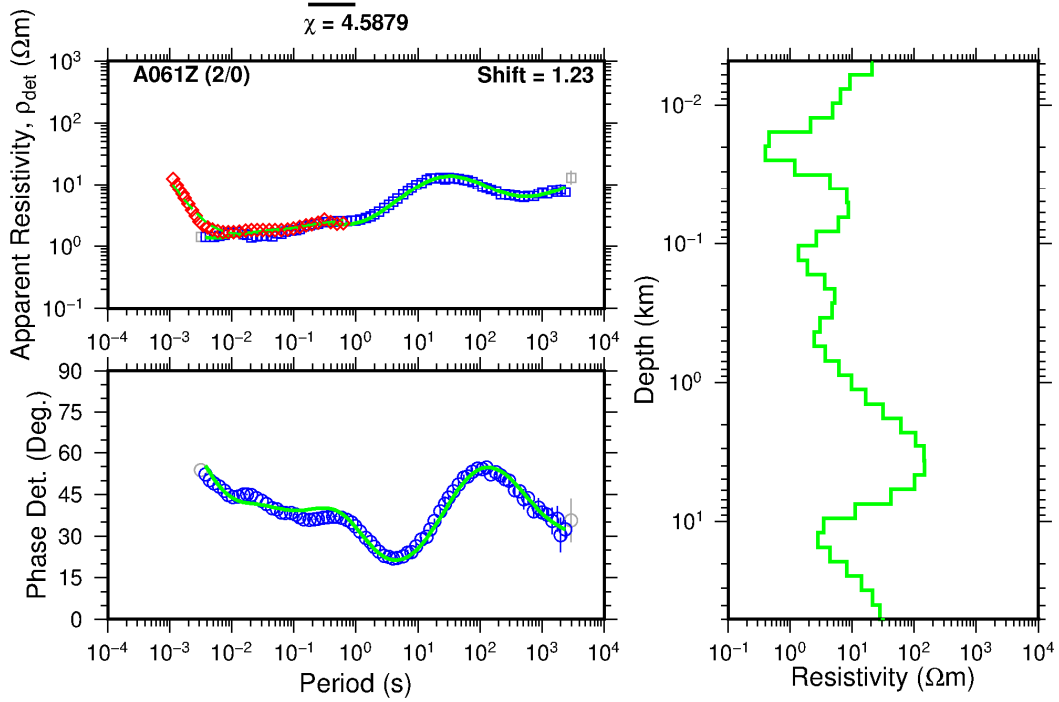
A055_A055Z

$\chi = 2.0851$



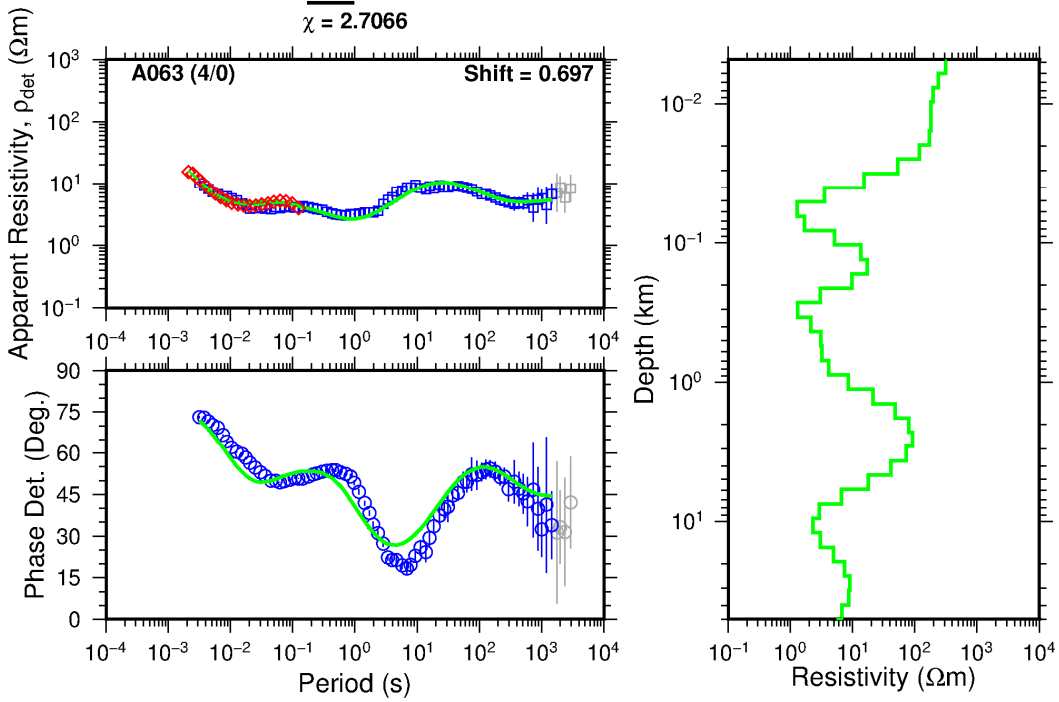
A061_A061Z

$\chi = 4.5879$



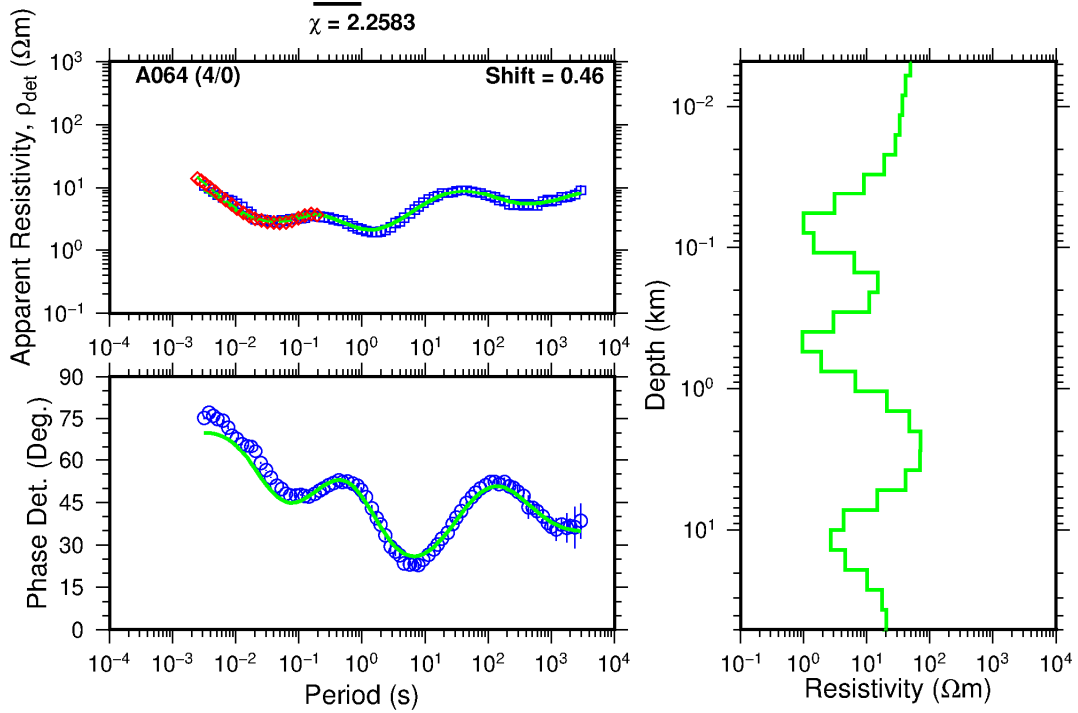
A063_A063Z

$\chi = 2.7066$



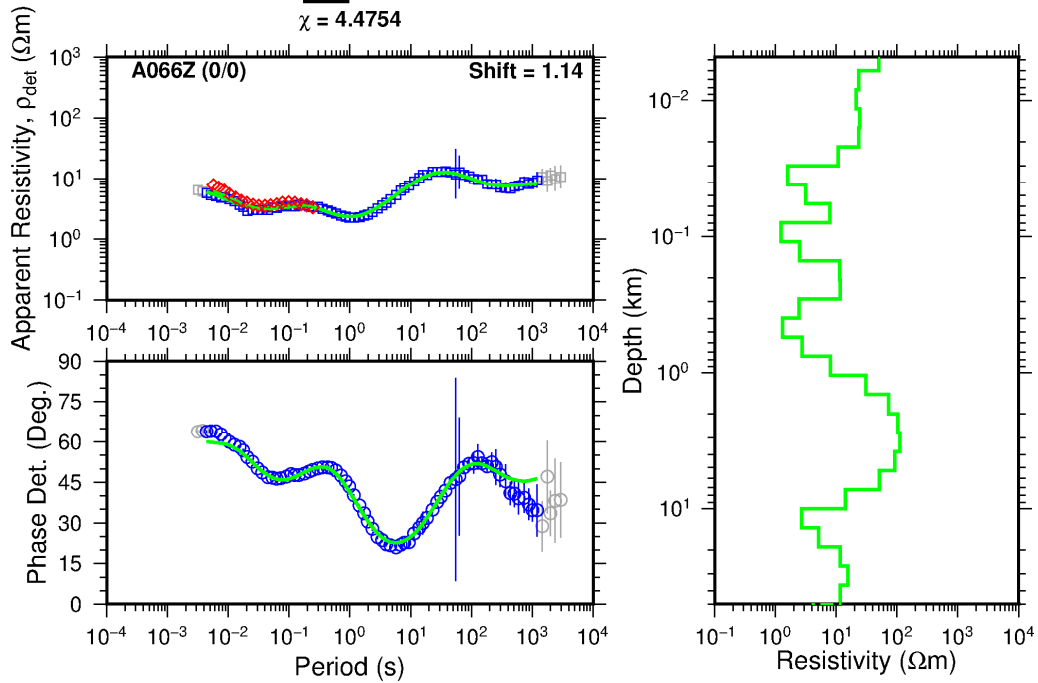
A064_A064Z

$\chi = 2.2583$



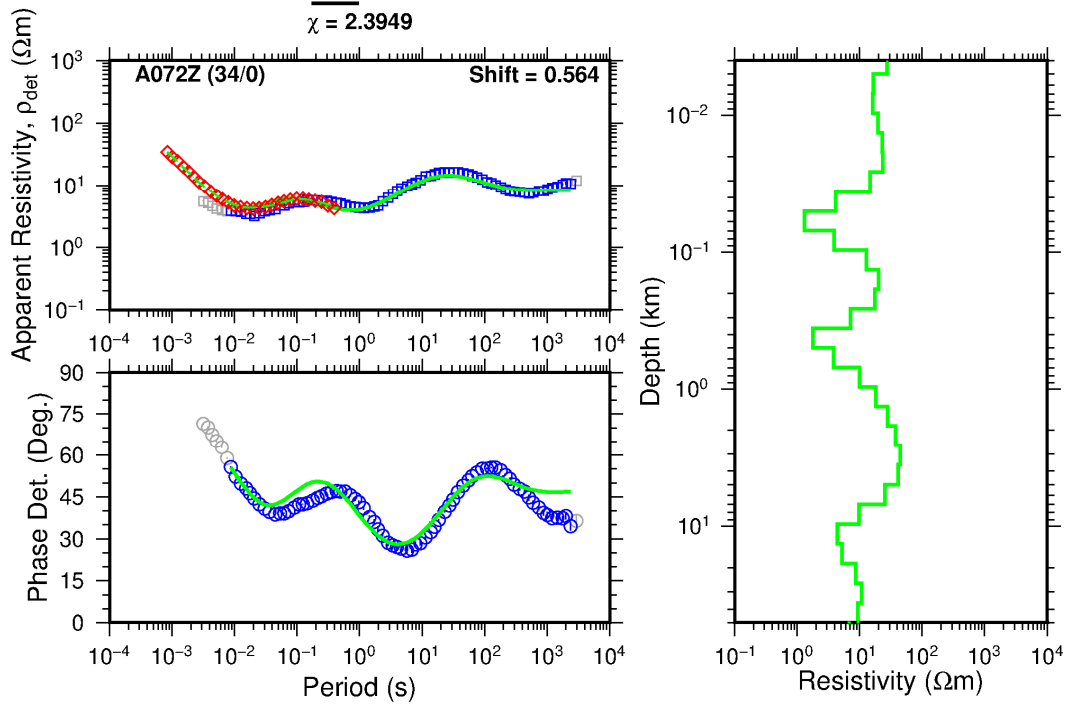
A066_A066Z

$\chi = 4.4754$

