

## # 記入欄

| 1            | 計画名称  | 大学VLBI連携  |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
|--------------|---|---|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|----------|--|--|--|--|--|--|--|--|--|--------------|-----------------------------|--|--|--|--|--|--|--|--|--|----------|----|--|--|--|--|--|--|--|--|--|---------|-----------|--|--|--|--|--|--|--|--|--|-----------|---|--|--|--|--|--|--|--|--|--|--------|--------------------------------|--|--|--|--|--|--|--|--|--|
| 2            | 代表者名  | 藤沢健太  |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 3            | 代表者所属   | 山口大学  |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 4            | 関連する主な研究者コミュニティ名（あれば）                                   | 宇宙電波懇談会、VLBI懇談会   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 5            | 現在の計画のステータス   | 定常運用中   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 6            | 第5期中期計画期間中(2028-2033年度)の予想されるステータス                      | 定常運用中、新望遠鏡計画進行中   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 7            | 計画のScience Goal (計画の核心をなす学術的問い合わせ)                      | 1ナノ秒から1G秒まで18桁にわたる時間幅で宇宙の変動現象をとらえる  |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 8            | 計画のScientific objectives (計画の研究目的)                      | 1ナノ秒から1G秒（30年）にわたる時間変動現象を観測し、時間変動とVLBIによる高空間分解能を手掛かりにして、天体および宇宙の動的な姿を明らかにする   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 9            | 計画が実施するScience investigations (何をどこまで明らかにしようとするか)       | パルサー・FRBの電磁波放射機構、X線連星・活動銀河核のジェット形成機構、大質量星へのガス降着機構、宇宙線の加速機構、終末期恒星の内部・外部の物理状態の解明  |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 10           | 計画の実施期間（既存の計画の場合は過去の期間も含む）                              | 2024~2035   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 11           | 計画全体の予算規模（総額、もしくは年度毎の額）                                 | 6600万円/年、2030年代に10億年（望遠鏡建設費）  |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 12           | 上記の中で期待する国立天文台の資金（総額、もしくは年度毎の額）                         | 5800万円/年  |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 13           | 国立天文台に期待する役割  | 茨城・山口局の運用経費、VERA/EAVN望遠鏡と共同観測   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 14           | 資金調達方針（5種類から数字で選択）                                      | 2, 4, 5   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 15           | 実施期間にわたる計画の簡単な線表（画像を添付）                                 | <table border="1"> <thead> <tr> <th>年次計画</th> <th>2023(R5)</th> <th>2024(R6)</th> <th>2025(R7)</th> <th>2026(R8)</th> <th>2027(R9)</th> <th>2028(R10)</th> <th>2029(R11)</th> <th>2030(R12)</th> <th>2031(R13)</th> <th>2032(R14)</th> </tr> </thead> <tbody> <tr> <td>① パルサー・突発現象</td> <td colspan="10">山口、茨城、日田</td> </tr> <tr> <td>② X線連星・活動銀河核</td> <td colspan="10">山口干渉計・茨城・山口VLBI、東アジアVLBI観測網</td> </tr> <tr> <td>③ 大質量星形成</td> <td colspan="10">茨城</td> </tr> <tr> <td>④ 終末期恒星</td> <td colspan="10">VERA 2ビーム</td> </tr> <tr> <td>⑤ 宇宙線加速領域</td> <td colspan="10">VERA 1ビーム<br/>水メーザ探査／岐阜・VERA・野辺山<br/>水メーザ VLBI年周観測・固有運動観測</td> </tr> <tr> <td>新望遠鏡計画</td> <td colspan="10">           ①概念検討 →<br/>           ②設計 →<br/>           ③予算要求・建設 →         </td> </tr> </tbody> </table> | 年次計画     | 2023(R5) | 2024(R6) | 2025(R7)  | 2026(R8)  | 2027(R9)  | 2028(R10) | 2029(R11) | 2030(R12) | 2031(R13) | 2032(R14) | ① パルサー・突発現象 | 山口、茨城、日田 |  |  |  |  |  |  |  |  |  | ② X線連星・活動銀河核 | 山口干渉計・茨城・山口VLBI、東アジアVLBI観測網 |  |  |  |  |  |  |  |  |  | ③ 大質量星形成 | 茨城 |  |  |  |  |  |  |  |  |  | ④ 終末期恒星 | VERA 2ビーム |  |  |  |  |  |  |  |  |  | ⑤ 宇宙線加速領域 | VERA 1ビーム<br>水メーザ探査／岐阜・VERA・野辺山<br>水メーザ VLBI年周観測・固有運動観測 |  |  |  |  |  |  |  |  |  | 新望遠鏡計画 | ①概念検討 →<br>②設計 →<br>③予算要求・建設 → |  |  |  |  |  |  |  |  |  |
| 年次計画         | 2023(R5)  | 2024(R6)  | 2025(R7) | 2026(R8) | 2027(R9) | 2028(R10) | 2029(R11) | 2030(R12) | 2031(R13) | 2032(R14) |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| ① パルサー・突発現象  | 山口、茨城、日田  |   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| ② X線連星・活動銀河核 | 山口干渉計・茨城・山口VLBI、東アジアVLBI観測網                             |   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| ③ 大質量星形成     | 茨城  |   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| ④ 終末期恒星      | VERA 2ビーム   |   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| ⑤ 宇宙線加速領域    | VERA 1ビーム<br>水メーザ探査／岐阜・VERA・野辺山<br>水メーザ VLBI年周観測・固有運動観測 |   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |
| 新望遠鏡計画       | ①概念検討 →<br>②設計 →<br>③予算要求・建設 →                          |   |          |          |          |           |           |           |           |           |           |           |           |             |          |  |  |  |  |  |  |  |  |  |              |                             |  |  |  |  |  |  |  |  |  |          |    |  |  |  |  |  |  |  |  |  |         |           |  |  |  |  |  |  |  |  |  |           |   |  |  |  |  |  |  |  |  |  |        |                                |  |  |  |  |  |  |  |  |  |