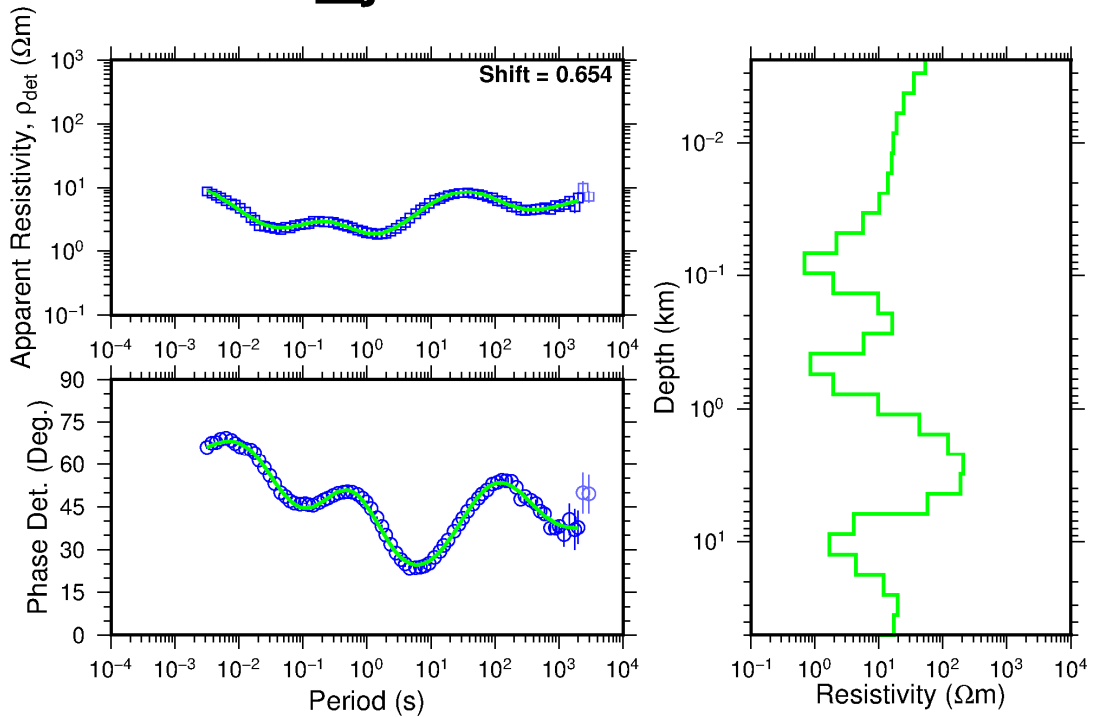


A072_A072Z

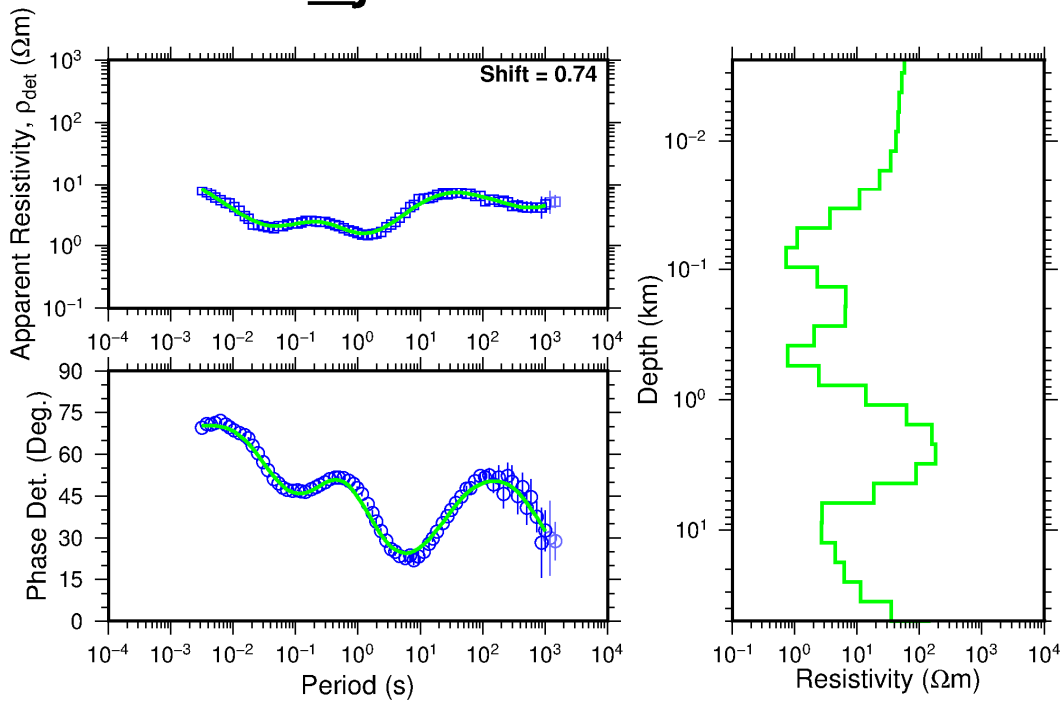
$\chi = 2.3949$



A074_justMT

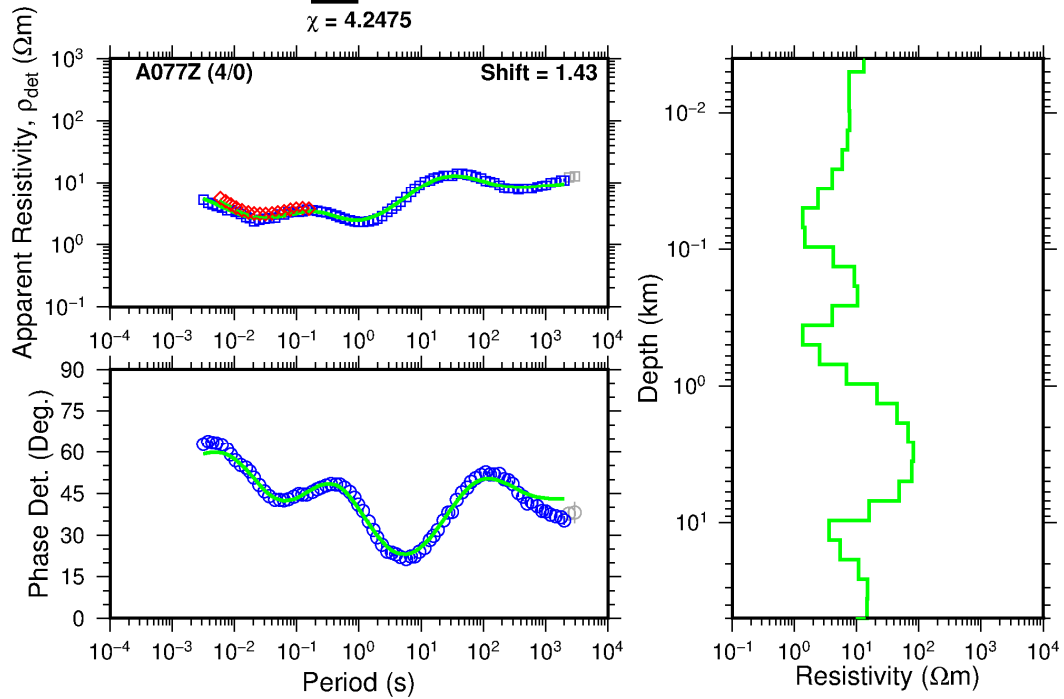


A075_justMT

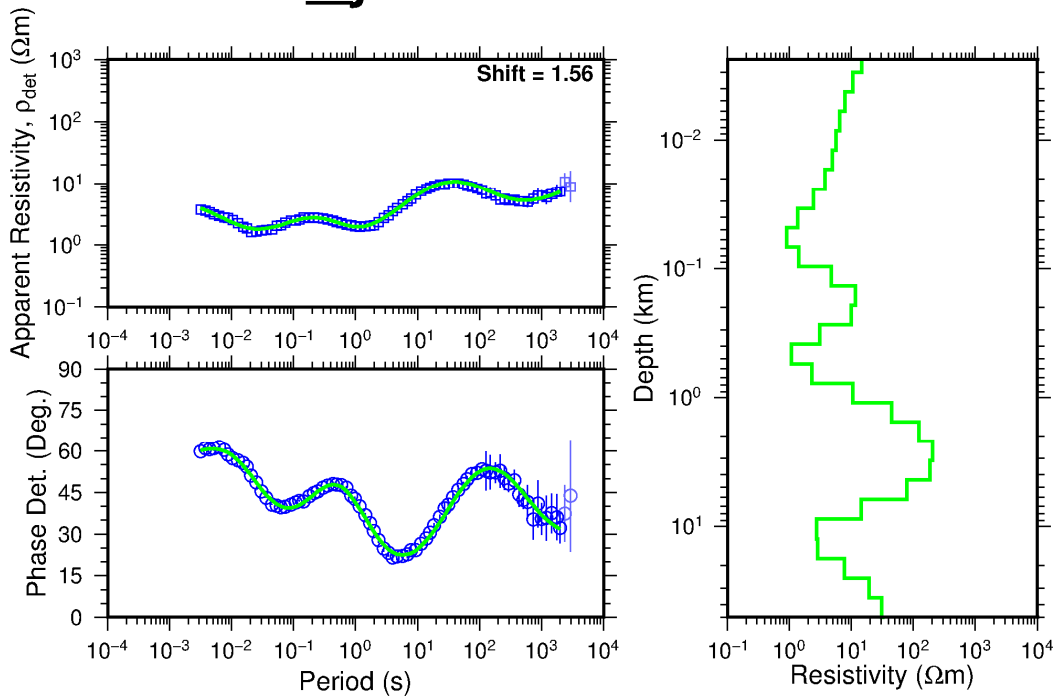


A077_A077Z

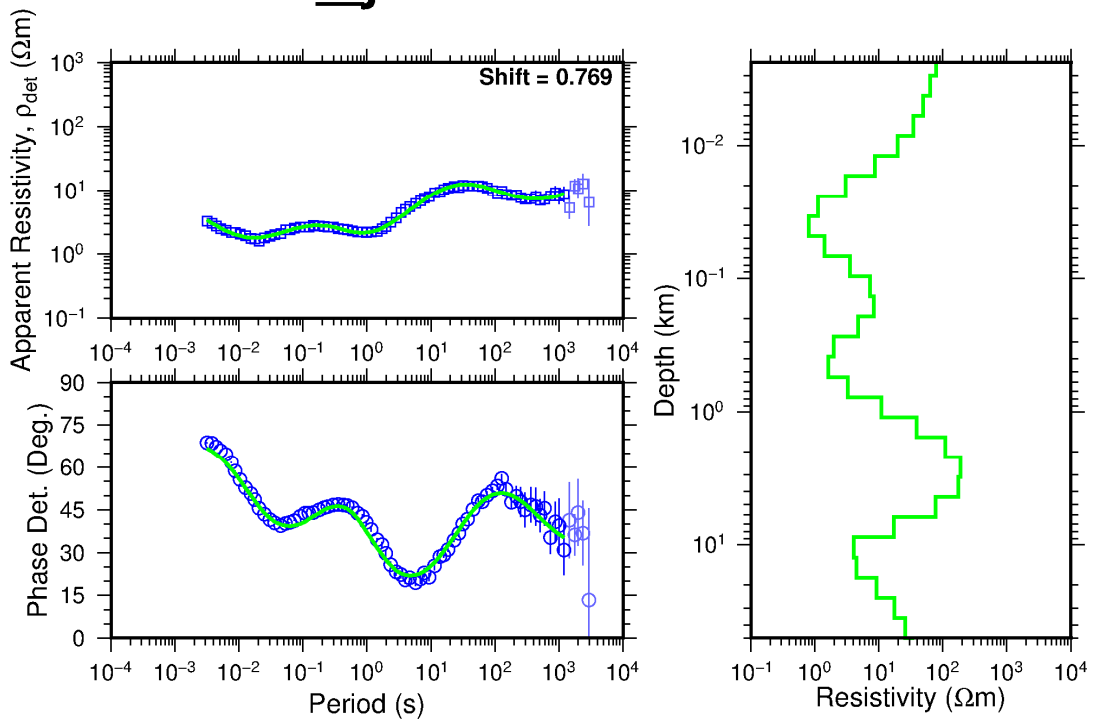
$\chi = 4.2475$



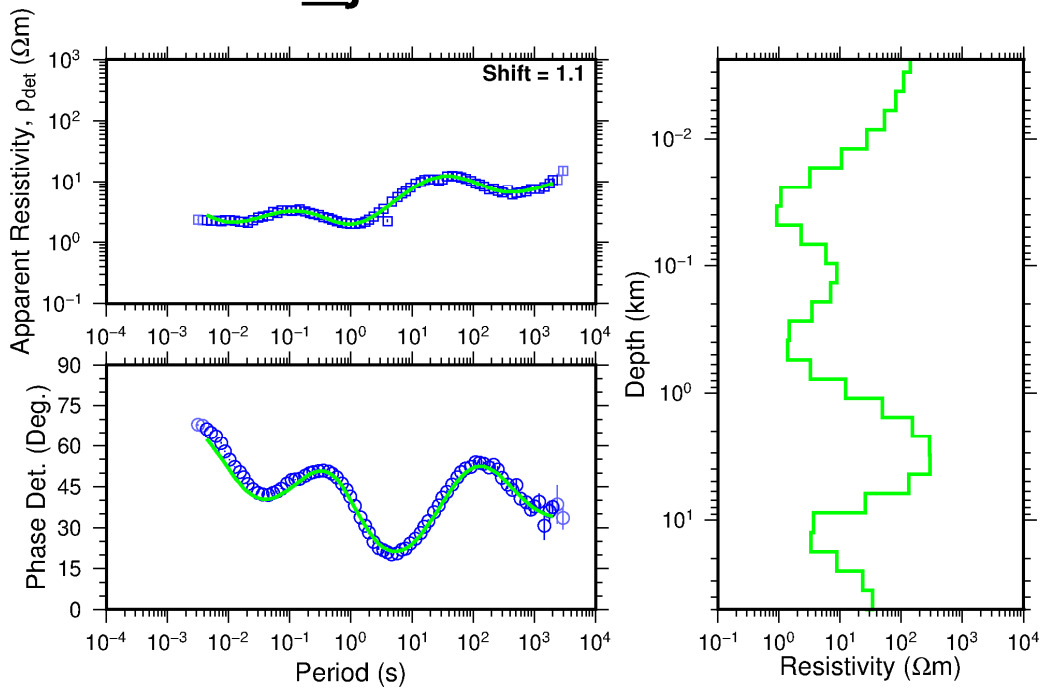
A078_justMT



A079_justMT

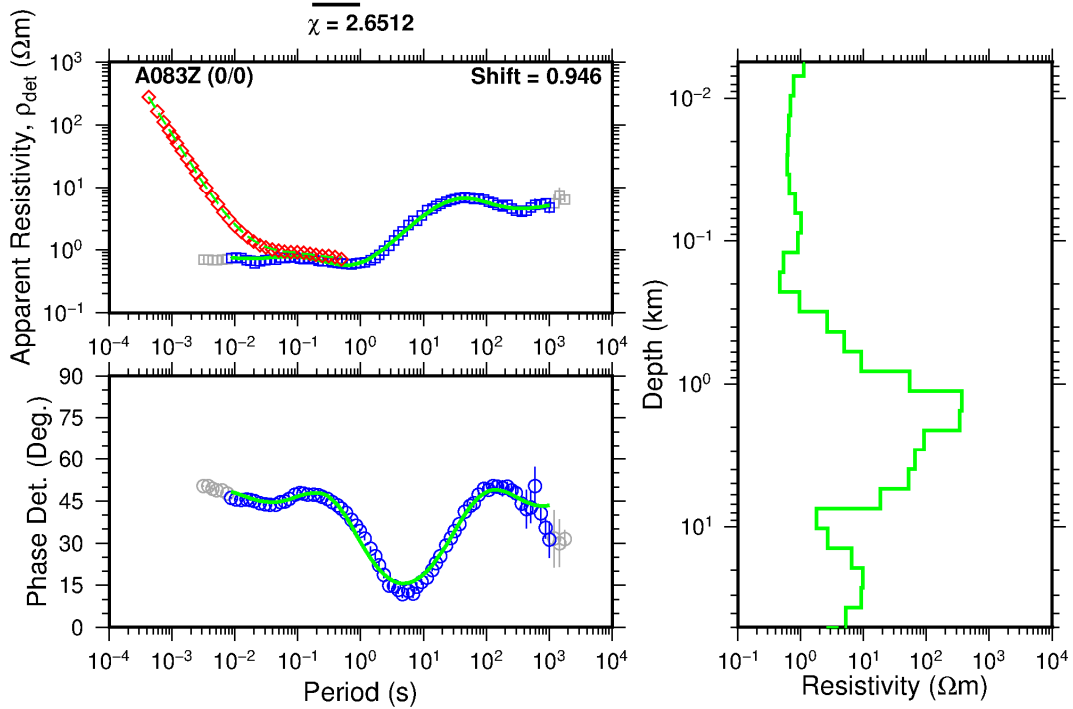


A080_justMT



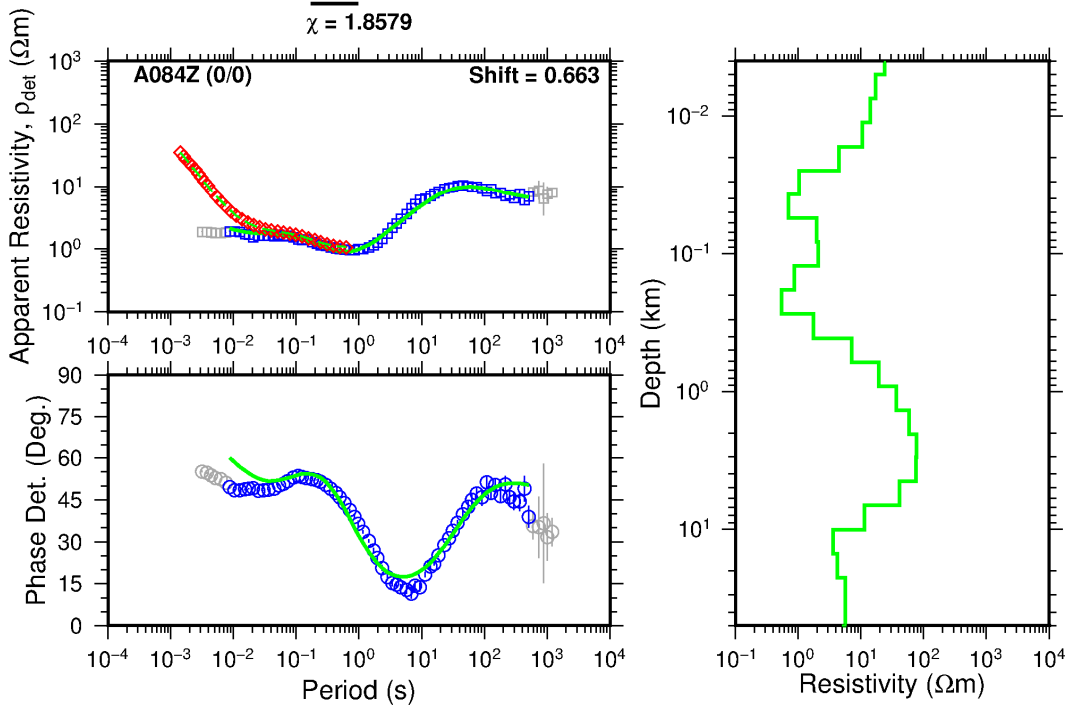
A083_A083Z

$\chi = 2.6512$



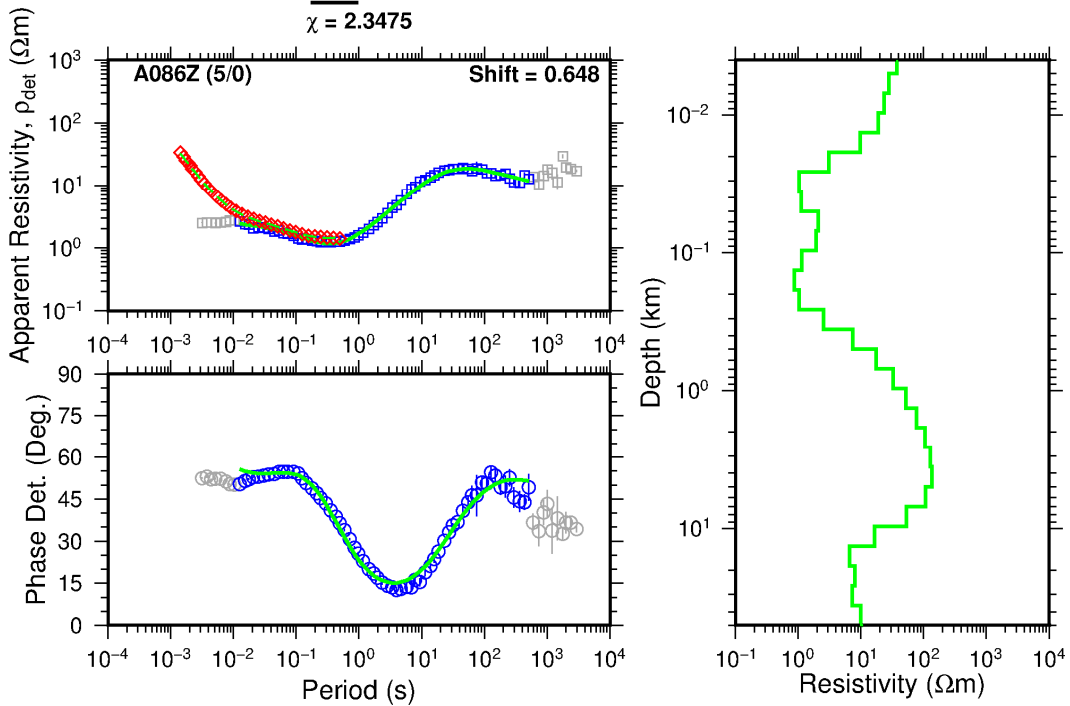
A084_A084Z

$\chi = 1.8579$

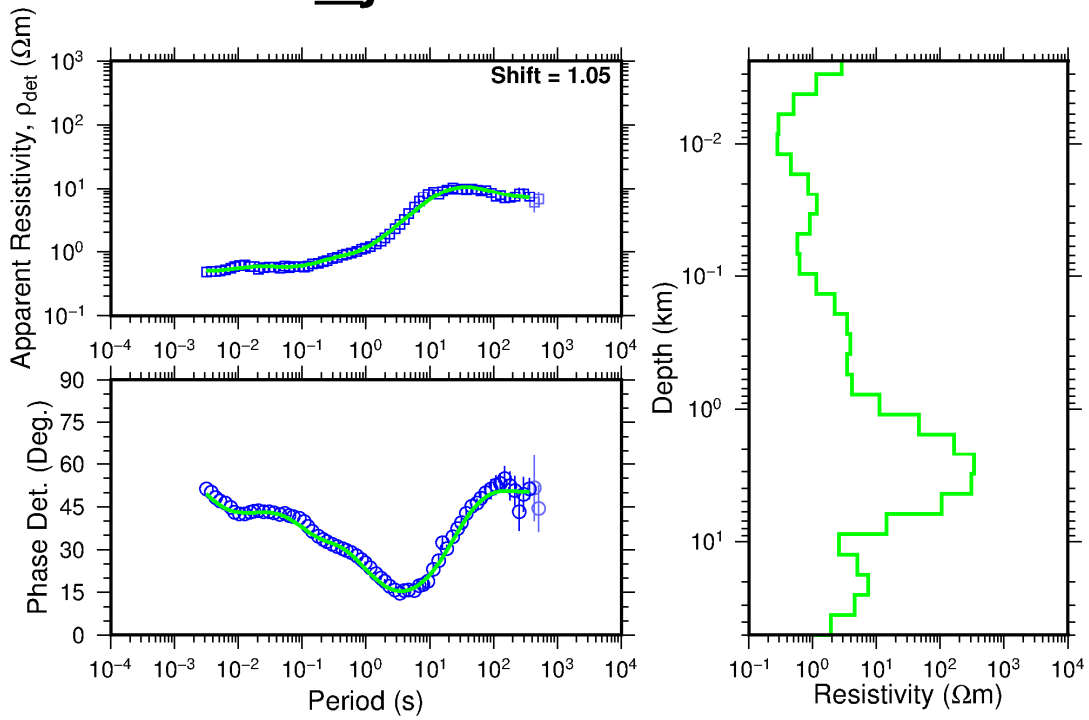


A086_A086Z

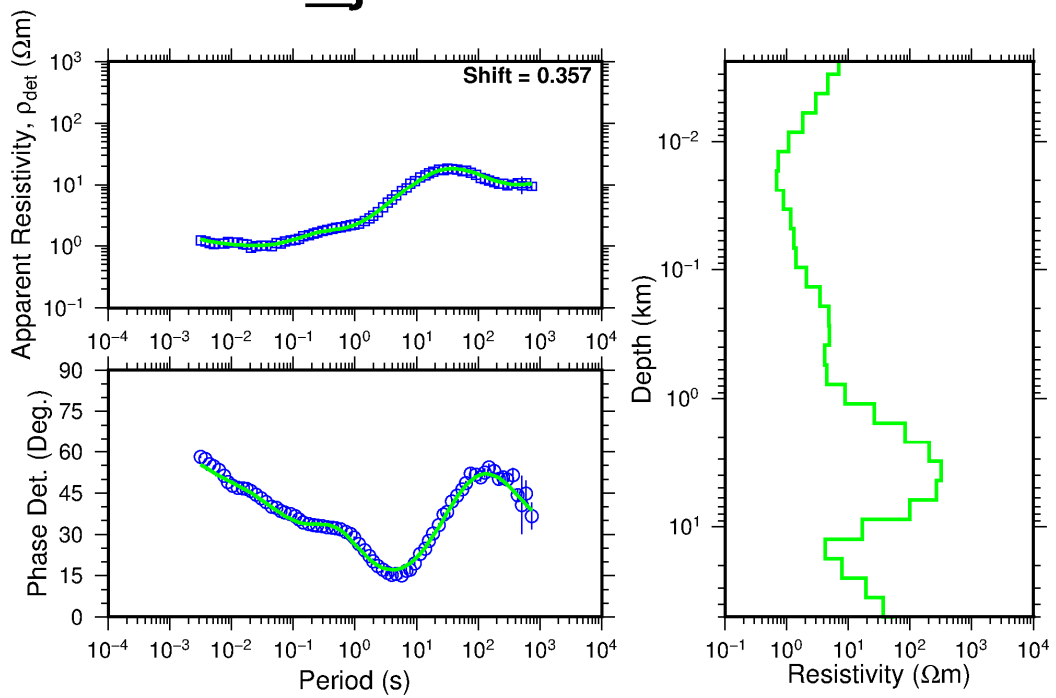
$\chi = 2.3475$



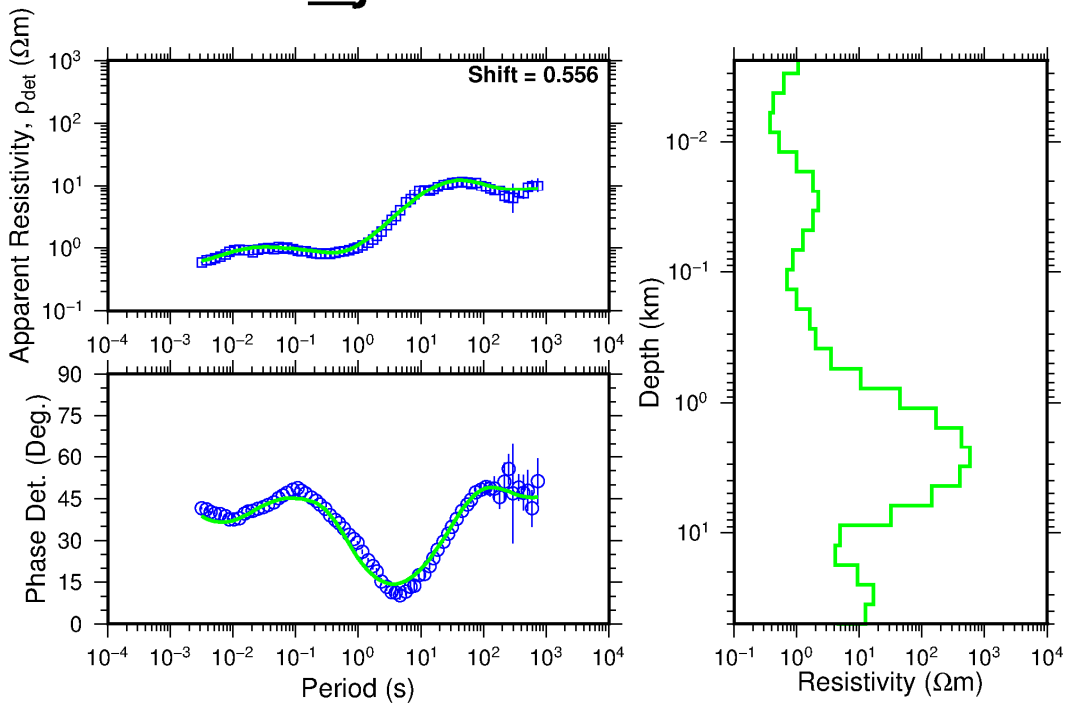
A087_justMT



A088_justMT

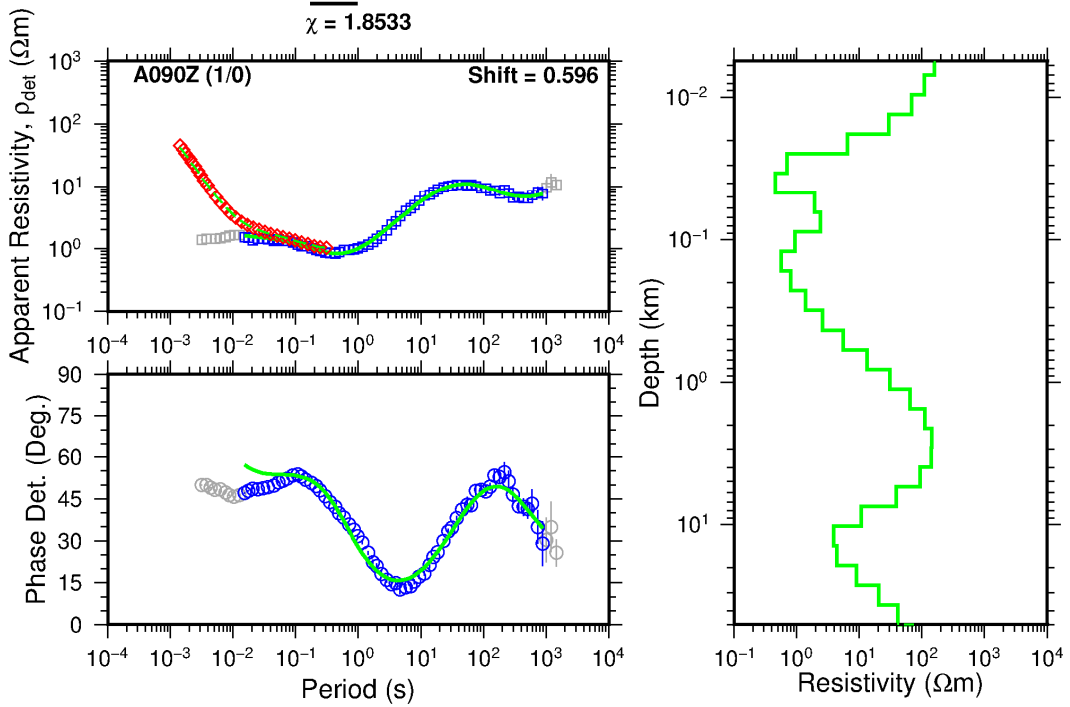


A089_justMT



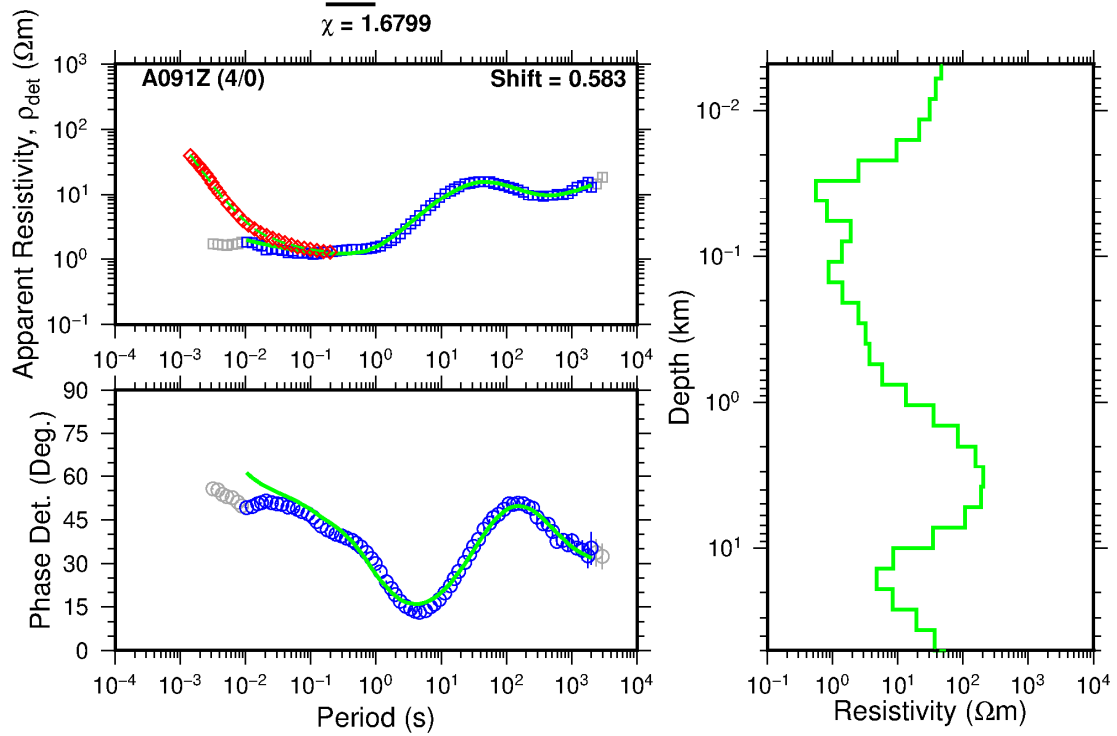
A090_A090Z

$\chi = 1.8533$



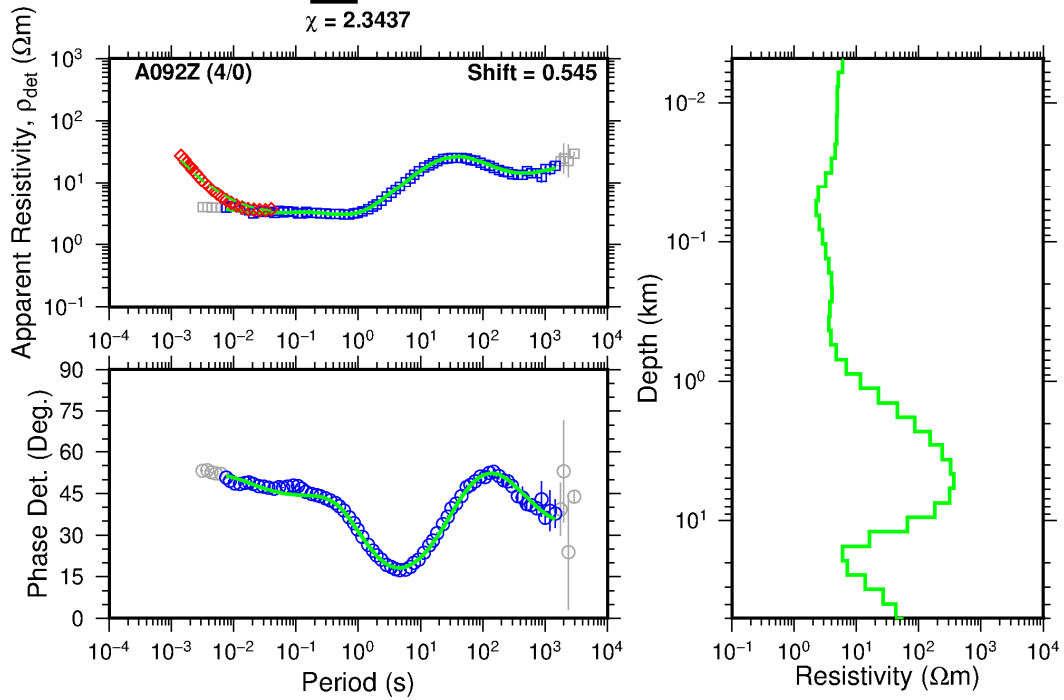
A091_A091Z

$\chi = 1.6799$



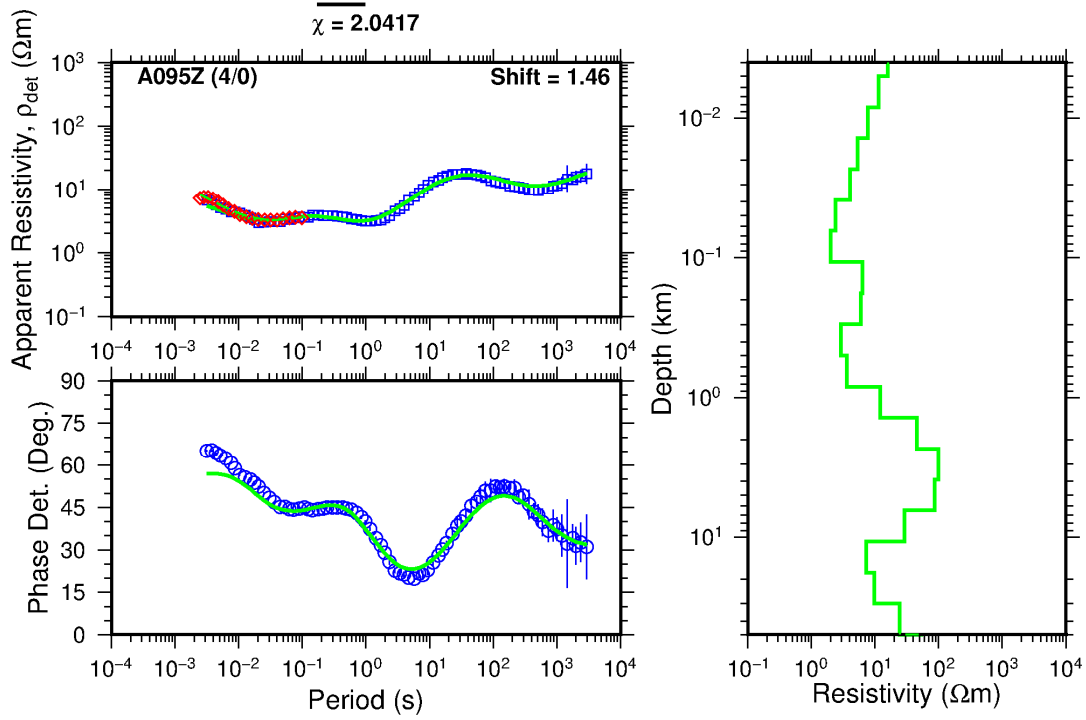
A092_A092Z

$\chi = 2.3437$



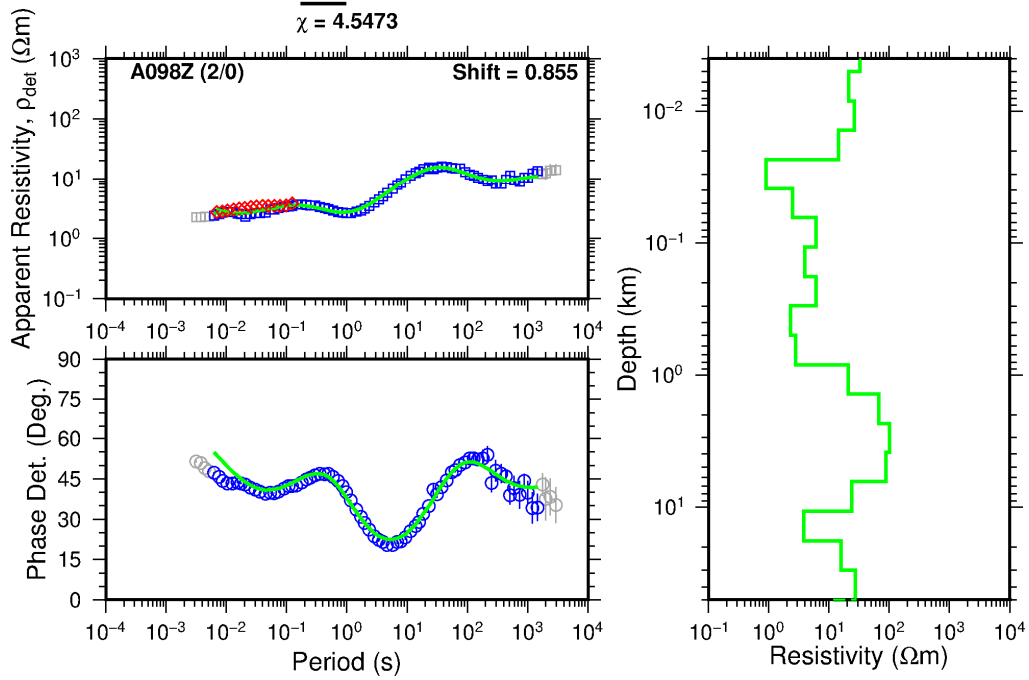
A095_A095Z

$\chi = 2.0417$



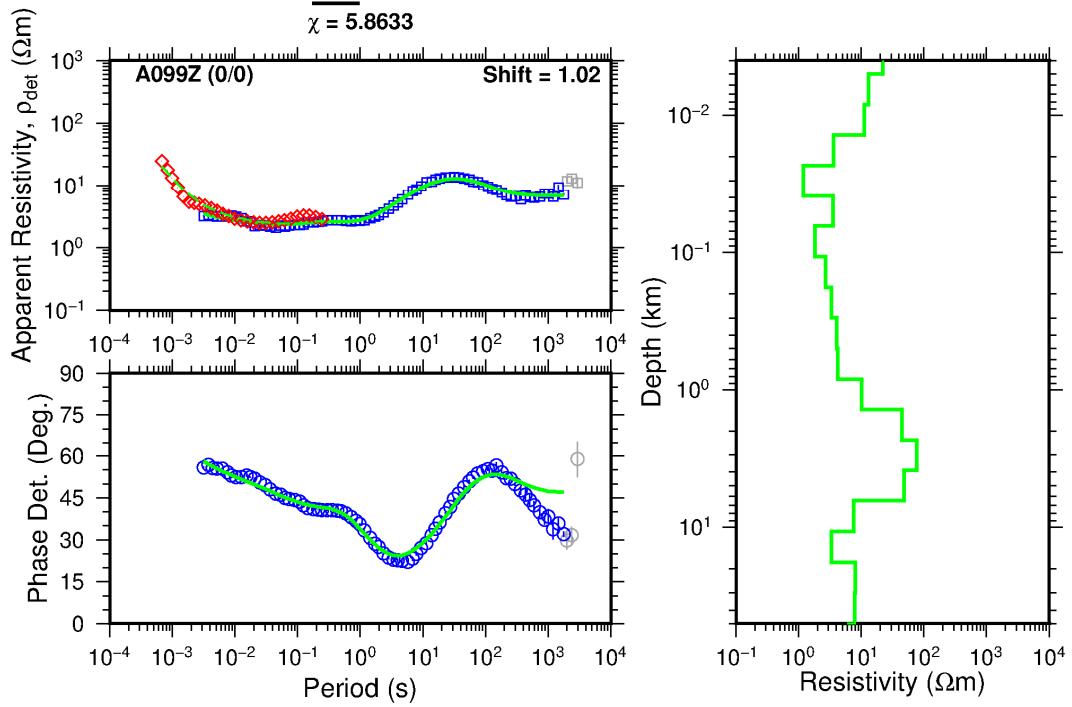
A098_A098Z

$\chi = 4.5473$



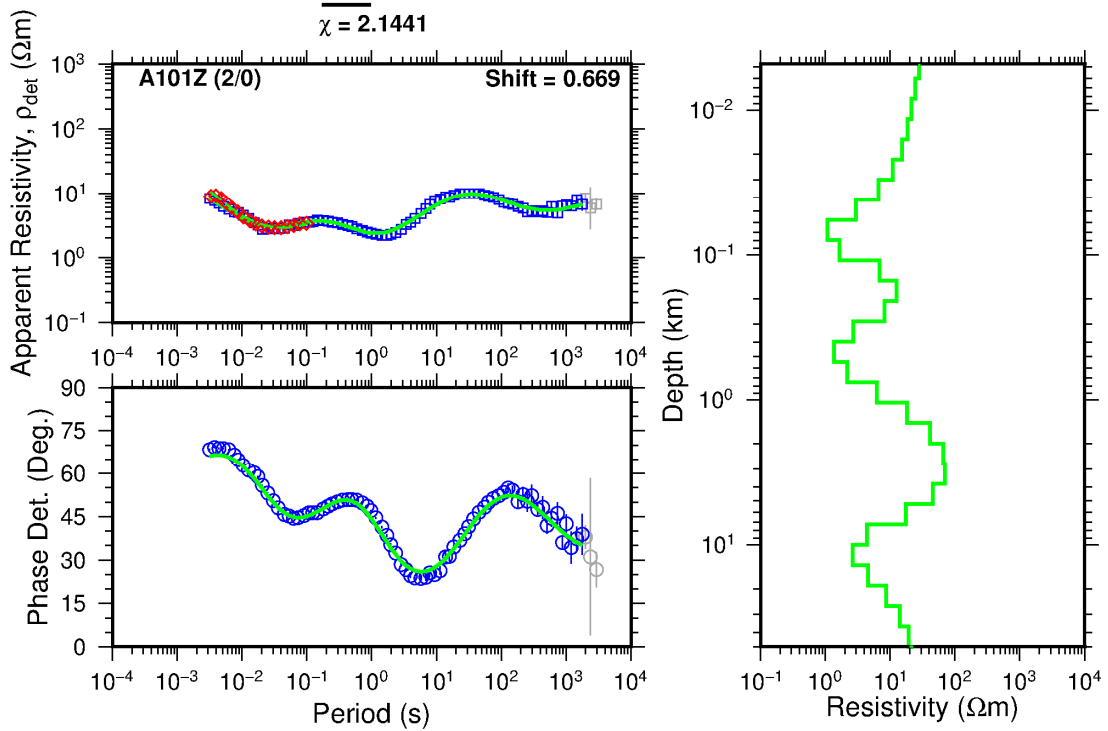
A099_A099Z

$\chi = 5.8633$



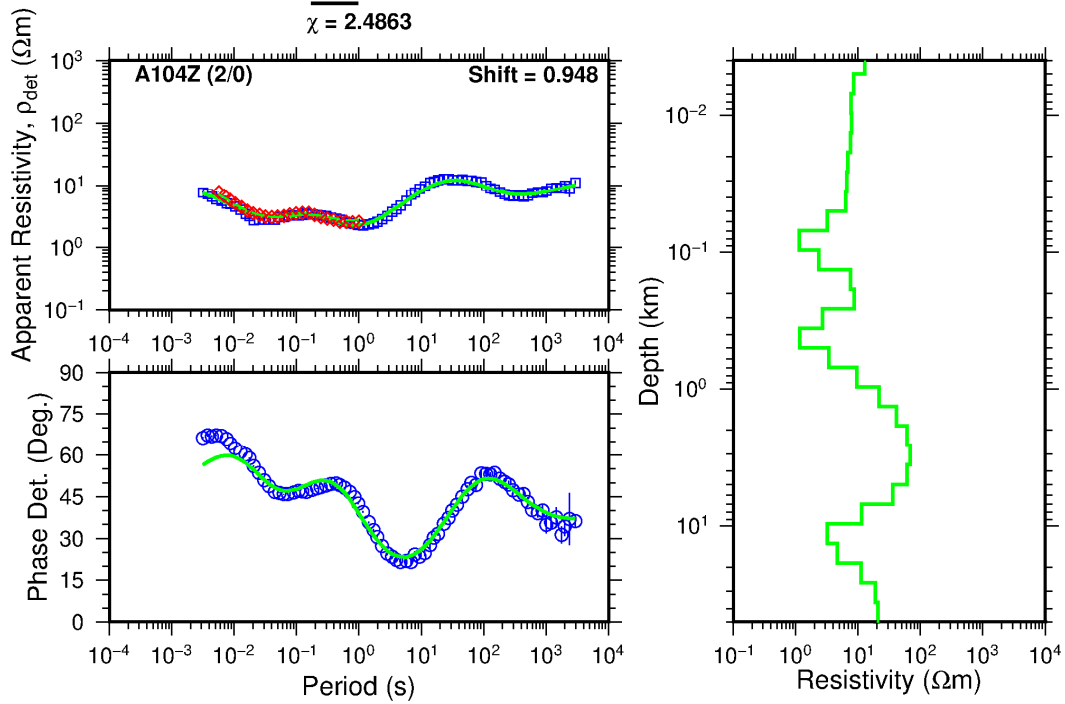
A101_A101Z

$\chi = 2.1441$

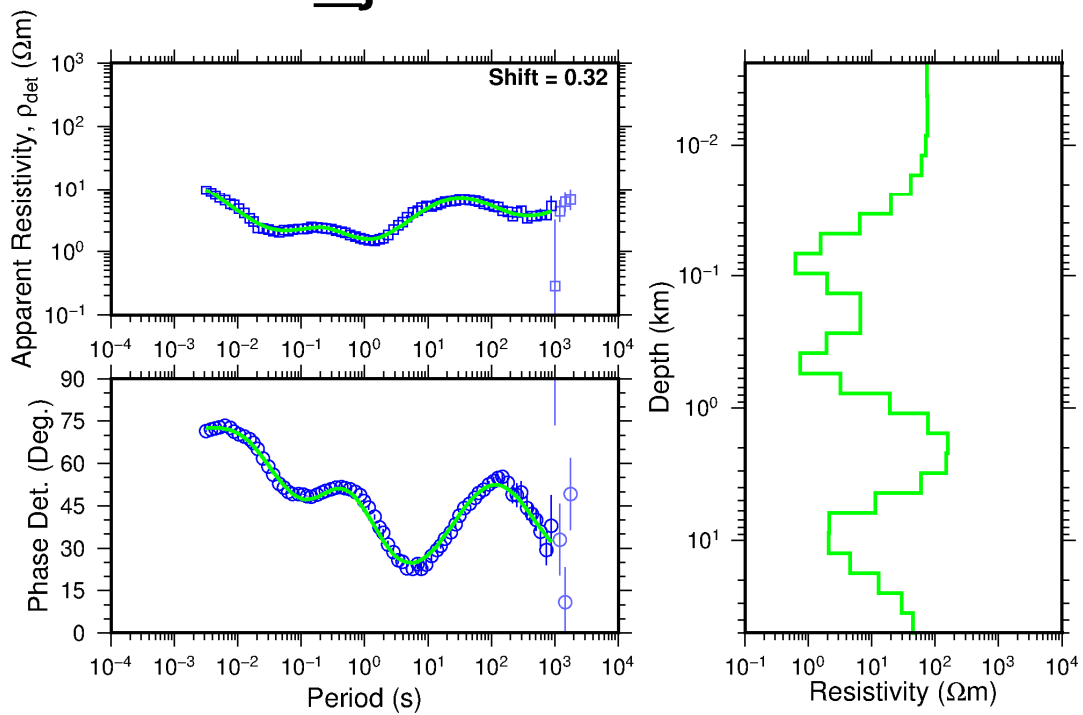


A104_A104Z

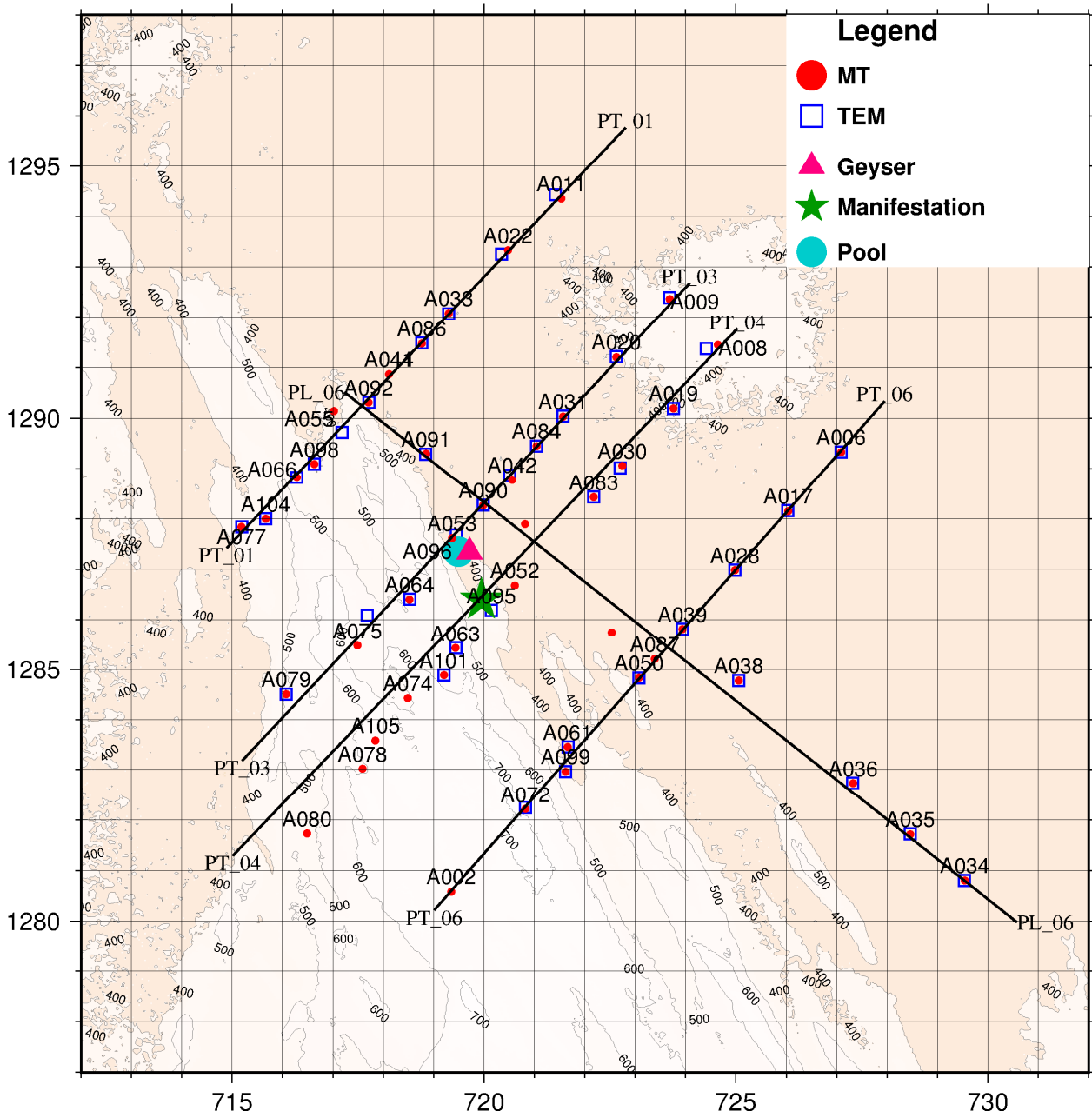
$\chi = 2.4863$

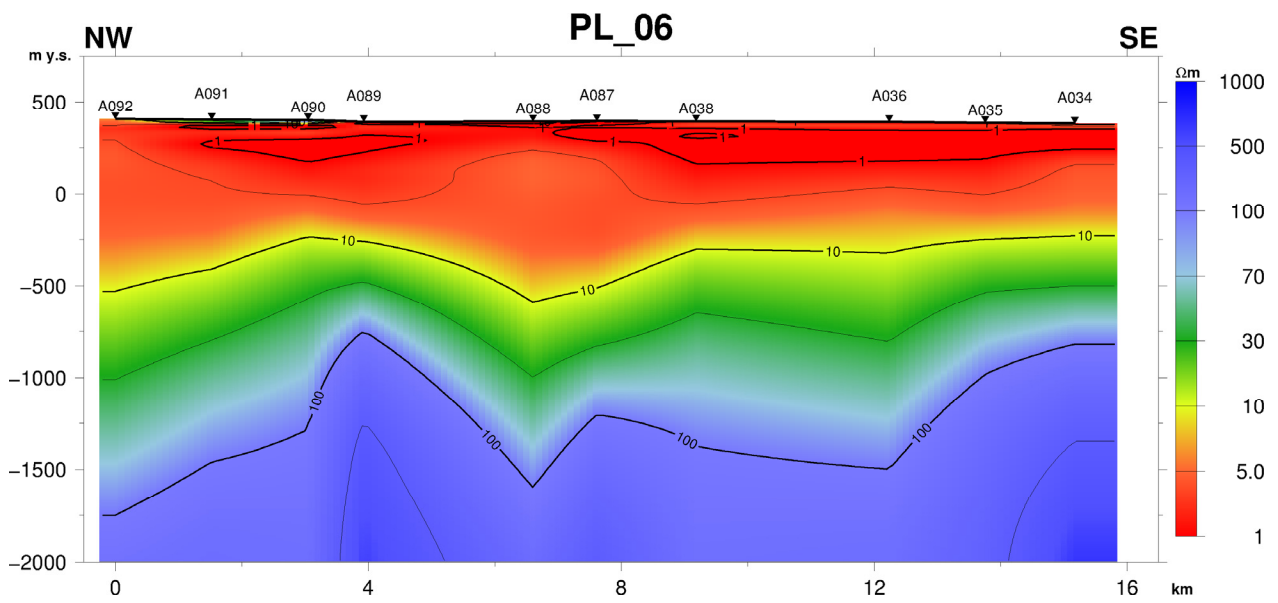
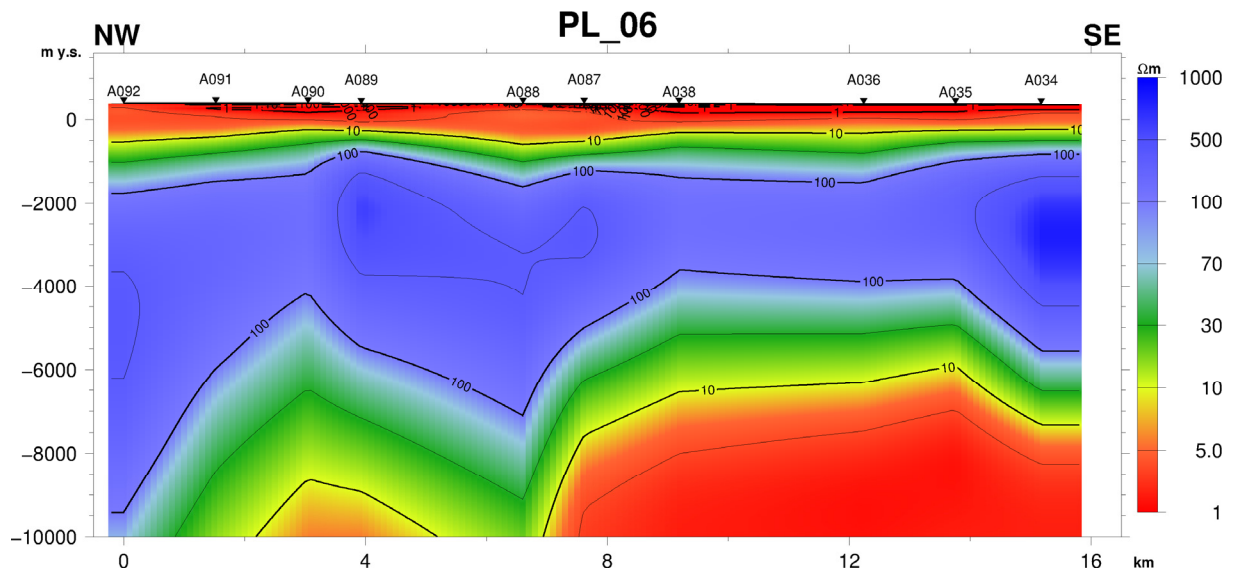


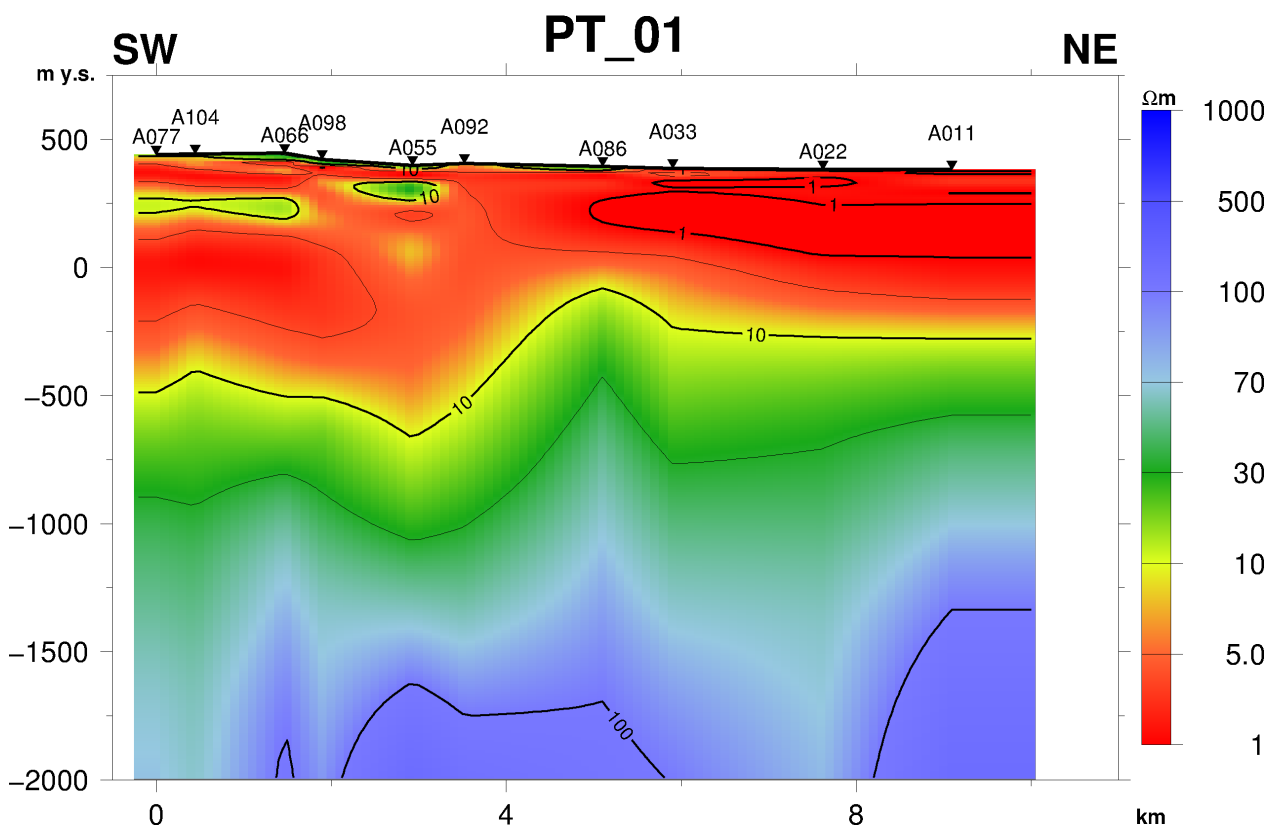
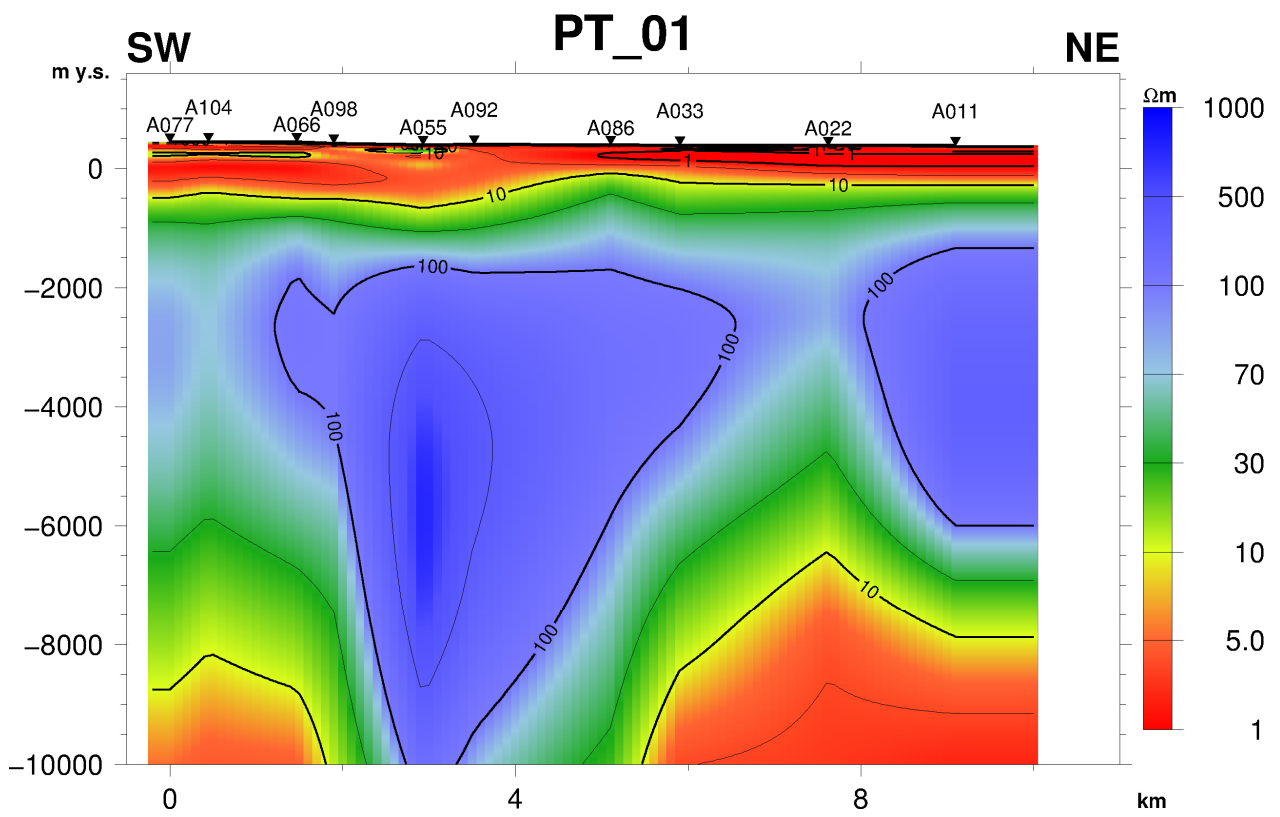
A105_justMT

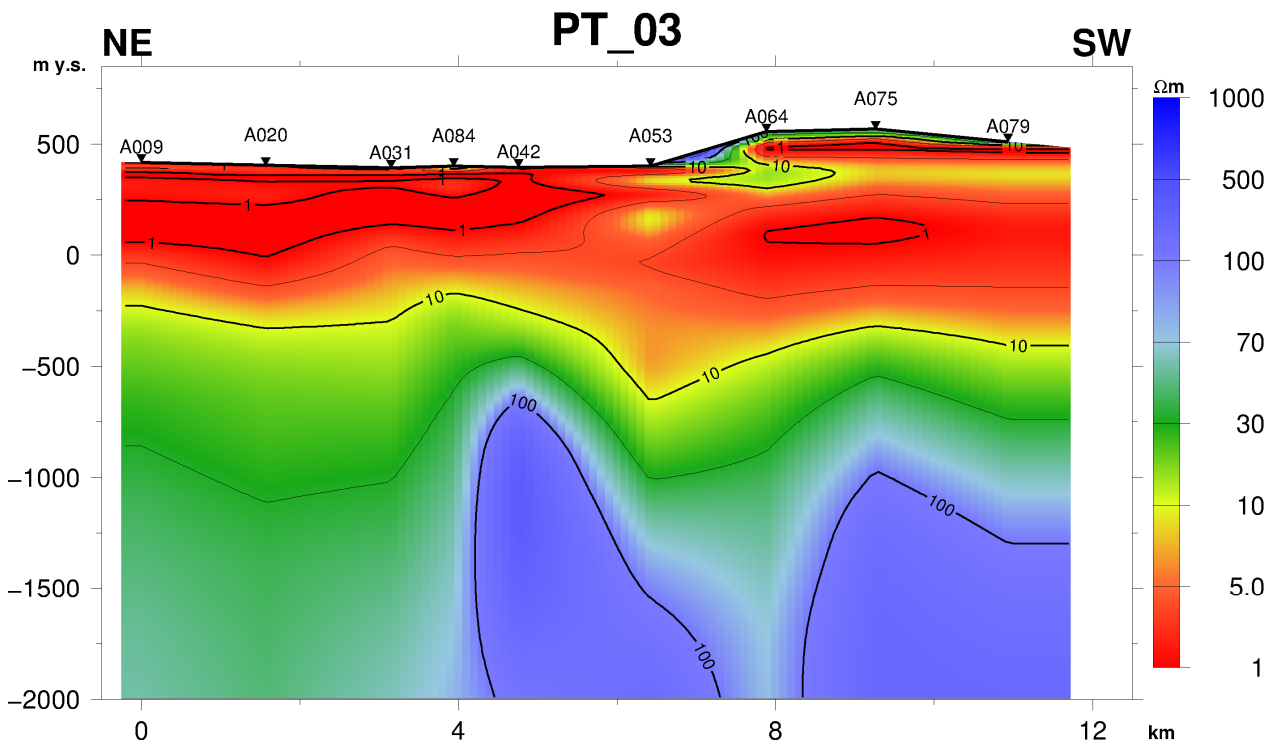
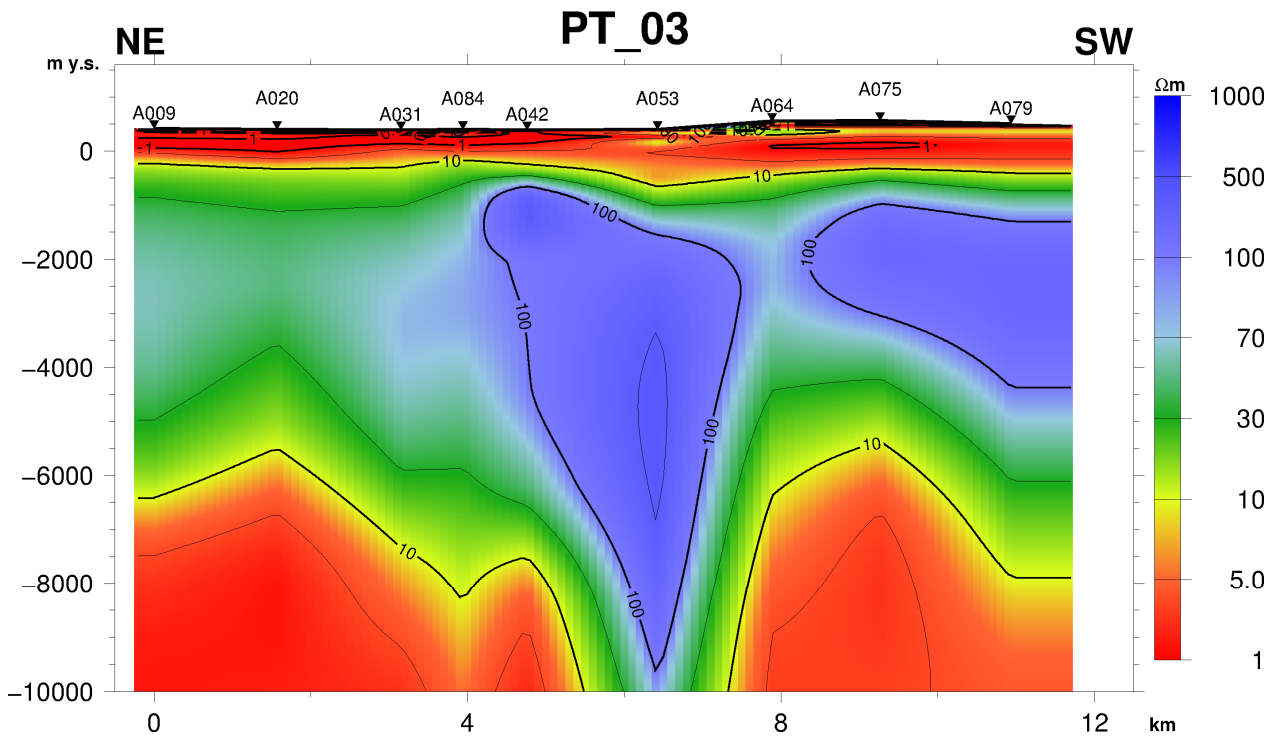


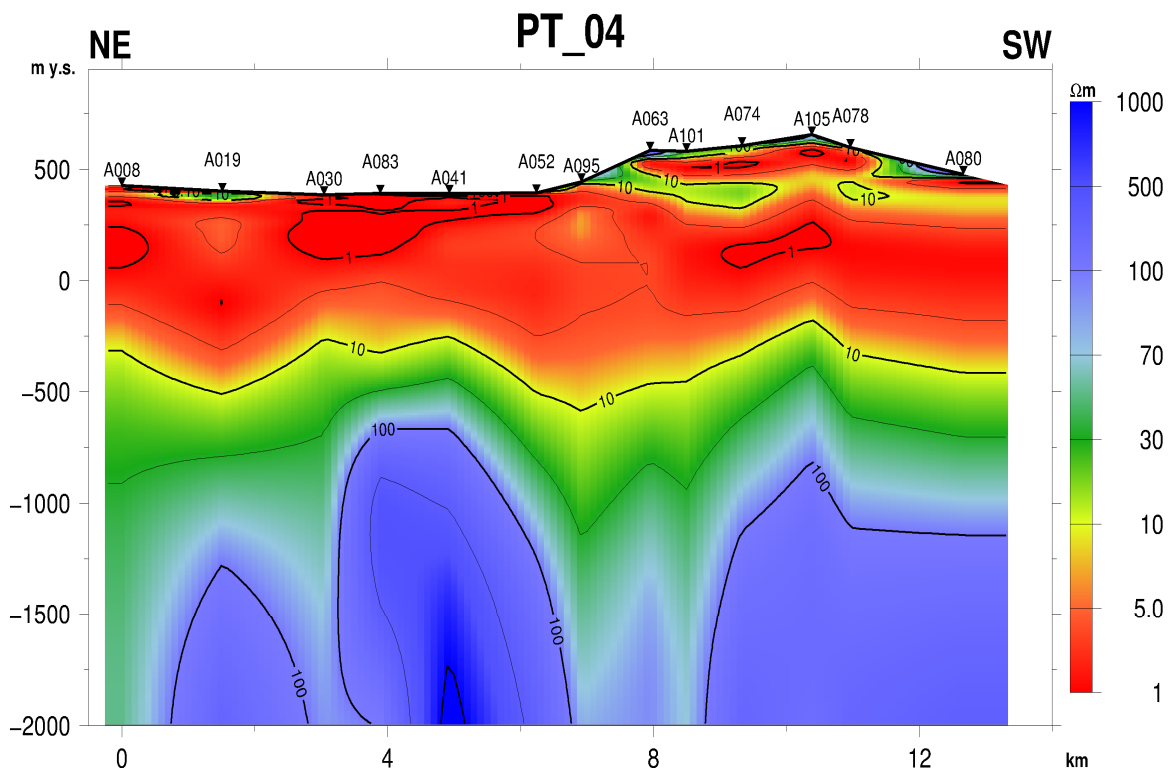
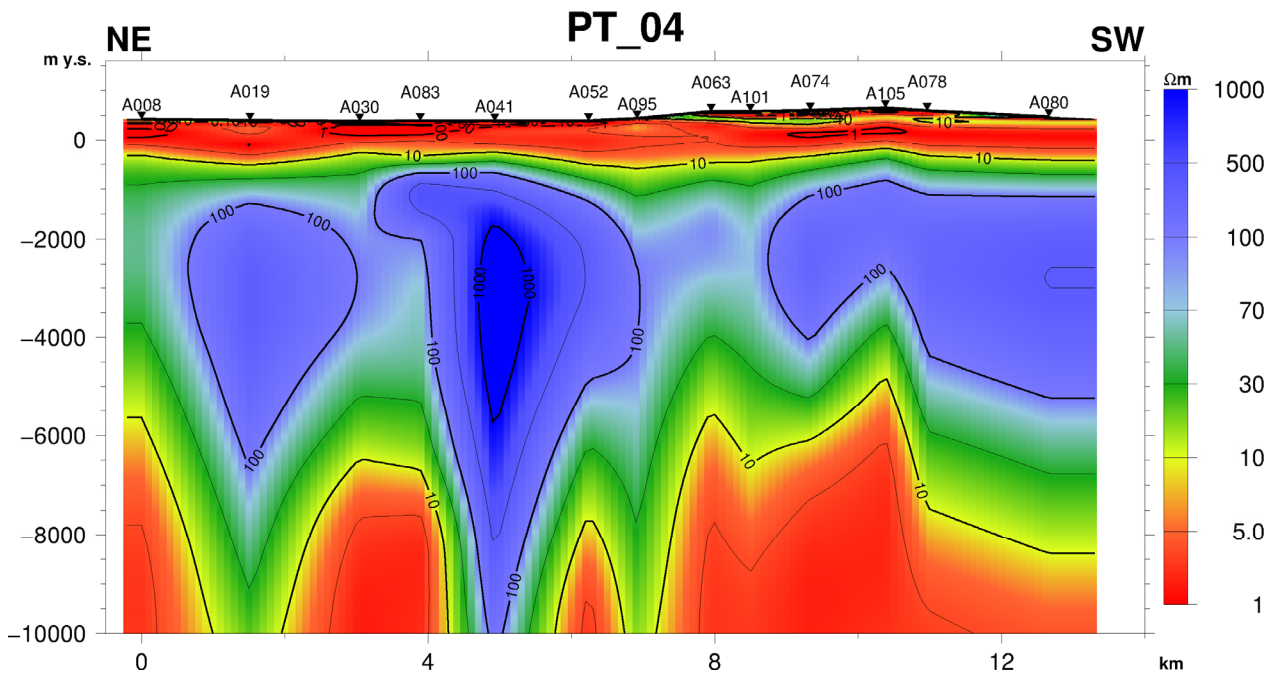
APPENDIX IV: Additional resistivity cross-sections and iso depth resistivity maps

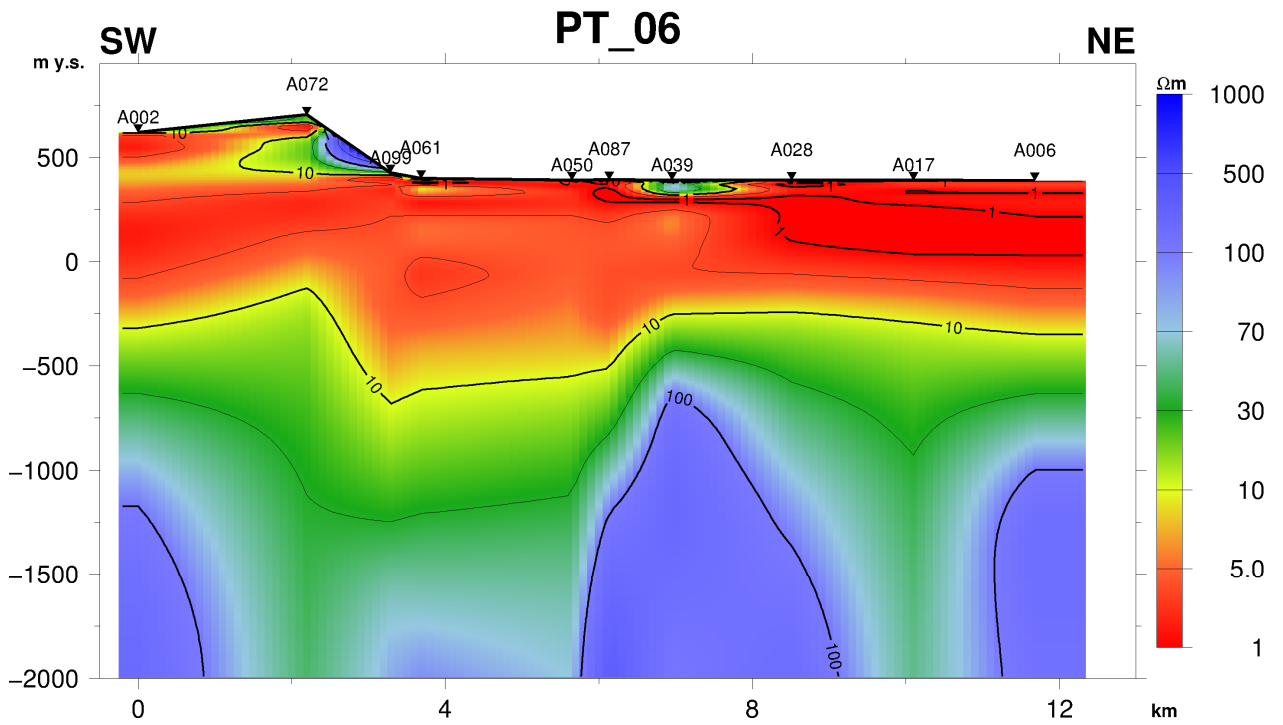
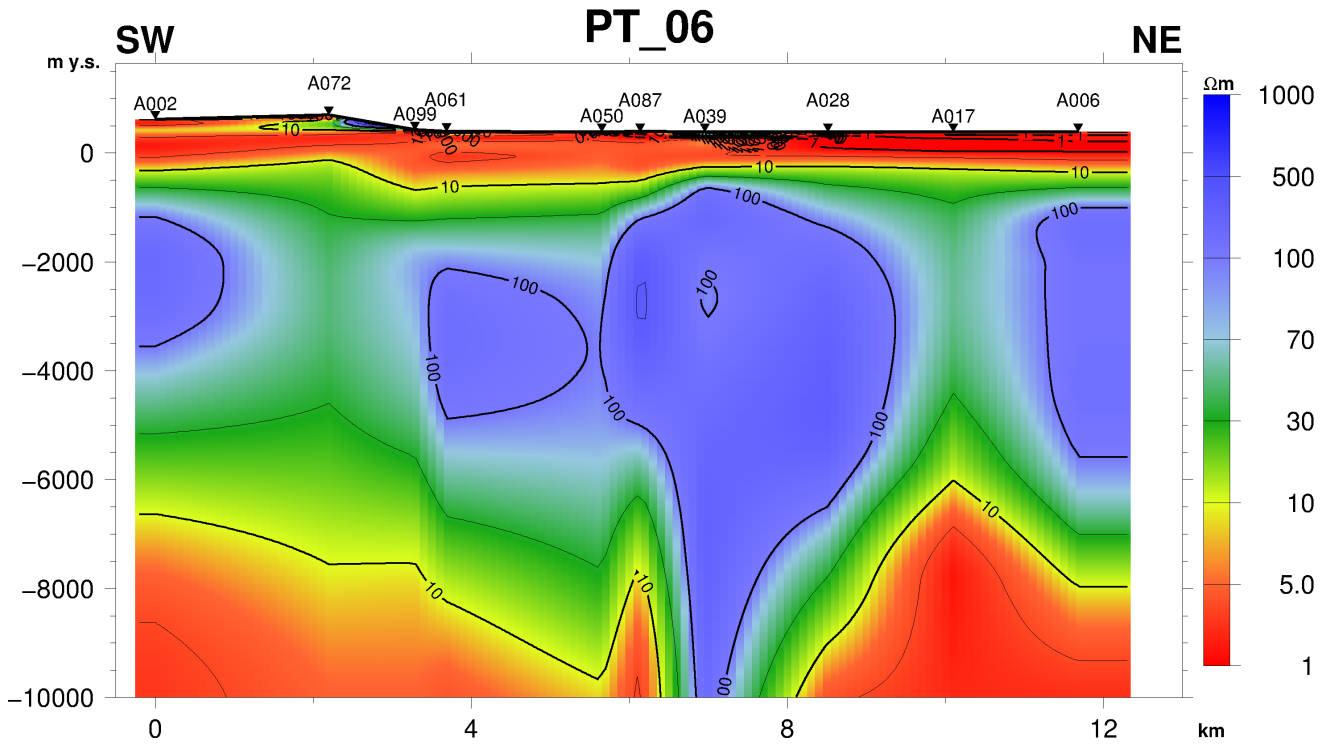


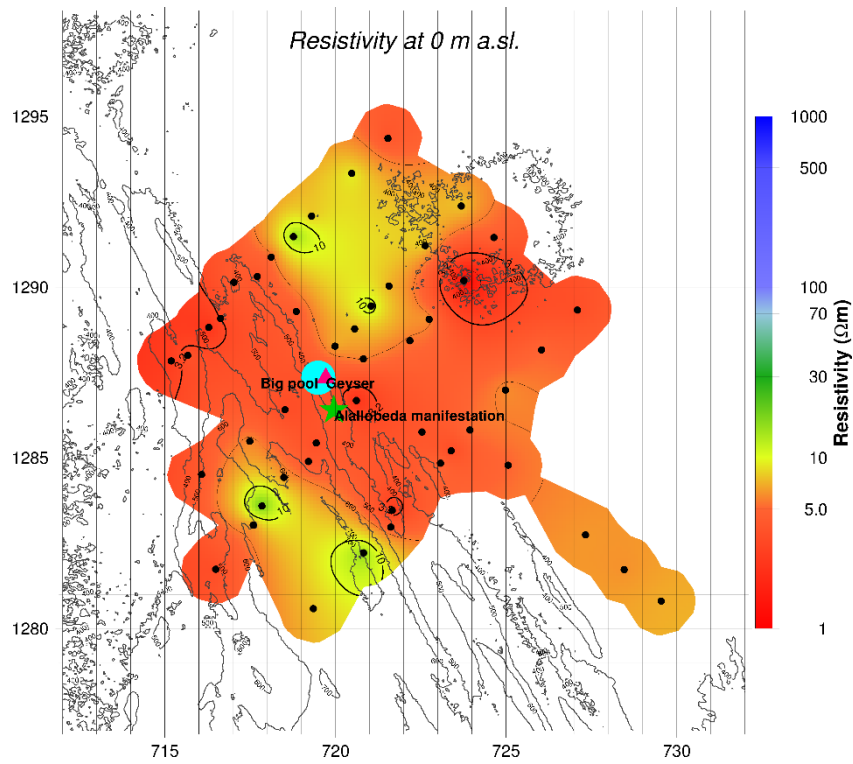
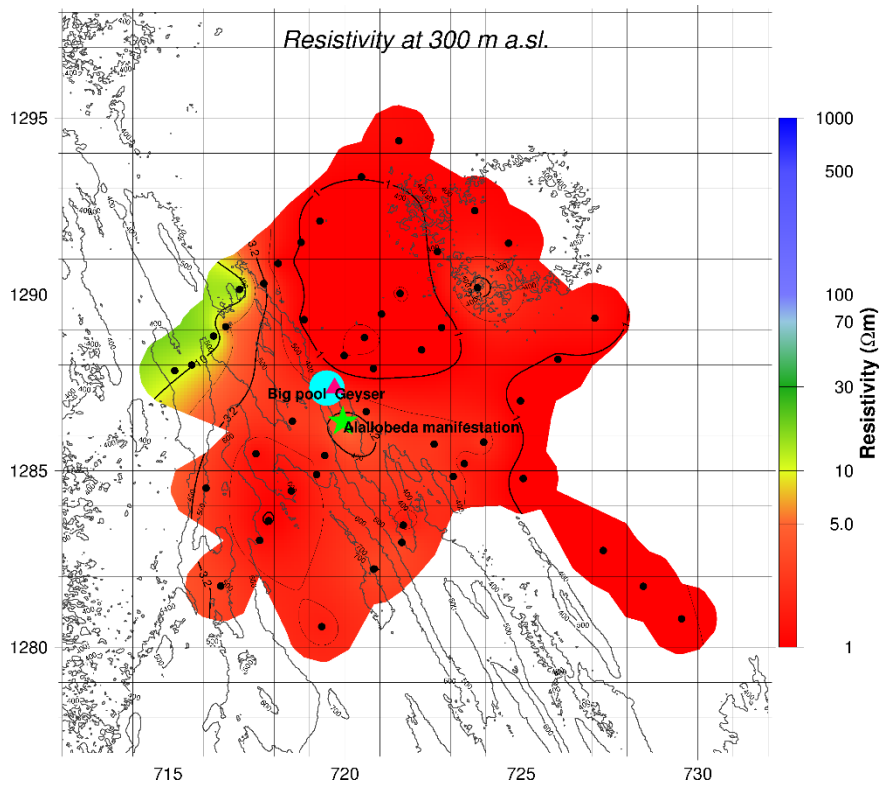


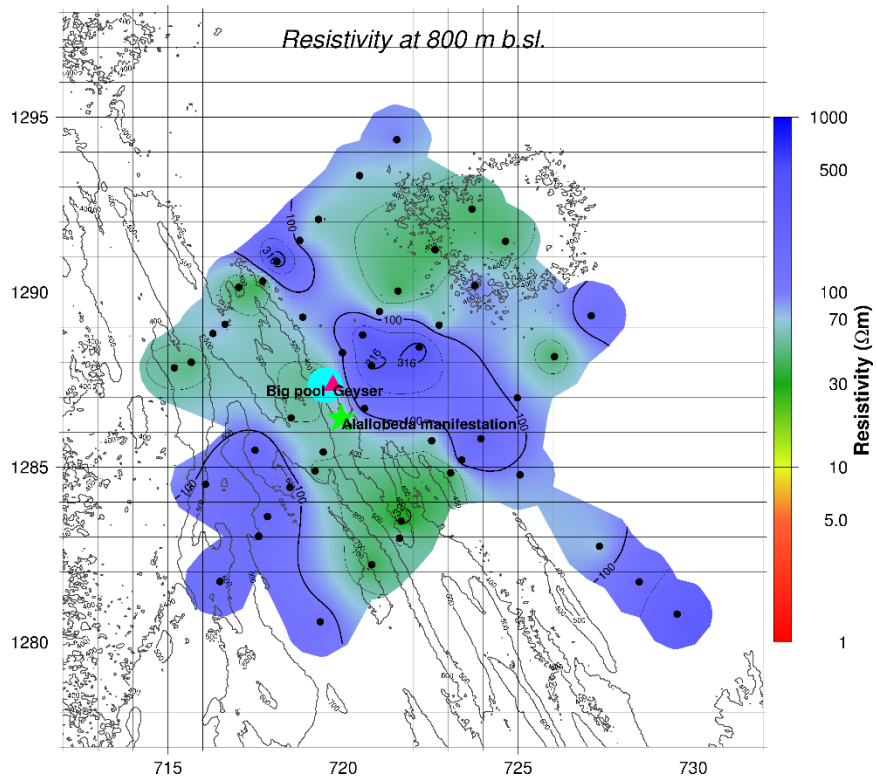
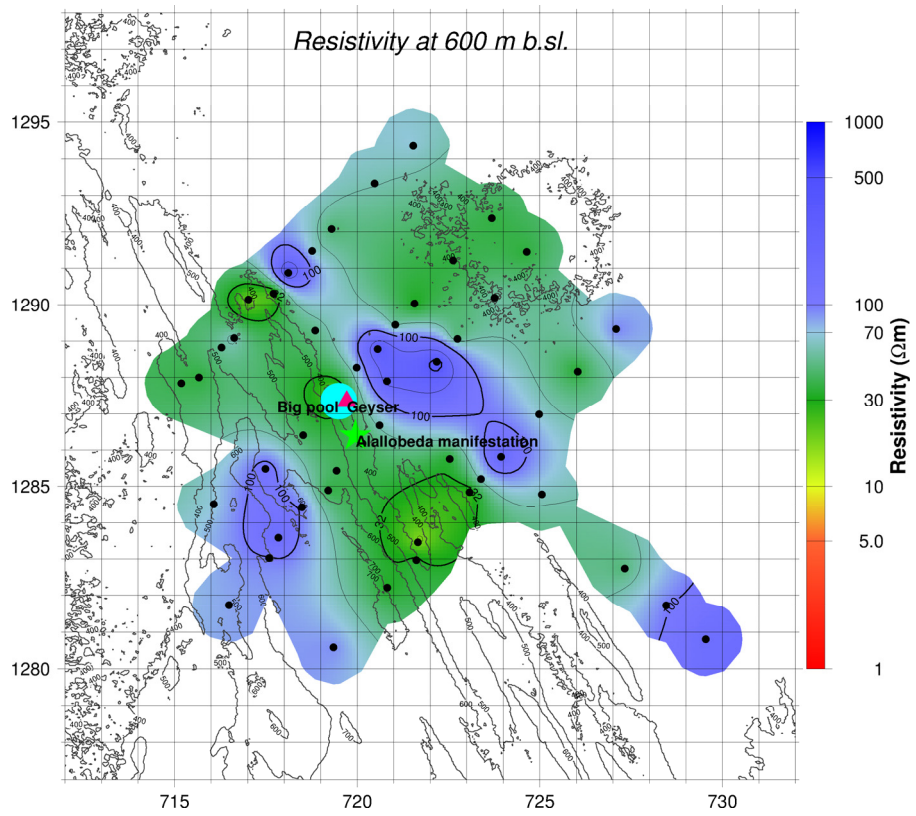


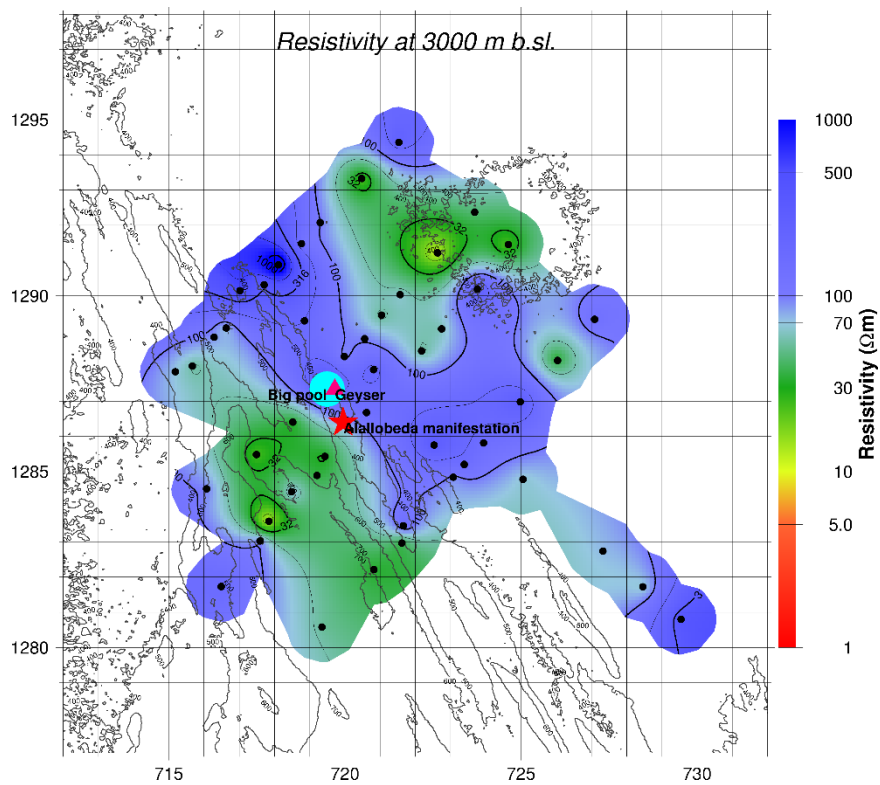
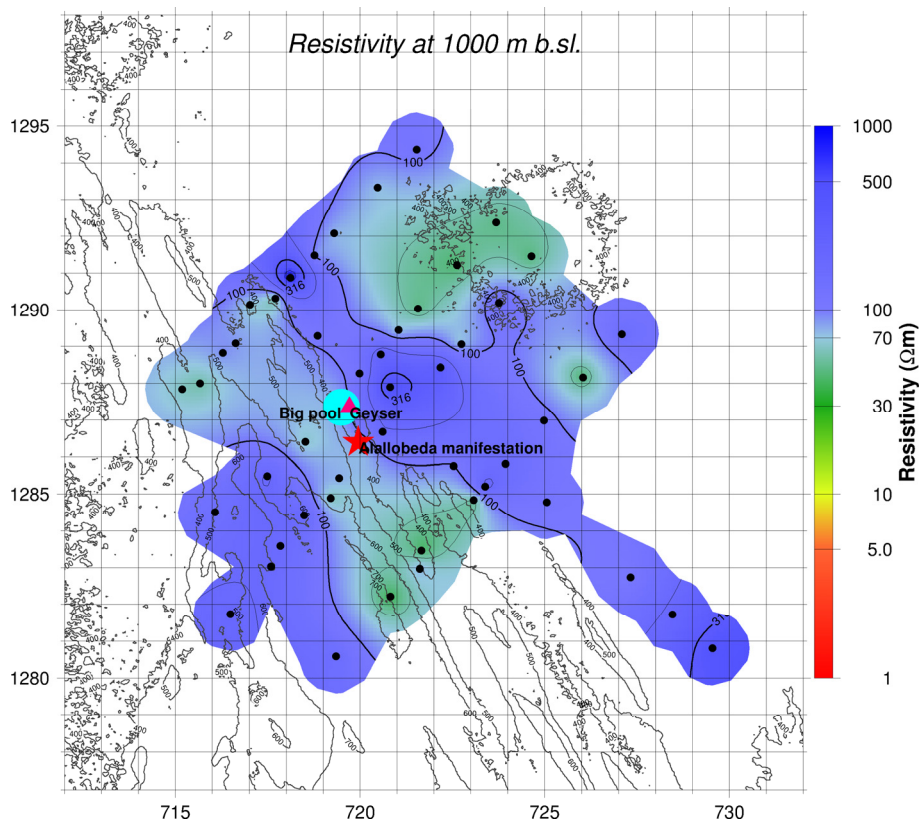


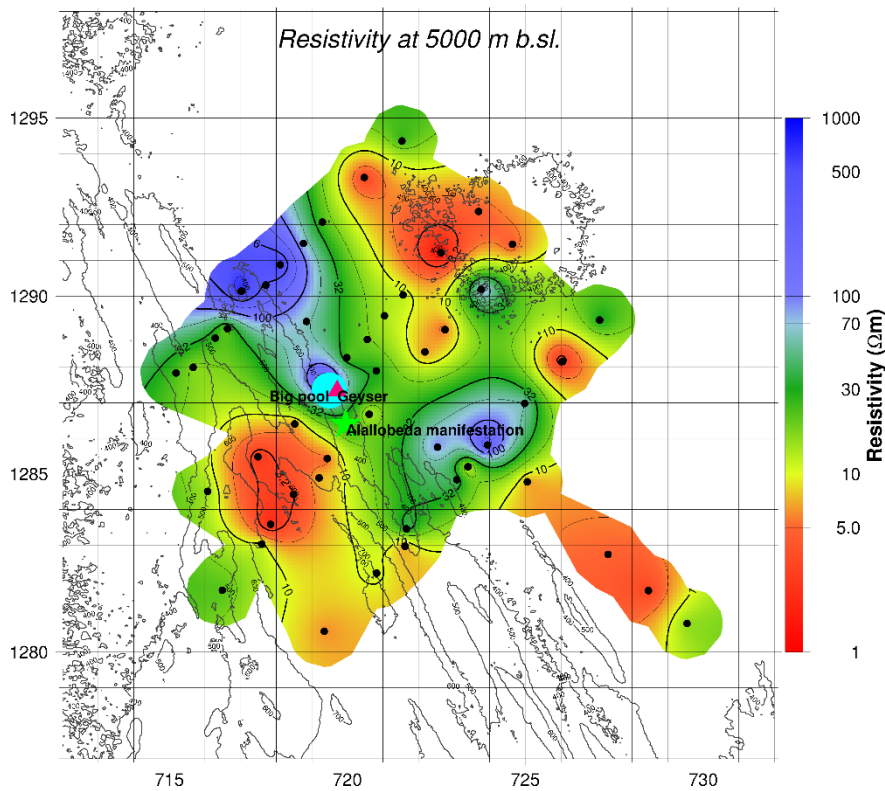
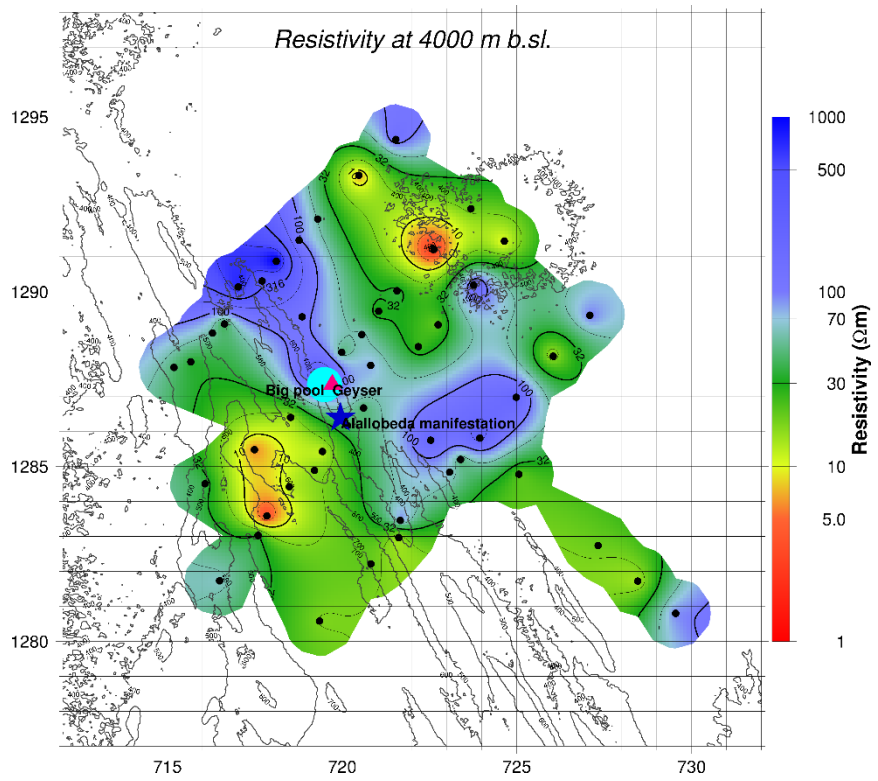


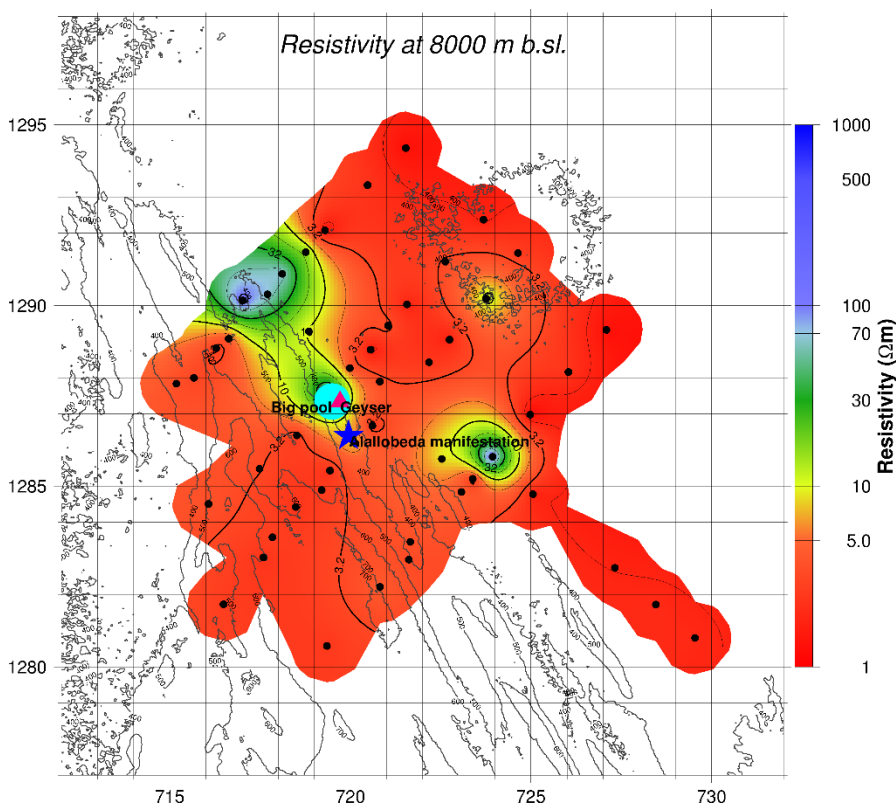
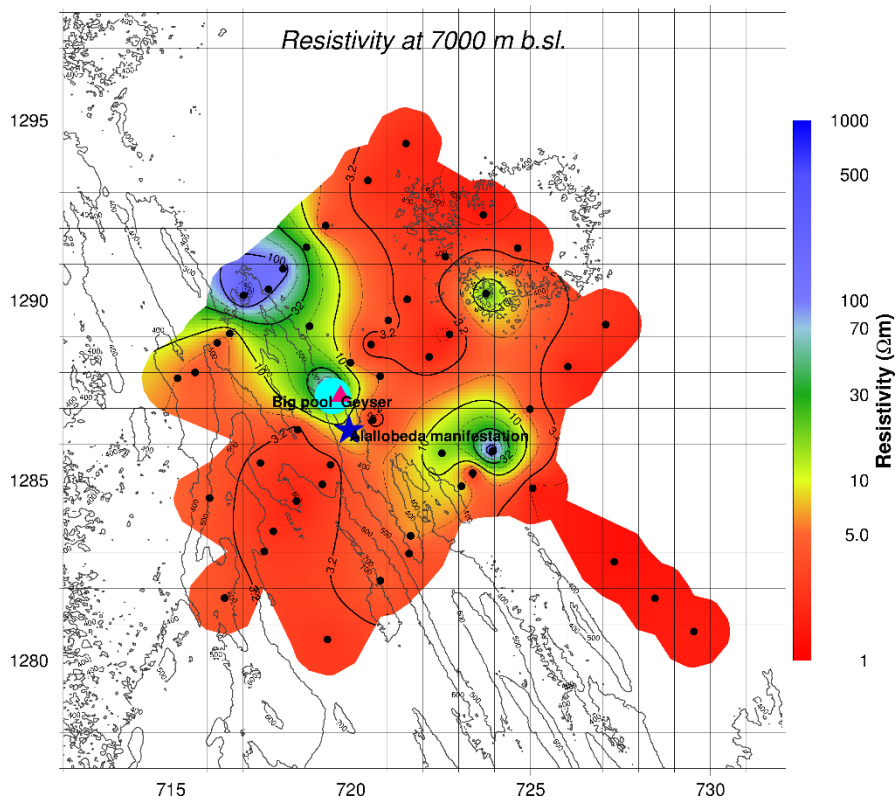












APPENDIX V: Maps showing the rose diagram of the Zstrike and induction arrows for different periods

